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**Sense and Susceptibility:  
How mothers view accidental injury risk and develop safety  
strategies for pre-school children**

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# Abstract

The prevailing rates of morbidity and mortality resulting from accidents in the youngest and most vulnerable members of our population are a cause for concern. Reducing childhood accidents has been identified as a priority for improving health in the United Kingdom and in many other countries. Despite mothers being identified as the main carers for pre-school children, relatively little research has examined mothers' perceptions of childhood accidents or explored their experiences and expectations of health professionals in promoting safety. This study examines mothers' perceptions of childhood injury risk, the ways in which mothers develop knowledge and skills for keeping their children safe and how they are motivated to adopt accident prevention strategies. The mothers' perceptions of the health visitor role in promoting the safety of pre-school children are also examined.

This study was undertaken within one Health Board district in Scotland, using a combination of quantitative and qualitative survey methods. A questionnaire was posted to eight hundred mothers of pre-school children, randomly selected from the Primary Health Care Data Base and to two hundred mothers whose pre-school children had attended the Accident and Emergency Department as a result of an accident within three months prior to the survey. From the survey respondents, forty mothers were selected as key informants and participated in qualitative, in-depth interviews. Quantitative data were analysed using the Statistical Package for Social Scientists. The interviews were tape recorded and transcribed to facilitate a systematic approach to content analysis.

The combined results reveal the complexity of caring for children safely, although certain aspects of this process can be understood by recognising distinct but interacting knowledge, perceptions and motivations. Mothers believed that much of their knowledge for protecting their children was common sense, indicating how many safety practices were socially constructed according to the norms of their social network. Mothers' perceptions of childhood injury risk were influenced by their families' accident experiences. However, new or unfamiliar risks were often not anticipated by mothers. This lack of generalisation from accident experiences and from prior knowledge may limit maternal motivation to adopt specific safety practices.

Mothers describe their motivation to adopt safety actions as being informed by a rational process of weighing up the risk of injury against the resources they had available. Mothers' perceptions of the susceptibility and severity of injury to their child were found to differ from the more objective measures of accident epidemiology. The mothers were most concerned about dramatic, but rare accidents outside the home, whilst severe and common accidents in the home concerned them less. This tendency to sensationalise certain injuries arguably detracted them from developing protective strategies to reduce the greatest causes of morbidity and mortality in pre-school children. Health visitors who could relate to the mothers social context were valued, particularly by lone mothers and others in situations of multiple disadvantage, who had specific needs for proactive social support.

The implications of these findings are discussed in relation to accident prevention approaches and the role of the health visitor. The value of an integrated research method for investigating the accident problem and for understanding mothers' perceptions is discussed and directions for future research are suggested.

## **Declaration of authenticity:**

*I declare that the work enclosed is my own and that I have composed this thesis.*

**Signed:**

**Date:** 18 November 1999

*Elaine Haycock-Stuart*

## **Dedication:**

**This thesis is dedicated to my nieces**

*Sophie, Imogen,  
Saffron and Francesca*

**Whose progress through their pre-school years I have watched with interest during the course of this research.**

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*With gratitude*

*Elaine Haycock-Stuart*

# **SENSE AND SUSCEPTIBILITY: HOW MOTHERS VIEW ACCIDENTAL INJURY RISK AND DEVELOP SAFETY STRATEGIES FOR PRE-SCHOOL CHILDREN**

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# Chapter 1

## Introduction to the study

### 1.0 Introduction

The need to reduce injury rates in pre-school children has never been more greatly emphasised in the United Kingdom than at present (Department of Health 1992). Prevailing rates of accidental injury to the youngest and most vulnerable members of our population are a cause for much concern. Accidents are the major single cause of death for children aged one to five years in the United Kingdom (Department of Trade and Industry 1993) and this is typical of many industrialised countries. The World Health Organisation has identified the reduction of accidents by the year 2000 as a priority. The problem of childhood injury, coupled with debility and family trauma are placing heavy demands on National Health Service resources (Child Accident Prevention Trust 1992). Consequently, reducing accidental injury rates is a priority for the health service at both local and national levels. Government proposals in the white paper *Health of the Nation* (Department of Health 1992) have tasked the National Health Service with reducing accident rates by twenty-five percent by the year 2000. Whilst there is now a widespread recognition of the problem of childhood accidents and an urgent need to develop effective strategies to reduce injuries, there is as yet only limited understanding of how this may be achieved.

Most accidents to pre-school children occur in the home (Department of Trade and Industry 1993). This adds complexity to studying the problem of accidents firstly because the home is a private space, where observation is often considered intrusive and secondly because many people play a part in maintaining a safe home environment for the pre-school child. For example, as well as direct supervision by parents and relatives, many other individuals have an indirect influence on child safety, such as the safety standards officers who ensure the quality of toys and the architects, designers and engineers who plan the layout of our homes. Formulating

an effective way to reduce childhood injury therefore relies on devising means to gather better information not only on how accidents occur, but also on how parents keep their children safe.

Many of the accidents occurring to pre-school children are known to be preventable (Avery and Jackson 1993). Yet despite the numerous accident prevention campaigns that have been developed, the total number of accidents occurring to children shows only a slow rate of overall decline, with certain specific kinds of injuries actually increasing, for example, poisonings and burns (Scottish Accident Statistics 1993, Forth Valley Health Board 1990). These two contrasting facts suggest that research to date has not provided us with a complete picture of how and why accidents occur to children in the home. Furthermore, the fact that almost every parent wishes to keep their child safe from injury leads one to hypothesise the existence of barriers, perhaps of social, economic and environmental kinds that prevent a parent from protecting their children in all situations. Research to date has not probed this question adequately to reveal the complex construction of the accident problem.

Although this study draws upon accident statistics and makes suggestions for collecting more useful information on the epidemiology of accidents within a region, it departs from most previous research into the problem of childhood accidents in a number of significant ways. The main thrust of this research seeks to discover how mothers keep their children safe within the home environment, which contrasts with many previous studies that have focused on the actions and opinions of health professionals.

This study proceeds from the assumption that mothers have useful, experiential knowledge, by which they identify risks and consider whether to take specific actions to keep their children safe from injury. By revealing the nature and sources of this knowledge, and illuminating the processes by which mothers perceive risk and are motivated to take action this study seeks to develop an improved understanding of how they keep their children safe.

## 1.1 Justification for the study

Mothers' views on accidents to pre-school children require this further investigation for several reasons. First there is a lack of formal knowledge on the perspectives of mothers with respect to unintentional injury to children and how to reduce accidents. Mothers' views are rarely sought on issues that they have an important contribution to make (Mayall and Foster 1989, Molzohan and Northcott 1989). The current approach of involving parents in the decision making process and facilitating joint participation with health care providers (Mayall and Foster 1990, Bajal et al 1991, Twinn and Cowley 1992) involves eliciting and responding to mothers' views on child safety (Joseph 1993). Exploring maternal perspectives seems a logical pre-requisite for the planning and delivery of effective strategies to reduce accidents to children.

A second reason for this study is its relationship to professional practice and the development of the health visitor role in the area of child safety. The identification of the health visitor by other health care professionals as a key person to help reduce injuries to pre-school children is significant (Levene 1990, 1992). Health visitors have a history of working in the community, tackling public health issues and working closely with parents of young children. This study which seeks to develop an understanding about mothers' opinions on the health visitor role specifically, in relation to preventing accidents to pre-school children, will complement other epidemiological studies and research examining the views of health visitors for the development of more responsive and effective programmes for child safety.

The understanding gained by studying how a mother's safety strategies are constructed through social, economic and environmental conditions may differ sometimes subtly and sometimes greatly from the strategies advocated by health professionals, based on their external and generalised knowledge of accident risk. It is recognised that accident prevention strategies being developed for the safety of children in the home, rely for their success on a partnership between family, health professionals and outside organisations. If differences in perceptions are found to

exist, then the understanding gained from exploring mothers' perceptions, motivations and actions can be used by health professionals in conjunction with improved data, monitoring the occurrence of accidents within a region, to formulate more effective campaigns for accident prevention and child safety. Exploring mothers' perceptions of accidents and how mothers protect their children from injury therefore provides a vital component of information in our overall understanding of the complex problem of childhood accidents.

## 1.2 Why childhood injury?

My interest in this topic arose initially from a professional interest in keeping children safe. I became more personally involved as the seriousness of the problem of childhood injury became more apparent to me in my work as a health visitor. I was involved in promoting safety practices, particularly among parents of pre-school children. Frequently, I worked with families who had experienced traumatic injuries. During the course of my work I became aware of the different priorities and expectations parents and health visitors placed on preventing childhood injury and the problems of developing effective safety practices. The implementation of safety strategies to reduce accidents often appeared fragmented with little if any structured planning and evaluation. At present there are many independent small scale programmes to prevent accidents. Many programmes operate in isolation, often not tailored to the needs of the population and possibly duplicating other programs with the probability of inefficient use of resources.

Many of the studies exploring childhood accidents have concentrated on an epidemiological approach of gathering accident data and identifying types of injuries sustained (Runyan 1991, Child Accident Prevention Trust 1993). These studies are useful for identifying the problem and drawing attention to the causes of accidents, but rarely are they able to suggest effective accident prevention strategies. In contrast, there are some studies on the educational, enforcement and environmental aspects of accidents, offering greater insight into effective accident prevention strategies (Avery and Jackson 1993, Towner et al 1993). Educational studies often

look at the delivery of safety information and the extent to which the recommended actions are being implemented by the people receiving the information. For instance, studies into the effect of enforcement approaches examine how the law influences peoples' safety practices; observing seat belt wearing rates is an example of this type of study. The efficacy of the environmental approach to preventing accidents has been observed in studies comparing accident rates before and after the installation of window guards in the home (Spiegel et al 1977). Such studies are important for understanding safety strategies in relation to specific accident problems.

A critical review of the literature reveals that much of the research on childhood injury has taken place outside the United Kingdom often in North America and Australia. Thus it does not necessarily reflect the situation in Britain. Relatively few studies have investigated the attitudes and behaviours of mothers (Laidman 1987, Combes 1991) who are identified by many health professionals as having a central role in the reduction of childhood injury (Levene 1990 and 1992). There is however, a little more literature presenting the perspectives of health professionals' (Carter et al 1992, Marsh et al 1995).

This type of research which examines childhood injury from a maternal perspective is intended to develop greater understanding of the accident problem and enable more effective safety strategies to be developed. Few studies have explored the attitudes and behaviours of mothers and the expectations they formulate for the safety of children and the prevention of accidents. As a consequence of this client focused approach it is intended that the health professionals, specifically health visitors become an object of study through the perceptions of their clients whilst not becoming subjects themselves. This form of investigation can identify how they are valued by the people they are intended to serve and can ascertain the positive and negative factors of the service from the clients' perspective.

Within the area of accident research it is documented that many parents misperceive their young child's developmental abilities and this is associated with childhood injury (Rivara et al 1989, Dunne et al 1992). The expectations of mothers with regard to the safety of children needs to be identified and addressed to facilitate the successful reduction of childhood injury. Such studies can clarify associations between factors influencing the occurrence of accidents and how to realistically take steps to prevent injuries. Redland and Stuijbergen (1993) stress the importance of gathering attitudinal information prior to developing programmes in the area of health promotion. Attitudinal information can be used to tailor programs to the identified needs of the participants and improve the success of the programme, but this is rarely achieved (Rabinowitz et al 1993).

### 1.3 Study aims

In this study the aim is to analyse mothers' perspectives of accidents to pre-school children; to understand how mothers are motivated to adopt accident prevention strategies when caring for their pre-school children; to identify the value of the health visitor in facilitating safety practices and consequently to formulate recommendations for future accident prevention programmes.

#### 1.3.1 The specific research questions are:

- What motivates mothers to adopt safety practices and to take action to prevent accidents to their pre-school children?
- How does social context relate to mothers' perceptions of injury risk and necessary safety practices?
- What is the value of health visiting for preventing accidents to pre-school children?

The aim and research questions above demonstrate the focus for this study. The research questions were necessarily refined to form hypotheses for the deductive inquiry and lines of enquiry for the inductive research. These hypotheses and lines of enquiry are presented in Chapter 4. The assumptions, prior evidence and theory that

led to the development and selection of the hypotheses will be explained more fully in the following three chapters of the thesis.

The participants in the study lived in one Health Board district in Scotland. Through a survey method and data analysis using qualitative and quantitative methods, a description and interpretation is offered of mothers' views on the issue of childhood injury, how they believe they keep their children safe and what barriers and forms of assistance they perceive. These views are analysed in relation to the varying social and demographic contexts of the individual mothers to understand the relevance of any of these conditions on the views expressed.

## 1.4 Summary

It is acknowledged that accidents to pre-school children are a major problem in the United Kingdom. It is argued elsewhere by others that there is a need for epidemiological data gathering once accidents have occurred and more accurate and detailed data recording of the events leading to an accident and the injuries sustained (Deane 1993). These data would allow prioritisation of further research and the development of educational, environmental and legislative policies to promote child safety. Whilst improving epidemiological recording identifies accidents that have occurred, studies exploring the perspectives of the main carers and their socio-demographic information can lead to greater understanding of the problems facing young families. Through developing an understanding of mothers' perspectives we can begin to appreciate and evaluate more sympathetically issues pertinent to mothers which may previously have gone unrecognised. A partnership approach in determining the problems and solutions to accident problems can enable us to examine how realistic and acceptable approaches to reducing childhood injury can be achieved.



## 1.5 Conclusions

- There is a lack of formal knowledge on the perspectives of mothers with respect to unintentional injury to children and how to reduce accidents.
- Mothers' views are rarely sought on issues about which they have an important contribution to make.
- By revealing the nature and sources of maternal knowledge and identifying the processes by which mothers perceive risk and are motivated to take safety action, this study seeks to develop an improved understanding of how some mothers protect their children from injury.
- Exploring mothers' perceptions of accidents and how they protect their children from injury is intended to provide vital information able to contribute to an overall understanding of the complex problem of childhood accidents.
- This form of investigation can identify how health visitors are valued by the people they are intended to serve and can ascertain the positive and negative qualities of the service from the clients perspective.

## 1.6 Structure of the thesis

The structure of the thesis is as follows: In chapter two a critical review of the accident research literature is presented. The basic principles of accident prevention are explored to clarify how traditional epidemiological studies of the accident problem are being supported by the educational, environmental and enforcement approaches to reducing childhood injury. The research literature is drawn mainly from the medical field with some studies from psychology and nursing. These studies propose a number of ways to gain an understanding of childhood accidents, the complexity of the problem and some recent attempts by health professionals to reduce accidents. The third chapter evaluates relevant theory and models of attitude and behaviour change primarily drawn from psychology, which are then selectively used to develop a justifiable set of methods for the study. Chapter four describes the methods for the study. The first part of the chapter includes the exploratory interviews and a discussion of how the findings from these exploratory interviews led

to the development of the pre-test interviews and pilot survey. The second part of the chapter presents the quantitative and qualitative methods for the two main parts of this study. Chapter five presents the results of the quantitative statistical analysis of the main survey. The results are presented in respect of the six research hypotheses. Chapter six discusses these results, summarising how some of the major findings were used to develop the lines of enquiry that were explored in greater depth and specificity using qualitative interviews.

Within chapters seven and eight the findings are presented and discussed from the interviews undertaken in the qualitative study. Chapter seven reveals the importance of accident experiences for motivating mothers to adopt specific safety strategies and elaborates on the development of knowledge for protecting children through the varied experiences of parenting. Chapter eight discusses the mothers' views on the health visitor role specifically in relation to preventing childhood injury and clarifies the broader value of health visiting from the mothers' perspectives. Chapter nine presents the discussion and conclusions derived from the combined methods of the main quantitative survey and from the qualitative interviews. The implications of the findings from the combined studies are discussed in relation to theory and practice developments for understanding maternal motivation to prevent accidents to pre-school children and the value of health visiting within this chapter. The value of an integrated research method for investigating the accident problem and for understanding mothers' perceptions is discussed in chapter ten prior to presenting the main conclusions resulting from this study and before stating recommendations for future clinical practice and research.

## **Chapter 2**

# **Background to the research into preventing accidents to pre-school children**

### **2.0 Introduction**

In this chapter the problem of accidents to pre-school children, the magnitude and complexity of the problem both at a national and local level will be explored. Whilst targets have been set by the National Health Service, a co-ordinated strategy for accident prevention still has to emerge. Through an understanding of the literature it became possible to identify the gaps in research and determine the research questions and methodology for the study. What is presented in this chapter is a critical review of the literature relevant to the formulation of the study. The literature was identified from a variety of data bases including Medline, Sociofile and Psychlit in addition to identifying relevant papers and texts referenced within publications. An examination of research papers pertaining to accident prevention projects showed that the strategies which are being developed for child safety are commonly based around the principles of accident prevention and the models of behavioural change.

In the first part of this chapter evidence is analysed from the research studies which have examined the educational approach to reducing accidents and studies which have examined the knowledge base of parents for preventing injury. The methodology of other studies are critiqued to demonstrate how they helped guide the focus of this study. Then the environmental and enforcement principles are briefly discussed, but since they are not the main focus for this particular research study they are presented simply to illustrate their vital contribution to reducing childhood injury. The literature relevant to the health visitor role in reducing childhood injury is then critiqued. In chapter three, the theoretical models of attitude and behavioural change are explored to determine how they contribute to a study seeking to understand maternal attitudes and motivation for keeping children safe. From this analysis of

existing work conclusions are drawn about research findings to date and relevant theory, the case is argued for a study of the attitudes, behaviours and socio-demographic characteristics of mothers to inform the development of knowledge for preventing accidents to pre-school children.

## 2.1 Defining accidents and related concepts

The word accident is commonly understood and its meaning taken for granted in much of our everyday conversation. Avery and Jackson (1993) argue that the term 'accident' is generally more acceptable to the study population and more easily understood than unintentional injury or injury control which are argued to be more appropriate terms by some injury prevention researchers (Pless 1991). Unintentional injury may be seen to have undertones of child abuse to some of the study participants and be off putting, reducing their willingness to participate in the study. It is therefore, necessary to consider the acceptability of terminology for eliciting information from mothers whilst conveying the findings of the study to researchers.

The New Collins Concise Dictionary of the English Language (1982) refers to an accident as an 'unforeseen event' or 'an event without apparent cause', 'anything that occurs unintentionally or by chance', 'a misfortune or mishap especially one causing injury or death'. The dissatisfaction with the term 'accident' relates to its incongruence with the predictability of injury events. Many of the events leading to childhood injury **can be** foreseen, **are** with apparent cause and **do not** happen purely by chance (Green 1997). The preference for using the term injury which reduces this ambiguity is understandable, but as Avery and Jackson (1993) argue the word accident is more commonly understood in the United Kingdom and is used by the World Health Organisation. For the purpose of this study the word accident will be used inter-changeably with injury without loss of meaning within this study. Sudden infant death syndrome will not be studied in this research as this specific problem is being researched extensively both in the United Kingdom and abroad. The data collected on accidents is commonly separable from the sudden infant death syndrome data in the United Kingdom thus making it possible to make this distinction in

morbidity and mortality. Many studies do not clearly define accident prevention and we are left to make our own assumptions as to its meaning. To avoid ambiguity, for the purpose of this study 'accident prevention' is defined as 'the act of keeping unintentional injury or death from happening'.

## **2.2 Magnitude of the problem**

Childhood accidents are gaining recognition in the National Health Service not only as the major cause of death for children under the age of five years in Scotland (Scottish Accident Statistics 1993, Scottish Health Statistics 1988, Forth Valley Health Board 1991) but also as an important demand on National Health Service resources (Child Accident Prevention Trust 1992, Tsai et al 1991). As the body of knowledge about accidents and their prevention increases, more effort is aimed at reducing their occurrence and this has made them an ideal target for reduction (Department of Health 1992, Department of Health 1993a). Reducing accidents has both health and economic implications for the Health Service and families, reducing injuries will promote health and save resources simultaneously (Child Accident Prevention Trust 1992).

Most injuries in the age group of children from birth to five years occur in and around the child's own home (Department of Trade and Industry 1993). There is evidently a need to concentrate on reducing accidents in the child's home environment. Since young children are often dependent on their mothers to safe-guard them from accidents in the home, systematic enquiry focusing on mothers should yield information necessary for the planning and resourcing strategies to prevent accidents to pre-school children.

### **2.2.1 Complexity of the accident problem**

Many mothers report feeling responsible for their young children (Sadler 1972, Mayall and Foster 1989), although there may be complex child care arrangements involved. Ultimately it is the mothers who feel the responsibility for their children's welfare (Edwards and Duncan, 1996). The majority of accidents occur in the home

environment, often involving furniture and structural design features of the home (Department of Trade and Industry 1993). Examples of these are falls from stairs and windows, cuts from the corners of tables or from glass tables and doors. These structural design hazards within the home environment indicate that the prevention of accidents does not solely rely on the mother as the influencing factor for a child's safety. The architects, designers and building manufacturers contributing to the development of the child's home environment also have a large impact on the safety of pre-school children (Jackson 1990). While the mother's acceptance of her responsibility for her child's safety is generally recognised (Craig 1991), this allows many other organisations to devolve and escape their responsibilities to young children and the promotion of child safety. The child and the mother are not separate from the social organisation and environment in which they live. The complex nature of childhood accidents involves many different individuals, organisations, social and environmental agencies effecting change to reduce childhood injury (Runyan 1991, Bryce et al 1993). Reducing accidents is not an easy task. The magnitude and complexity of the accident problem requires much work to be done by a variety of people in different settings.

### **2.3 Preventing childhood accidents: the need for better understanding**

In the literature on accidents and their prevention many of the studies described are epidemiological in approach as the main body of the literature comes from the medical profession. The medical model of health education (Ewles and Simnett 1985) to reduce accidents is often central to many of the studies. For example, the medically defined disease - in this instance accidents - involves promoting medical intervention to prevent and treat accidents, often by using persuasive and authoritarian methods of how to keep children safe. There is an increasing amount of literature moving away from the medical model as the engineers, behaviourists and social scientists investigate accidents and how to reduce them within the wider context of the local environment and the social organisations influencing a person's health. As the approaches to studying childhood accidents diverge it is apparent that

no one approach to reducing accidents will suffice. From the gradual recognition of the important roles different individuals, agencies and professionals have to play in preventing accidents a set of basic principles guiding accident prevention programmes and research activities has evolved.

### **2.3.1 The basic principles of accident prevention**

Accident prevention incorporates three main principles which are education, environment and enforcement (Avery and Jackson 1993). The three basic principles all influence behaviour to a greater or lesser extent. Education can be considered to be the most 'active' approach to accident prevention as it requires the individual receiving the education or information to take action to improve safety and reduce accidents. This 'active' participation required for the educational approach to prevent accidents relies heavily on individuals taking responsibility for their health and for the person to be motivated to prevent accidents.

The environmental aspect of preventing accidents can be seen as the more passive approach. The individual is often required to take little or no action in developing the safety measure as it is usually incorporated into the structural design of the environment. For example, the presence of smoke detectors in new houses do not rely on the individual actively installing the device, it is an environmental measure already in place in the new home. However, it is necessary for the individual to check the working order of the smoke detector and this does require some action on the part of the individual. An obvious advantage to the passive environmental approach to safety is that it requires little conscious effort (United States Preventive Services Task Force 1990). In reality it is not possible to achieve environmental safety measures for all potential dangers ( Peterson et al 1993a). Active involvement to reduce accidents is often required and educating people about the potential hazards and how to actively avoid them will always be a major task when preventing accidental injury.

At times the willingness of individuals to adopt recommended safety practices is limited. The enforcement of safety measures for the prevention of accidents takes place when effective safety measures are known, but individuals and organisations do not voluntarily or actively adopt the measure for a variety of complex reasons. Enforcement can be either active or passive at the individual level, depending on the legislation and regulations developed. For example, the wearing of seat belts is active at the individual level, but the safety regulations for the design of new cars to provide seat belts are passive at the individual level. Enforcement is often controversial as some people view enforcement as an infringement of their civil rights and a reduction in personal freedom to govern one's own life. Other people believe enforcement is essential to protect the safety and health of the wider population. It is argued that enforcement should play a much greater role in accident prevention as there are now several effective safety measures that reduce morbidity and mortality, but they are not being implemented appropriately (Wortel and DeGeus 1993). Enforcement may be essential if accident prevention practices are required and known to be effective, but the willingness of individuals and organisations to conform to the effective safety practices is not forthcoming.

The basic principles of accident prevention emphasise the need for an integrated approach between education, environment and legislation for a reduction in accidents. This integrated approach is similar to the integrated approach to health promotion being advocated by Kelly et al (1993) who gave a description of the integrated approach to health promotion for promoting public health. They allude to four levels of health promotion: environmental, social, organisational and individual. It is recommended that these levels be considered together in health promotion activities rather than implementing health promotion activities at one level to the exclusion of other levels. The environmental approaches of both accident prevention and health promotion appear to be similar whilst the social and organisational level of health promotion can be seen to have some resemblance to the legislative component of accident prevention in that they influence the regulations and structure of the society in which we live. The individual level of health promotion can be



considered similar to the educational component of accident prevention in that much of the education is aimed at changing an individual's behaviour.

It is important to recognise that each of the distinct principles of accident prevention impinge upon each other as do the four levels of health promotion and have a combined effect on promoting health and preventing accidents. It is therefore necessary to consider these different levels in an integrated way for the successful reduction of health damaging behaviour, including accidents.

Education combined with environmental and enforcement approaches can do much to reduce accidents (Torrel 1993, Schmidt and Becker 1993). A combined approach to implementing the basic principles is advocated for the success of accident prevention programmes (Avery and Jackson 1993). This brief summary of the basic principles of accident prevention represents a widely recognised and co-ordinated approach to preventing accidents and was a useful framework for analysing the literature. In the following pages, the degree to which education contributes to accident prevention is examined. Only a brief elaboration of the environmental and enforcement approaches to accident prevention is made in this review as these approaches were considered beyond the scope of this particular research study.

## 2.4 Education

In this section the literature relating to individual behaviour change through educating people is examined. Education can be understood as the process of imparting or receiving knowledge. Knowledge is a complex phenomenon and whilst it is possible to explore the various philosophical positions, the magnitude of the task is well beyond the bounds of the present study. Knowledge is recognised in the principles of accident prevention as playing a major role in the reduction of injury and for this reason it is necessary to analyse the various meanings and methods of attaining and imparting knowledge here, in so far as they help us to understand the studies of accident prevention education.

Knowledge can be defined as the 'specific information about a subject' or 'the facts and experiences known by a person' (The New Collins Concise Dictionary of the English Language 1982). It would appear that familiarity gained by experience and learning is very important for the acquisition of knowledge. People develop knowledge through various means and everyday experience is often considered the most poignant method for gaining knowledge (Robinson and Vaughan 1992, Berger and Luckmann 1966, Bryce et al 1993).

Other ways of increasing knowledge are through observation and verbal persuasion (Belenky et al 1985). Observation is a visual way of learning and may involve watching a role model. There is less direct involvement when people observe, as it is possible to watch a person without them knowing or intending to share their actions with the observer. Verbal persuasion involves an interaction between the people talking. The people are aware that they are involving each other in the process of talking and are thinking about the content of the conversation.

Belenky et al (1985) in a qualitative study investigated 135 women and their experiences of learning and knowing. Ninety women were associated with formal academic settings and forty five women were recruited from family agencies where they were seeking assistance with parenting. The case study approach to the interviews with the women involved tape recording and transcribing the data for contextual analysis. Belenky et al (1985:15) described five major epistemological categories for women's ways of knowing: silence, received knowledge, subjective knowledge, procedural knowledge and constructed knowledge. To elaborate on these categories a brief summary is presented here:

- Silence signified the least powerful of women who were submissive to authority, these women tended to be younger and the most socially, economically and educationally disadvantaged. These women it was suggested did not cultivate their capacities for representational thought and found little meaning in the words of authoritative figures.

- Some mothers, the *received knowers* were considered capable of receiving information and reproducing it, but not creating their own knowledge.
- Subjective knowledge was used to describe women who considered knowledge to be intuitive and personal.
- Procedural knowledge was associated with the women who applied themselves to learning procedures which they could then carry out to communicate with others and develop knowledge.
- Finally the most developed knowers were encompassed in the descriptions of constructed knowledge. These women perceived knowledge as contextual, appreciated subjective and objective methods for knowing and created knowledge.

Belenky et al (1985) reported that women ground their ways of knowing in speaking and listening, emphasising an interactive verbal dialogue. This is in preference to non interactive, visual, ways of knowing. The work suggests that verbal persuasion is a more effective method than observation for the development of knowledge amongst women. This would suggest knowledge acquisition for preventing accidents amongst mothers and health visitors should centre around educational approaches which involve verbal persuasion and dialogue.

Tannen (1990) identified the importance of the manner in which information is conveyed to women as being as important as the content and purpose of the information. An exchange of words alone does not signify successful communication for the sharing of knowledge. A combination of communication skills are required to share meaning, knowledge and information amongst women. Welch (1991) suggested engaging mothers in a verbal dialogue of safety rather than just handing them safety leaflets to read to encourage greater understanding of the accident problem. The literature suggests that for women to develop the higher levels of knowledge through an educational process they should enter in to a dialogue. Common sense knowledge it has been argued is constructed from everyday experiences, with greater or lesser reflection on the part of the individual (Berger and Luckman 1966, Hitzler and Keller 1989).

### **2.4.1 Common-sense**

Knowledge is often perceived as 'common-sense'. Moss and Tobin (1988) studied a convenience sample of eighty one parents with children under the age of four years recruited from child health clinics and reported that many parents identified their decision to use a car seat to be based on common-sense knowledge. Although Likert scales had been constructed for the purpose of data collection, many parents utilised the opportunity to record common-sense under 'other' responses within the questionnaire. This indicated that parents selected not to conform with the predetermined responses, but identified their decision making to be based upon different types of knowledge than had been suggested.

Berger and Luckman (1966) described common-sense knowledge as that which we 'share with others in the normal self evident routines of everyday life'. They argued that social structure is an essential element of the reality of everyday life and things which are 'taken for granted as being socially approved' are often seen as common-sense knowledge. We 'live in the common-sense world of everyday life equipped with specific bodies of knowledge' (Berger and Luckman 1966) and safety practices to prevent accidents are essentially a body of knowledge which is part of everyday life and may be seen by many people as common-sense. The work by Belenky et al (1985) suggest subjective knowers personalise this type of knowledge.

A problem related with delivering information which is then perceived as common-sense is that common-sense knowledge is difficult to measure for the purpose of evaluation, a task highly emphasised in all accident prevention programmes and in the work of the health visitor (Department of Health 1993a, Department of Trade and Industry and The Health Education Authority 1991). The recognition of some aspects of accident prevention knowledge as common-sense must ultimately be seen as positive. Common-sense is not trivial knowledge, but knowledge deemed personally acceptable and relevant to the parents therefore the means through which this knowledge is constructed is important to understand and value. This contributes to the debate about how accident prevention information

should be delivered and the approaches health visitors should adopt in disseminating their information. If informal methods for delivering knowledge about safety practices are more acceptable to parents than the traditional teaching methods employed by many health visitors, then perhaps it is time to alter the traditional mechanisms used to educate parents and evolve into less conventional, but more acceptable methods? Utilising more interactive accident prevention strategies may be more acceptable and effective for informing parents of strategies than traditional methods such as the distribution of safety leaflets.

Understanding knowledge development is crucial for the development of educational programmes intending to encourage behaviour change in mothers of pre-school children. Whilst the literature on educational approaches to preventing accidents is considerable (Towner et al 1993), few studies focus on the process of learning specific to the development of knowledge for reducing childhood injury.

## 2.5 Studies of the educational approach to reducing injuries

Having established the relevance of knowledge in accident prevention education it is pertinent to examine how such knowledge is documented in the studies of accident prevention. The need to identify parents' sources of information from which they developed their knowledge bases to prevent accidents to pre-school children has been highlighted in the study by Laidman (1987). In this small scale qualitative study of parents' and health visitor attitudes to accident prevention, Laidman (1987) utilised interviews, questionnaires and group discussions for researching health visitor practice when preventing accidents to young children. The research identified health visitor sources of information for reducing childhood accidents as similar to those of the parents they visited. The concern that health visitors appeared to receive no additional information on tackling childhood accidents than many of the parents they were expected to counsel, gave rise to concerns about the lack of preparation of many health visitors for teaching parents about ways to prevent accidents to children. It is perhaps this lack of formal education and preparation for preventing childhood injury that remains disconcerting to many health visitors and may be the reason why

child safety is often a fragmented and poorly organised aspect of the health visiting service (Cameron and Fletcher 1989, Ehiri and Watt 1995).

Some studies have reported a reduction in specific accidents and injury rates following educational approaches to injury prevention (Bryce and Fakher 1992, Jordan et al 1993). Bryce and Fakher (1992) surveyed 200 accident and emergency attendees, for information about the circumstances leading to the patients' hospital attendance and their knowledge of risk factors associated with certain injuries. In this study they reported that injuries to pre-school children were lower for types of accidents where accident prevention campaigns had been targeted; for example fewer children were poisoned following media safety campaigns that gave advice to reduce accidental poisoning.

Jordan et al (1993) in their longitudinal study of 363 adolescent mothers who were interviewed at 3 and 15 months postpartum found that accident rates were lower when mothers reported more sources of safety information. However, the number of hospital admissions as a result of accidental injury did not decline. No formal intervention for imparting safety information was used in this study and the mothers were asked to recall information from routine sources for the three months preceding the interview. Health professionals were reported as the main source of information, with family members as secondary sources, however the exact content, quality or method of education used was not documented within this study. It seems serious injuries requiring hospitalisation, whilst low in number persisted, despite traditional approaches to safety education. Mothers were also asked to recall injuries that had occurred within the past year when their child attained the age of fifteen months. Comparison of the mothers' accounts of injuries and medical records revealed close agreement of the injury episodes despite the time elapsed since injury and interview. The findings suggested that educational approaches can reduce minor injuries, but how different methods of education and learning influence behaviour to prevent injury was not addressed. Importantly, the study also demonstrated the reliability of retrospective maternal reports of injury events for a preceding twelve month period.

In contrast, Agass et al (1990) identified accurate reporting by parents of the detail of injuries experienced by their children, but less reliable reporting of the incidence and timing of injury. In a general practice postal survey, 4066 parents of children under the age of sixteen were contacted and asked to report injuries sustained by their children in the previous year. 2737 parents returned the questionnaire and the authors stated that this gave a response rate of 73% after the patients who had left the area or practice were removed from the original sample. A sub sample of 93 respondents who reported accidents were used to validate parental reporting of injuries by comparing their reports with the medical records. Samples of medical records from households of non respondents and parents who reported no injuries were also examined to identify accident incidences. In total 327 children's records were examined from 172 households. Parental reports of types of injuries were accurate for eighty out of eighty two instances, however, seven accidents were under reported by the parents when compared with the medical records. The timing of injury was less accurate as only 64 out of 82 instances were considered correct for the twelve month period. The sample who reported no accidents were found to have not reported five accidents which were documented in the medical records whilst the non-respondent sample had 12 injuries recorded in the medical records. The authors concluded that parents under reported injury incidence possibly due to forgetfulness. However, the detail of information from parental reports was more comprehensive than from medical records. It is probable that the period of time over which parents were asked to reflect on injury incidences reduced the accuracy of their reports. Perhaps if parents were asked to reflect on the one or two months prior to data collection the accuracy of their reports would increase.

A small, qualitative study of three families being treated for child abuse and neglect reported a reduction in observed hazards in the home when a safety education package including a slide show and certain items of safety equipment were distributed (Barone et al 1986). Although a small scale study it demonstrated how efforts can be successful with families in difficult circumstances to reduce hazards

and influence behaviour change. However, despite the intervention being essentially educational some safety equipment was supplied which once installed would become more of an environmental measure. It is not simple to distinguish when the use of safety equipment transcends from being an educational approach to an environmental approach and possibly back to an educational approach as parents may need to install and possibly interact with the safety equipment at different times to use it appropriately. The positive changes observed reflect the achievements possible through an educational programme, but one which is contingent upon some degree of environmental approach. It would be important to establish that the validity of the educational package for modifying hazards and ultimately reducing serious injury by using a larger sample and a control group.

It is difficult to conclude from these types of studies that the educational component was the only factor influencing the success of a safety campaign. Invariably, environmental components may have also influenced the outcome. For instance, the safety packaging of medication probably played a role in reducing poisonings in addition to the safety messages conveyed through media campaigns. The distribution of safety equipment as part of the safety education package would probably have contributed to the parents' decision to modify hazards in the Barone et al (1996) study. It is realistic to deduce that the combination of the source of information, an increase in knowledge and other environmental approaches helped to reduce the severity or frequency of some injuries and hazards.

In studies where parents have been asked to identify appropriate ways to receive further accident prevention information, they reported a preference for safety information presented in booklet and video format that could be taken away, rather than attending group classes on safety (Eichelberger et al 1990, Liller et al 1991). These types of sources of information identified by parents were mainly passive mechanisms that may seem easy for parents to read or observe. It is necessary to compare these findings with those of Belenky et al (1985) who found that interactive verbal sources were more successful for developing knowledge amongst women. It



may be that watching a video appeals to parents, but this may not have the required impact of increasing knowledge to the same extent as having a group discussion or attending a class. This is important to consider when implementing new accident prevention programmes as the source of the information may have a direct bearing on the acceptability and success of the accident prevention programme.

Educational approaches are the basis for many projects and studies seeking to prevent childhood accidents (Towner et al 1993). In addition to the debate about the most appropriate method for developing knowledge about safety, especially as the literature suggests active methods encourage greater understanding, but passive methods are considered more acceptable to parents, there is also the argument that education alone does little to reduce accidents (Avery and Jackson 1993, Stone 1996). It was assumed in the past that education to improve knowledge about ways to prevent accidents would ultimately result in a reduction of accidents. It now seems naive to assume that education alone can reduce accidents.

Several studies have shown that improving a person's knowledge has little direct effect on the reduction of accident rates for example, Kelly et al (1987) studied by experimental design, 129 families. Initially there were 65 families in an intervention group and 64 in the control group however, only 109 families agreed to complete the study through to final data collection, resulting in 55 families in the intervention group and 54 in the control group. Parents in the intervention group had received a three part individualised course in child safety requiring their active participation. The control group received routine safety advice. One month following the one year child health contact, a community health worker who was unaware of the allocation of the family to the intervention or control group undertook a four part assessment of each family. The assessment measured parental knowledge by asking them to circle pictorial hazards that they recognised and the community health worker observed specific hazards in the home using a nine item checklist. A structured questionnaire was used to obtain parental reports of their car safety practices and finally reported accidents were compared with hospital records for injury attendance. The reported

findings suggested that safety education that is individualised, repetitive and requires parental participation increases parental knowledge and produces an improvement in reported safety practices, but not observed practices. There was no significant reduction in injury rates or observed safety practices for the intervention group.

The study demonstrated that parents were aware of good safety practices, but were not actively employing safety behaviours to reduce childhood injury. The fact that parents identified and reported safety practices, but that specific objectively observed hazards within the home remained, raises the question of whether parents perceive themselves to be more active and effective in safety behaviour than they actually are. Parents' misperception of their accident prevention endeavours may account to some extent for the prevailing accident rates despite safety campaigns.

It is also possible that the parents in the study did not view the types of hazards considered pertinent by the researchers as a threat to their child's safety at the time of data collection. The study took place within the first year of the child's life when relatively few accidents lead to morbidity and mortality when compared with children between the ages of one to five years. A study with parents of older, more mobile children would perhaps have revealed different results for the observed hazards.

In one of the few large scale studies of community based injury prevention programmes Guyer et al (1989) evaluated the impact of five types of campaigns to reduce burns, poisoning, falls, suffocation and passenger road traffic accidents. The study took place over a twenty two month period and involved nine intervention communities and five control communities. The intervention communities had significantly lower motor vehicle occupant injuries compared to the control communities, but no evidence was found to support a significant reduction in the other types of injuries targeted by the campaigns. Problems with gathering accurate morbidity data may have influenced the lack of significant results for injuries rather than an inadequate impact of the educational programme. There are inadequate data

collection systems for injuries other than road related accidents. At present in many countries including the United Kingdom, road traffic accident data is often the most comprehensively recorded accident data. Some improvements in knowledge were associated with the intervention communities, but these were not statistically significant.

Thomas et al (1984) reported a study in which fifty eight couples who had chosen to attend educational well baby classes, were randomly assigned by the toss of a coin to an experimental or control group. The intervention group received the same information as the control group, except they also received a short lecture and handouts on burn prevention including hot water temperature and smoke detector information in addition to a discount coupon for the purchase of a smoke detector. Significantly more couples had hot water temperature recordings of 54.4 degree Celsius than the control group at four to six weeks following the educational well baby class. Home ownership was significantly correlated with safe water temperature settings for both groups. No significant difference was found in the proportion of operational smoke detectors between the two groups.

The well baby class and burn prevention information were considered effective for educating parents to modify their behaviour towards hot water burns. However, no pre-intervention hot water temperatures were recorded for either groups to be certain of the degree of change that the intervention had incurred. The sample for the study could be considered unrepresentative of the population as a whole as only a minority of parents who were eligible volunteered to attend the educational class. Arguably these parents may have been more motivated to undertake safety practices than the general population. The findings suggest families living in rented accommodation may have been more constrained in their safety actions due to their environmental circumstances rather than through a lack of knowledge or desire to behave safely. The authors concluded that primary health care providers can have an impact on burn prevention practices in the home. The findings suggest this is the case, but also draw attention to the possible influence of environmental and more specifically, housing

circumstances on safety actions. The impact of legislation for the installation of smoke detectors in the year preceding the survey may have mediated some of the impact of the educational campaign (Thomas et al 1984). Longitudinal burn injury rates for the families involved in the study were not supplied in the paper to compare whether there was a reduction in injuries sustained between the two groups as a result of the intervention.

From a critical review of the studies it can be implied that whilst more superficial injuries may have been prevented, serious injuries requiring hospital admission or attendance were not reduced by accident prevention education interventions and that childhood mortality is unlikely to be reduced by accident prevention education alone. The findings of the studies were more supportive of the educational approach when it was used to increase knowledge to identify and reduce home hazards. It seems however, that educational approaches alone can do little to reduce serious injury.

## 2.6 Parents' perceptions of injury risk

When stimulating parental interest to prevent accidents to their children there is much competition for the parents' interest and resources. The *Safe Kids* national telephone survey conducted in America amongst 404 parents, found that injuries to children were of low concern (Eichelberger et al 1990). A random digit dialling procedure was used to select the parents with children under thirteen years of age and a telephone interview based on ninety questions was used to obtain data. Verification of the accuracy of data recording was made with forty three respondents who were contacted a second time. The respondents were considered representative of the United States population. The authors reported that parents worried most about kidnapping and drug abuse rather than the more common accidents such as burns or drowning. Many parents appeared to be misguided as to the risk of kidnapping compared with the risk of accidents to children. When describing their safety actions, the parents reported 'being careful' as a common safety precaution as opposed to specific safety measures for example, using a locked medicine cabinet. The findings suggested little understanding by parents of the extent of the accident

problem and when confronted with potential accidents parents did not know the most effective safety strategy to adopt to prevent injury.

It is plausible that educating parents of the real risk of injury may increase their interest in accident prevention. There is however, little point in increasing parental interest without offering effective accident prevention measures. Education should not only inform parents of the dangers, but also teach them how to prevent and remedy the accident risk effectively. For parents to implement accident prevention information into actions there needs to be acknowledgement by the parent that it is important to prevent accidents and that they are capable of carrying out the required safety action.

If parents are to implement safety practices they need knowledge about potential injuries and how to prevent them. Liller et al (1991) also identified a lack of parental knowledge when they surveyed mothers' knowledge, risk perceptions and behaviours pertaining to childhood accidents. The small scale survey involved one hundred postpartum women volunteers within one hospital which had a high number of low income patients. The survey questions were read to the mothers by a research assistant, but it is not clear as to how the data were recorded and if their responses to a variety of open and forced questions were tape recorded or hand written by the research assistant. Almost a quarter of mothers reported not using child safety seats with other, older children despite legislation requiring this. There was also a lack of knowledge of the correct temperature of hot water tanks to avoid scalds and many mothers were unaware of the temperature of the hot water tank in their homes. These mothers also preferred to receive further safety information from leaflets rather than an educational session and most felt that many injuries to children were unavoidable. The evidence suggests lack of parental knowledge inhibits parental safety strategies. However due to the small sample and lack of randomisation in the study the respondents may not have been representative of postpartum mothers. The time around giving birth may not be most appropriate time for questioning new mothers in hospital about safety strategies at home, as mothers will be exhausted, possibly in

pain and concerned about developing skills to meet the basic needs of food and warmth for the baby.

### **2.6.1 Parental perceptions of child development and injury risk**

Several studies by Rivara et al (1989), Dunne et al (1992) and Glik et al (1991) identified a lack of parental knowledge about the child's developmental abilities and reported that parents consequently underestimated the risk of injury to their children. Rivara et al (1989) contacted 5743 parents of children in kindergarten and elementary school and achieved a 42.9% (n=2464) response rate in their survey by self completion postal questionnaire of parental attitudes and practices towards children as pedestrians. Despite the majority of parents not believing that five and six year old children could reliably cross the street alone, one third of parents allowed this age group to cross residential streets and walk to school alone. The majority of parents incorrectly perceived the risk of child pedestrian injury to be less than bicycle or motor vehicle occupant related injury. The authors suggested parents needed to be educated about their children's limited capabilities so that they can identify the tasks that children perform which are beyond their skills to do safely. The authors acknowledge that the response rate to the study may have reflected a response bias and that the knowledge and views of the non-respondents may have differed from the respondents altering the picture presented by the results obtained. For example, the non-respondents may have been less cautious or knowledgeable parents and they could have exposed their children to more risk than the respondents' results suggested. However, the non-respondents may have been cautious, knowledgeable parents whose children were possibly at less risk of pedestrian injury than the results suggested.

Dunne et al (1992) studied 240 parent - child dyads recruited from two public schools by letter and follow up telephone call. Data were collected through a demographic questionnaire, psychological tests including vocabulary tests, locus of control and behaviour questionnaires before completing four simulated and real street crossing tests. The parents were observed whilst they completed the street crossing exercises

in the manner that they expected their children to undertake the exercise. Differences between the children's performances and the parents perceptions were then analysed. Parents over-estimated the abilities of their 5 and 6 year old children more than all other age groups, on all four tests and were unrealistic about their young children's pedestrian skills. The study did not allow maternal perceptions of the children's abilities to be compared with the fathers' perceptions as only a few fathers agreed to take part in the study.

The children involved in the study would probably have concentrated more on their street crossing skills knowing they were being observed than if they were walking under normal circumstances. This raises the question of whether the results are optimistic of the parents ability to recognise their children's pedestrian skills. Perhaps the children would have performed different, less safe street crossing skills under more ordinary circumstances and the parents would, therefore, have misperceived the children's abilities to an even greater extent. It may have been more realistic to video record the children's street crossing skills over several days and have had several observations of their behaviour in a more natural setting prior to asking parents to simulate their children's street crossing and pedestrian skills.

These studies demonstrated the need for parents to be educated about their children's abilities in relation to their age and development. Such an approach should encourage parental recognition of the dangers related to the child's stage of development and how to actively avoid exposure of the child to danger.

In contrast, Bryce et al (1993) considered parents to be knowledgeable about hazards and safety strategies in their investigation of parents living in an area of Scotland characterised by high unemployment, poor housing provision and other factors associated with social disadvantage and deprivation. The study involved group interviews with members of the community, 20 case studies and a household survey to ascertain injury incidence. From the qualitative interviews, the authors concluded that many parents were aware of the risks to their children's safety and became

experienced in safe keeping practices as a result of the many risks evident in the environment in which they lived. The constant exposure to injury risk and the experience of accidents was seen to enhance the knowledge of parents caring for children. This study focused on the influences of socio-economic and environmental disadvantage on the safety of young children rather than the lack of knowledge and anticipation of some parents to prevent injury. Whilst the reports from the parents elaborated on the risks they had identified and the strategies they described to keep their children safe, the parents selected familiar risks or risks they identified after their children had nearly experienced an accident or indeed had an accident. It is questionable as to whether the parents were as knowledgeable or as effective in preventing injury as the researchers suggested, but then the emphasis of this research was to draw attention to the problem of preventing injuries in adverse environments rather than to examine parental knowledge.

A few studies examined parents' beliefs and perceptions about accidents, the risk of their child having an accident and how this influenced the safety behaviour of the mother for example, Glik et al (1991), Garling and Garling (1991). Glik et al (1991) emphasised the importance of documenting how parents think about and perceive their child's injury risk. Through a telephone survey of 1200 families with a pre-school child, the researchers reported finding that many parents did not perceive the 'real' risk of injury to their pre-school children. People overestimated rare, but serious events and under-estimated common, less serious events. In their study Glik et al (1991) identified objective risks as those that can be assessed and observed by health professionals, for example having stairs or scissors in the home. They contrasted these to perceived risks which are subjective and identified by the parent. Many parents, when asked to identify the risks they subjectively perceived in their home failed to identify many of the objective or real risks that would consistently be identified by a trained health professional. The authors found that hazards and risks arousing parental safety action may not have represented the greatest injury risk from an objective view point.



There may be problems of inter-subjectivity and mismatched expectations about the prevention of childhood injury, stemming from the different ways health professionals and parents are educated or acquire knowledge. People may bring different perspectives to maintaining the safety of children. Mothers wishing to encourage autonomy and independence in their children may well believe children should learn to cope with potential hazards such as how to use scissors. Health professionals however, may view their use as dangerous if the children's development has not yet reached the stage for them to be skilled enough to use them safely. Inconsistent safety practices that do not appear rational to the health professional possibly reflect the mismatched expectations between parents and health professionals and warrant further investigation. Only when the perceptions of mothers are better understood can we have more confidence that the delivery and implementation of accident prevention strategies are able to be modified to meet the needs of the main carers of pre-school children. The purpose of the present study is to account for these different views by identifying sources of knowledge, attitudes and associated social factors. It may then be possible to develop approaches to reducing childhood injury more in keeping with maternal expectations.

Studies in the field of accident prevention report that parents are taking steps to reduce accidents to their pre-school children, yet it is disconcerting to find that there is little evidence of a consistent approach to the safety practices many parents employ. Wortel and De Geus (1993) reported that many mothers did not or only partially adopted safety measures to reduce injuries. For the purpose of the study, safety measures were defined as structuring the child's environment, supervising the child, educating the child and administering first aid. Their study consisted of a structured self completion questionnaire administered to 1500 mothers with a pre-school child. The response rate was 84% with 1129 completed questionnaires being returned. The mothers reported inconsistent safety measures and structuring the child's environment was done selectively to prevent only specific types of accidents. For example, for any one type of injury such as a burn or scald, the mother would adopt the safety measures to prevent a burn by keeping matches out of reach, but not

adopt the safety measure of using a fire guard to prevent burns or reducing the hot water temperature to prevent scalding. Mothers reported educating the child and supervising the child for safety, but relatively *ad-hoc* approaches to structuring the environment.

In addition to the survey, Wortel and De Geus (1993) reported observing the homes of 148 respondents to validate the self reporting by mothers. No detail was given for the observational method part of the study, but the authors concluded that self reported safety behaviour was safer than the observed practices of the mothers. As no criteria were given for the observations performed this limits the interpretation of the study findings, but the authors suggested that the self reported unsafe behaviour results were the most valid of the survey data. The parents reported behaving least safely with smoking items such as cigarette lighters and matches (42.9%) which can lead to house fires, smoke inhalation and burns. House fires are a particular problem in Scotland (Scottish Accident Statistics 1994, Squires and Busuttill 1996) and such findings draw attention to the need to understand mothers' perceptions of such accidents.

It may be that factors other than potential injury motivate a parent to adopt a safety measure. Parents may have concerns about the cost or difficulty involved in preventing accidents which may influence safety practices rather than the risk of injury. It is important to identify why certain mechanisms motivate parents to develop certain safety practices whilst others do not. This research seeks to identify influencing mechanisms that motivate a mother to adopt one safety practice in preference to another.

## 2.7 Parental supervision

Some studies have reported the emphasis placed by parents on the supervision of the child for safety. Glik et al (1993a), Garling and Garling (1993), Wortel and De Geus (1993) are a few of the many authors who have examined this approach. Glik et al (1993a) interviewed 230 mothers of children between the ages of six months and four

and a half years and observed safety hazards in the home. Self reported measures of maternal supervision, safety attitudes, locus of control and social support were also recorded. The sample was a sub-sample of respondents to an earlier telephone survey of 1475 households. A checklist of observations devised by Tertinger et al (1984) was used. The checklist comprised of a forty six item scale. The researchers devised a Maternal Supervisory Inventory of ten safety vignettes. The findings reflected that maternal supervision was significantly associated with fewer observed hazards and the authors considered protective, cautious parents to have least hazards in the home. Maternal internal locus of control was also significantly related to home hazards and mothers with high internal locus of control had fewer observed hazards. Fewer hazards were also present in households of higher socio-economic status. No injury outcome data was presented for the families involved in the study and the authors drew attention to the low internal reliability of some of the hazard scales of the observation checklist. The results suggested that different maternal supervisory practices existed and that these were associated with home hazards. Children who received least supervision were at most risk of exposure to hazards within their own home.

Alwash and McCarthy (1987) suggested that the level of supervision had an influence on accident exposure rather than the physical environment following their structured questionnaire administered through home interviews with 402 parents whose children had attended the accident and emergency department. The authors suggested health visitors should concentrate more on parenting processes and how people live in their homes rather than trying to influence environmental change. From the evidence presented in this paper it was difficult to conclude that reduced supervision was as important to injury outcome as suggested with the exception of circumstances surrounding falls, where the results stated that the children were unsupervised in 21% of the accident incidents.

Supervision was identified in other studies as having some bearing on accident risk and exposure. In their interview study of 150 mothers of first born children aged one

to three years, Garling and Garling (1993) reported that mothers perceived lower injury risk when their children received a high level of supervision, but they took little account of increased risk factors such as boys being more at risk than girls as identified in other studies (Matheny 1991). However, mothers perceived the youngest children to be at most risk of injury despite close supervision. Mothers were less confident about protecting the one year old children than the older two and three year olds. The authors did not elaborate on this finding, but perhaps the experience of caring for children over time enabled the mothers to develop confidence in their ability to protect the child.

## 2.8 Summary of the educational principle

The evidence suggests that education to develop knowledge about hazards and how to reduce them has a role in accident prevention strategies. Education is useful for increasing knowledge and stimulating parental awareness of the accident problem, but more complex mechanisms are involved when knowledge is to be transferred into actions which may in turn reduce accidents. It is important to increase knowledge, but it is essential to identify the mechanism by which people decide to utilise their knowledge and improve safety practices in an appropriate manner to reduce accident rates. There is evidence to suggest that the views of mothers' should be considered prior to developing accident prevention programmes aimed at reducing childhood accidents. Identifying factors that influence positive motivation to adopt certain safety practices and those that do not, should enable a more sensitive approach to accident prevention programmes and encourage maternal motivation to adopt safety practices. The evidence suggests accident prevention education alone cannot reduce accidents, but when combined with environmental and enforcement approaches to preventing accidents, it can make an important contribution. This study seeks specifically to examine mothers' knowledge development for protecting children. Through examining the ways that mothers learn how to keep their children safe, a greater understanding of knowledge development and motivation to reduce accidents is expected.

## 2.9 Environmental Approaches

There is increasing recognition of the impact that the environment has on a person's health (Townsend et al 1988, Lowry 1990). Environmental factors such as poor and inadequate housing conditions are identified as being as much a pre-disposing influence for accidents in children as behavioural or attitudinal factors (Bryce et al, 1993). This suggests accidents are as much if not more a result of a hazard in the environment in which the person lives than a result of careless behaviour or lack of safety knowledge.

The physical environment may not only have a direct impact on the child's exposure to danger, but may also influence how people view safety and how they feel about their ability to perform accident prevention endeavours in that particular environment. Pill et al (1993a) in their study of mothers of low socio-economic status, found housing type and tenure to have a significant association with mothers' health behaviours. Mothers living in local authority housing reported less positive health behaviours than those in privately owned housing. Pill et al (1993b) suggested that the present emphasis on health education as a primary means to improve health is not taking in to account the possibility that many people have little opportunity to change their lifestyle or behaviour as they are limited by the environment in which they live.

The environmental approach to reducing accidents has been identified as having a more direct effect on accident rates than the educational component (United States Preventive Services Task Force 1990). For example, passive approaches of well designed houses and cars requiring little conscious effort from individuals to maintain safety are most effective at reducing accident rates (Widner-Kolberg 1991). Although environmental measures such as the installation of circuit breakers and excluding plug sockets in the bathroom to prevent electrocution, improve the safety of children in the home there is little evaluation of these safety measures in the literature. The installation of seat restraints in new vehicles has been shown to reduce morbidity and mortality when appropriately used (Pless 1993, Margolis et al 1988).

Much of the research in to the environmental approach to safety takes place within the technological industries often being carried out by engineers (Avery and Jackson 1993). An example of the environmental approach to accident prevention is the use of safety packaging for medication, since many medicine containers manufactured and distributed in this country now have child resistant caps. There is a good deal of literature available on the technological advancement of safety and the improved specification of many products contributing to the safety of children. It is not the purpose of this study to tackle the engineering literature, but to recognise its important contribution to the prevention of childhood accidents. The study by Janssen et al (1991) demonstrates the relative success of engineering approaches for reducing injury rates.

Concerns that advances in technological safety are being prevented from reaching many people have been voiced. The pressures to justify acceptable technical solutions to safety problems by way of economic feasibility have been accused of hindering the availability of improved environmental measures for safety (MacFarlane and Woolfson 1993a). Viewing safety as a hindrance to economic performance opposes the intentions of many safety practitioners who argue that enhanced safety makes good economic sense (MacFarlane and Woolfson 1993b, Koop 1993, Child Accident Prevention Trust 1992).

It is realistic to assume that not all accidents are preventable by purely environmental safety measures requiring only one intervention. The passive safety measures of installing window locks, thermostatically controlled water heaters and smoke detectors need the individual actively and sometimes repeatedly to utilise the equipment provided in the appropriate manner (Erdmann et al 1991, Thomas et al 1994, Towner et al 1993). It is evident that it is not enough simply to make environmental safety measures available as many still require some active use by the individual. Active participation in accident prevention practices requires education of the individual of the appropriate safety practices involved.

Ultimately the provision of environmental safety measures that make living safer and require the least action from the individual are desirable. However, environmental safety measures are not available to counteract all kinds of accidents experienced by young children (Peterson et al 1993a). The need for individuals to behave in a safe way to prevent accidents is still required by many environmental safety measures. There is a need for environmental and educational approaches to be combined in accident prevention strategies (Child Accident Prevention Trust 1993, Avery and Jackson 1993).

### **2.9.1 Summary of the environment principle**

Whilst this study was not designed to test a specific environmental approach to safety it was necessary to understand mothers' perceptions of the environmental factors influencing accidents and their concerns about the hazards they perceived in their environment. An understanding of the mothers' views of safety equipment was also desirable and whilst this equipment often relies on some action on the part of the individual, it can be considered an environmental approach to safety. To understand mothers' motivation to adopt safety strategies it was important to gain an insight to environmental approaches to accident prevention from the mothers' perspectives.

## **2.10 Enforcement**

Legislation leading to the enforcement approach to accident prevention is the last or extreme approach to child. Enforcement usually follows educational or environmental approaches when these have been unable to achieve the desired effect voluntarily. When certain accident prevention practices which are known to be effective are not used by individuals or organisations, means of enforcing safe practices are sometimes needed. In the United Kingdom enforcement usually involves making laws or regulations which are then imposed on individuals or organisations by law enforcement officers or others assigned the task of ensuring adherence to the specified regulations. The different approaches to accident prevention can be considered progressive. For example, education may be seen as

the first approach to addressing newly identified accident hazards, then subsequently engineers will modify designs to prevent or mediate the identified hazards and if compliance with these two preceding approaches is low and accidents remain a problem, progression to the enforcement approach can follow.

Enforcement can be seen to take place at the individual and organisational level. At the individual level for example, enforcement of the legislation for the wearing of seat belts has been effective in reducing morbidity and mortality rates as a result of car accidents. Enforcement at the organisational level offers benefits to the wider community and is often more effective than relying on individual action. At the organisational level, for example, there are regulations governing product design which toy manufacturers or builders need to conform with. The organisational regulations must be strictly enforced to safe-guard the public and ensure economic feasibility is not being considered as more important than safe products (MacFarlane and Woolfson 1993a). Concern that the government's imposed review of safety regulations would remove legislation if it impacted upon market performance rather than emphasise safety has been documented (MacFarlane and Woolfson 1993b).

Enforcement has been shown to improve the compliance of individuals and organisations with safety practices. In their observational study of car occupant restraint use in Fife, Campbell and Richardson (1992) reported that since car rear seat legislation in 1991 there has been a 77% increase in rear seat restraint use in Fife. It is important to recognise that the legislation for seat belt wearing is enforced in Scotland and this increases the effect of compliance with the legislation. Legislation which is not enforced is often less successful in obtaining compliance or in reducing accident rates.

Moss and Tobin (1988) identified that adhering to the law was the main motivating force for using infant car seats. It is possible that parents are more able to recognise the importance of a safety practice when legislation is assigned to it and that it is not necessarily the threat of prosecution that motivates them to adhere to the law. For



whatever reasons, enforcement does bring about positive safety practices and a reduction in morbidity and mortality. It is desirable for individuals to behave safely of their own volition, but the lack of response by people to known, effective safety measures reinforces the need for the enforcement of legislation to prevent accidents.

Much of the research on the enforcement approach to accident prevention in the medical literature has been in the area of road safety (Pless 1993, Towner 1993, Gaffin 1991). Perhaps this has been due to the relative ease of accessing accident data in this area of legislation compared to other areas of legislation for example, toy safety. There is now an increasing number of studies measuring the effect of legislation on cycle helmet wearing and injury rates. Studies of cycle helmet use and the effect of enforcement come mainly from North America and Australia. Vulcan et al (1992) reported a significant reduction in head injuries when a cycle helmet was worn. In Victoria, Australia education campaigns to promote the wearing of cycle helmets took place from 1980 to 1990. The cycle helmet wearing rate in 1990 was 35%. In 1990 legislation for mandatory cycle helmet wearing became effective and wearing rates doubled to 70% (Vulcan 1993). Education and modification of behaviour for an effective safety practice were not voluntarily adopted therefore, legislation was enforced to achieve reduced injury. The need for enforced legislation to prevent accidents to many children remains essential.

A study of helmet wearing before and after helmet legislation in New South Wales, had similar findings but reflected that 50% of the children injured were still not wearing helmets (Carey et al 1993). The fact that so many of the children continued to be injured despite legislation reflected on inadequate enforcement of the legislation for the wearing of cycle helmets. Without appropriate enforcement of the legislation many people continued to cycle without protective helmets.

### **2.10.1 Summary of the enforcement principle**

In reality it is neither desirable nor feasible to achieve all aspects of safety through enforcement. It is necessary to have enforcement to promote some aspects of safety, yet there will always be a need for the individual to act responsibly and develop safety behaviours in response to many educational, environmental and legislative safety measures. It is to be expected that legislation particularly when it is enforced, will increase the number of people modifying behaviour and that is more likely to reduce accident rates than voluntary action alone. However, people need to be educated about safety practices relating to legislation and legislation cannot work in isolation from educational or environmental approaches.

It is not realistic to expect to reduce accidents through any one approach. The need to integrate the different approaches of the basic principles for accident prevention to reduce injury was evident from reviewing the research literature. Different accident problems will require different approaches to prevent them from occurring. This review identified the contribution of the basic principles of accident prevention to the reduction of childhood injury. It is apparent that childhood injury is complex and attempts to reduce accidents are extensive and varied, but as yet no vast reduction in accidents has occurred and accidents remain the single major cause of childhood mortality and morbidity in the United Kingdom. The next section examines the literature pertaining to the health visitor role in preventing accidents to pre-school children.

### **2.11 Health visitors: preventing accidents to pre-school children?**

Health visitors have traditionally played a role in the health education of families with young children in the United Kingdom (Davies 1998). However, relatively few studies have considered examining mothers' opinions of the health visiting service and specifically their views of the health visitor role in preventing and reducing accidents amongst families with pre-school children. The literature reviewed in this section critiques the evidence relating to the work of health visitors in relation to accident prevention activities. Most of the studies to date have examined the work of

health visitors, with them as the subjects elaborating on their work from their own perspective. In contrast, few studies have investigated the clients' perspectives in relation to the health visitor role for preventing accidents. Relying purely on outcomes of reduced injury rates and health visitor reports is an incomplete analysis of the effectiveness of health visiting for promoting child safety. The relative dearth of literature presenting evidence of the clients' subjective evaluation of health visiting in respect of preventing accidents emphasised the need to undertake this study.

### **2.11.1 Health visitors' views**

Several studies have examined the role and function of health visitors (Robinson 1982, Clark 1984, Mayall and Foster 1989, Pearson 1989, 1991) but relatively few have investigated the health visitor's role in accident prevention. Recently, health visitors have been reporting their role in accident prevention activities through the medical and nursing journals (Lowe 1989, Adams 1993). Other health professionals have also identified health visitors as developing a role in accident prevention (Cameron and Fletcher 1989, Melia et al 1989, Levene 1990, 1992). Only a few studies have investigated this role systematically (Laidman 1987, Carter et al 1992) and the perspectives of mothers have rarely been sought and documented compared with those of the health visitors.

Laidman (1987) examined health visitors', student health visitors and parents' perspectives of preventing accidents to pre-school children in a small scale qualitative study. One of the key findings from this research was that parents were unable to recall any safety information from health visitors. In response to this the author recommended that health visitors should be more direct in their approach to discussing safety with parents, making it clear to parents that the purpose of their visit was to discuss child safety and ways to prevent accidents. In contrast Jordan (1993) reported that parents spontaneously identified health professionals as sources of information for preventing accidents.

Laidman (1987) reported that the health visitors were ill prepared for their role in tackling the problem of childhood accidents as many of them found it difficult to establish discussions about preventing injuries with parents. It seems that most health visitors viewed their role as educational and little attention was given to either environmental or enforcement approaches. Considering the small size of the study, it formed a catalyst to prepare health visitors better for their role in accident prevention. For example, the Health Education Authority (1991) in association with the Child Accident Prevention Trust, developed a training resource pack for health visitors. Further publications described approaches to tackle childhood accidents and to evaluate preventative programmes (Child Accident Prevention Trust 1991). There was, however, no obligation for the educational institutions to incorporate these resources into health visitor training programmes or health service in-service training. The impact of the training pack has not been systematically evaluated since its high profile release in 1991.

Perhaps spurred on by the interest in the health visitor role in reducing childhood accidents, Carter et al (1992) developed a study to identify health visitors' perceptions of their preparation to undertake accident prevention work with parents. Using a self completion postal questionnaire 96 health visitors were surveyed and a good response rate (93%) was achieved, however, the findings whilst representative of the situation in Staffordshire may not have reflected the circumstances of the rest of the United Kingdom. The health visitors in Staffordshire reported that they were uncertain of their role in accident prevention and only 12% felt they had enough information about how to prevent accidents. This seemed remarkably similar to the findings of Laidman (1987) five years previously. Only 13% of the 89 respondents reported visiting all notified accident cases. Evidently health visitors used their own discretion as to which families they visited after accidents. It may have been that the demands on health visitors' time did not allow for post accident support visits to all families. However, the findings raise questions about the value of such selective and discretionary post accident home visits from the clients' perspective.

A study by Gray (1992) sought to analyse health visitors' views on community development and identified health visiting priorities in the Haringey area of London. Through a postal survey method which involved 40 health visitors and achieved a 70% response rate, health visitors were asked to select priorities for practice with respect to the recent white paper *Health of the Nation* (Department of Health 1992). Accident prevention was identified as a priority by health visitors for the health visiting service when compared to other key areas identified in the white paper. This finding contrasted with those reported by Kay (1989) who found that the prevention of childhood accidents was considered a low priority amongst health visitors when visiting parents and that feeding advice figured more prominently in their priorities.

Little is known about how health visitors organise accident prevention work in clinical practice and how mothers perceive this particular aspect of the health visitor's role. Whilst many people profess the important contribution of health visiting for promoting child safety (Cameron and Fletcher 1989, Jackson 1990, Avery and Jackson 1993, Levene 1990, 1992) particularly post accident (Melia et al 1989) there have been few studies which have examined or evaluated these aspects of health visiting. Further, there was little acknowledgement given to the possibility that mothers may differ in their perspectives about the value of the health visiting contribution to preventing accidents compared with health professionals.

What was gleaned from the literature discussing the effectiveness of health visiting for reducing childhood accidents, was that educating parents to reduce accidents was the most common approach expected of health visitors (Alwash and McCarthy 1987, Fradd 1989, Melia et al 1989, Towner et al 1993). We have already seen from the studies of the educational approach to accident prevention, that such an approach to reducing childhood accidents was inadequate when used in isolation.

Alwash and McCarthy (1987) suggested that health visitors should concentrate on how people live in their homes and guide them in safe coping practices rather than seeking to make physical alterations to the home environment. In contrast,

Widner-Kolberg (1991) recommended that public health nurses should as part of their accident prevention role identify environmental hazards, unsafe products and petition for their removal. Health visitors were identified as influencing safety in the home through posts such as the Health and Housing Facilitator in Oxford (Child Accident Prevention Trust 1992). It seemed these authors considered the health visitor's role to verge on the environmental approach as they sought to alter the home environment, and that health visitors should become more active in seeking legislation which would lead to the enforcement of safety standards (Gaffin 1991). The work of health visitors for reducing accidents could be seen as controversial amongst health professionals and it was not evident as to what clients perceived the role of health visitors to be in preventing childhood accidents.

### **2.11.2 Parents' perceptions of health visitors**

Mayall and Foster (1989) investigated the perspectives of 33 mothers of children who were aged 21 months and younger and 28 health visitors in their examination of child health care services. The mothers and health visitors differed in their approaches to child health care and their opinions about services to promote child health. Although this study did not specifically address the issue of accident prevention, their research emphasised that obtaining the views of mothers was a valuable approach for examining health service provision as expectations may differ between health visitors and mothers.

Arguably, it is important to study both sides of the accident prevention dialogue with mothers and health visitors when seeking to improve services and their impact on reducing childhood injury. However, it was not the purpose of this particular study to examine the health visitors' perspectives, but to explore the less researched views of the mothers who cared for pre-school children. It was important to identify what kind of work mothers perceived health visitors to be involved with and if accident prevention was an important and valued part of the health visitor's role. Given the evidence that health visitors felt ill prepared for this particular role, but that it was important for them to address the problem of childhood accidents, it was necessary to

understand how the mothers viewed health visitors working or coping with this paradox.

Combes (1991) undertook a small scale, qualitative, action research study of parents and children's perspectives on child safety. Parents were invited to attend group discussion meetings and 112 agreed to take part in the study and 196 children aged 3 to 6 years took part in structured group discussions and made drawings. The study was undertaken in four locations in England, Scotland and Northern Ireland and data gathering sessions took place in schools, family centres and nurseries. The majority of parents could not recall any discussions on preventing accidents with health visitors and wanted more advice from health visitors about making the home safer. Parents recognised that health visitors have an important role in the prevention of accidents, particularly by volunteering information to parents rather than parents having to seek information. Parents identified being most in need of accident prevention information when children are between one and three years of age. The health visitors' manner was identified as equally important as the content of the information being delivered when undertaking accident prevention education and this has been found to be so for the delivery of child health care information when investigated by qualitative methods (Mayall and Foster 1989, Islam and Nielsen 1993).

Post accident support visits involve health visitors supporting families and advising on safety at home following an accident to a child. Most health visitors are now informed of injuries that lead to hospital contact for treatment. Most parents in the Combes (1991) study who had received post accident support visits reported them to have been a negative experience. The parents criticised health visitors who focused on the injured child rather than on supporting the parents at a time of stress. Indeed it was suggested that post accident support visits could be considered the most stringent test of a partnership between health visitors and parents (Combes 1991).

### 2.11.3 Summary of health visitors and preventing accidents

The value of the health visiting service for preventing accidents to pre-school children has received little scrutiny despite health visitors being considered appropriate health professionals for promoting child safety and reducing accidents. The opinions of the service recipients, in this instance mothers of young children, had rarely been sought when examining the contribution of the health visiting service for reducing childhood accidents. A review of the literature demonstrated a lack of knowledge about the importance and priority for preventing accidents amongst mothers and health visitors. The work of health visitors is varied and many demands are made on their skills and time. Few studies had examined what mothers considered health visitors' work priorities to be and what issues or needs they perceived had influenced health visitor work patterns or approaches to reducing childhood accidents. Disparity of priorities for reducing accidents have been reported by health professionals (Kay 1989, Gray 1992), but these may be a reflection of health policy and health targets shaping the work of health visitors. Given the pertinence of preventing childhood injury, the need for greater understanding of the accident problem from the mothers' perspectives was evident from the review of the literature.

## 2.12 Conclusions on the research into childhood accidents

- Epidemiological data elaborates on the persistent problem and pathology of accidents to pre-school children, but rarely does it identify ways to resolve accidents to pre-school children.
- The research literature does not provide answers to the questions posed in this research study.
- Research in to accidents to pre-school children reveals a diversity of approaches drawn from several fields. Accidental injury is a complex problem and a range of organisations are responsible for promoting the safety of children.
- The three principles of accident prevention, namely *education*, *environment* and *enforcement* characterise the approaches followed in the majority of studies in to accident prevention.



# **Chapter 3**

## **Background to the Theoretical Framework of this Study**

### **3.0 Introduction**

It is questionable as to how much thought nurses give to the theoretical base on which they develop practical skills and to the value of clinical practice to theory development. Nurses often argue that what they do is intuitive (MacCleod 1990). Arguably, there is a general lack of recognition amongst nurses of the different theoretical bases that can construct and guide practice. This lack of recognition of the theory upon which nursing practice is based is not entirely a failing of the individual nurse. Outside academic circles the theory guiding nursing practice is rarely discussed (Kitson 1993). Many of the empirical and practical research studies reviewed in the previous chapter, whilst providing findings relevant to practice, often made no explicit reference to a theoretical base and this is not a failing of only accident prevention studies. Jaarsma and Dassen (1993) in their review of the nursing literature also identified this same problem. Yet this literature in popular nursing and medical journals is the source most nurses rely upon to improve their knowledge base, once their formal nurse education is completed. Whilst the studies contributed to an increase in nursing knowledge they often failed to clarify the significance of theory in either research or practice. When the dialogue about theory and its relation to practice is so poor as not to be documented in much of the research literature, it is not uncharacteristic that nurses in their daily work should fail to identify with theory or document its impact on their work or vice-versa.

Nurses are constantly yet unknowingly using theory in their work and many are contributing to theory development as they are studied going about their work (Pearson 1992). However, in clinical practice few nurses recognise and document the relationship between different theories for guiding or developing their work. If

researchers and academics fail to be explicit about the theoretical framework for their work, how then can nurses be expected to recognise the contribution it makes to the quality of their nursing care and more importantly how can they demonstrate the role theory has in nursing practice? This question is raised here as it seems that in practice so many of the different theories are implicit to the work of the nurse and used subconsciously to guide practice. The basis of much of the practice of nursing is taken for granted or identified as developing from the recent empirical literature where the theoretical framework has not been made explicit.

In this chapter the importance of theory guiding this particular study is clarified. The study was grounded in theory from several theoretical bases as no one theory appeared to be complete or appropriate for studying the complexity of preventing childhood accidents. The method and analysis for interpretation built upon several different theories from various disciplines, essentially psychology, behavioural science and sociology.

The emphasis of this research was to examine the mothers' perceived (subjective) accounts of the accident situation and how this was associated with their motivation to protect their children. The reality or objective view for the purpose of this study was considered to be the information obtained through accident data collection systems, for example, the number and types of injuries that had occurred leading to hospital admission. The frequency and type of accidents to pre-school children were considered to be the reality of the situation. In contrast relatively little was known about the mothers' perceptions of childhood accidents and to study these the following theoretical issues were identified as important: self efficacy, locus of control, severity and susceptibility of children to accidents, the socio-demographic circumstances of the family and maternal sources of information.

The need for this study to incorporate a combination of theories from different disciplines in its contribution to knowledge was to be expected. Pearson (1992) described theory as providing knowledge about the process of nursing. Vaughan

(1992) elaborated further, suggesting that nursing is a complex process built on several different disciplines and that it is the unique way that nursing combines, interprets and utilises knowledge from different disciplines that make it a separate and unique discipline. In addition, the varied nature of accident prevention and the research studies which have examined it necessitated some frame of reference from which to develop and organise the research approach. Yet it seemed no one specific theory or model would allow for a thorough examination from the mothers' perspective. In view of these findings the necessity to combine theories to develop the theoretical framework for this study comes as no surprise.

### **3.1 Theoretical models explaining health behaviour**

From the preceding section of the literature review, it was evident that most accident prevention activities involved behaviour change to some greater or lesser extent. For this reason the theories explaining behaviour were considered useful for understanding accident prevention strategies. In studying and interpreting behaviour numerous theoretical models have evolved which have attempted to predict, explain and modify behaviour, for example The Health Belief Model (Becker 1974), and Protection Motivation Theory (Rogers 1975). Before elaborating on these particular models and theory which were used as the theoretical framework to guide the study, its methodology and analysis, it is necessary to consider cognitive theory from which they were originally derived.

#### **3.1.1 Cognitive Theory**

Cognitive Theory explains that a person's behaviour is mediated by thought processes involving rational thinking and reasoning. This theory is in contrast to stimulus response theory which implies behaviour is a conditioned response of rewards and punishments which act as reinforcements to bring about a particular behaviour in which thinking and reasoning are not required. Stimulus response theory is not considered here in any detail as it was considered not to be representative of accident prevention behaviour and was given purely as an example

to contrast with and emphasise the cognitive process of thinking about preventing accidents and whether or not to behave safely.

Arguably, some safety behaviours can be considered subconscious, requiring no thinking or reasoning for example, the conditioning of people to cross a road at a Pelican Crossing to avoid injury or to fasten a seat belt for each journey in a car. On the other hand, such behaviours require much rational thinking and reasoning as they are initially developed. However, cognitive processes can essentially explain the learning of such protective behaviours which may then eventually be considered to be subconscious acts once they are well developed. Since human behaviour is not fully explained by cognitive theory the possibility that stimulus response theory or some other unidentified behavioural mechanism might operate to produce behaviour which may prevent accidents is not dismissed. Clark (1992) wrote of the synthesis and blending of the different psychological perspectives for understanding behaviour more comprehensively. The theoretical framework for this study focuses on cognitive processes to develop an understanding and explanation of motivation to adopt safety strategies for reasons outlined below.

### **3.1.2 Value Expectancy Theory**

Cognitive theorists emphasise the role of rational thinking and reasoning to produce certain behaviour. There is an 'expectation' that a particular behaviour will bring about a certain 'outcome'. Behaviour from this perspective is considered a function of Value Expectancy Theory, Schwarzer (1992) offers a thorough critique of the development of this theory and the models which have originated and evolved from it. Behaviour in this particular theoretical framework is a function of the subjective value of an outcome and of the subjective expectation that a particular action could achieve the outcome. For example, the subjective value of an outcome may be safety, the subjective expectation that the particular action of wearing a seat belt could achieve the outcome of safety from injury, influences a person to wear a seat belt as a safety behaviour. This decision to wear a seat belt is a cognitive process

requiring the person to think about their safety and reason as to what is a safe way to behave, therefore it is a cognitive process of what is a perceived value of safety.

Value Expectancy Theories are the basis for Social Learning Theory (recently termed Social Cognitive Theory) (Blair 1993, Bandura 1977, Rotter 1966). Social Cognitive Theory holds that behaviour is determined by expectancies and incentives as these influence a person to behave accordingly. This theory is explained in some detail here to enable an understanding of its relevance to understanding and explaining accident prevention behaviours and the determinants influencing people in their decisions to adopt safety behaviours.

### **3.1.3 Social Learning Theory (Social Cognitive Theory)**

Social Learning Theory suggests peoples' behaviours develop through the interaction of the person and the environment (Bandura 1991, Connor and Norman 1995). This theory was therefore considered particularly useful for understanding the mothers' views of maintaining safety and preventing injury in and around the home environment. An explicit recognition of the interaction of the environment in which mothers cared for their child as being associated with their perceptions of accidents seemed a logical expectation of any theory which was to be developed as a framework for this study. The theory of social learning is comprised of what Bandura (1977) termed expectancies and incentives. Further clarification of these terms is offered here to enable understanding of Social Learning Theory and its contribution to this study.

Bandura described three expectancies that influence behaviour.

- Expectancies about environmental cues- beliefs about how events are connected (what leads to what).
- Expectancies about the consequences of one's own actions-how individual behaviour is likely to influence outcomes. This is termed 'outcome expectation'.
- Expectancies about ones own competence to perform the behaviour needed to influence outcomes. This is termed efficacy expectation and includes self efficacy.

Incentive is defined as the value of a particular object or outcome and termed value outcome. Behaviour is modified by the perceived value of an outcome.

To clarify this theory in respect of accident prevention strategies it is necessary to give an example of how the theory can explain a mother's behaviour towards her child when she is protecting it from injury. A mother who perceives the (value outcome of) use of an infant car seat will change behaviour and use an infant car seat if :

- a) the mother perceives car travel poses a threat to the child's well being (environmental cue)
- b) the mother perceives that using an infant car seat will reduce the danger to the child during car travel (expectation outcome)
- c) the mother is personally capable of adopting the new behaviour, for example using a car seat (efficacy outcome).

Social cognitive theory is a useful theoretical framework for health promotion programmes (Blair 1993) especially accident prevention programmes where it is evident that interaction between the environment, education (a cognitive process) and behaviour occurs. For example, an environmental hazard such as unlocked windows from which young children can fall can be remedied by educating the mother about the hazard and how to use window guards, influencing cognitive factors predisposing the mother to being able to actively behave safely by installing window guards.

The theory explains how for positive behaviour change to take place it is essential that the parent perceives the hazard, understands the safety behaviour to reduce the danger and feels able to carry out actively the safety behaviour. Strecher et al (1986) emphasised that it is the perceived ability of a person to perform actively a certain behaviour that has an important influence on whether the safety behaviour takes place, not the true or real capabilities of the person. The perception of the mother may or may not reflect the objective reality of the situation which may result in

different approaches to preventing accidents. The mother may or may not perceive the hazard of falling from the window, or understand the use of window guards in reducing falls or the mother may perceive herself unable to use the window guards as recommended.

Self efficacy is considered an important attribute by several researchers when explaining behaviour change (Bandura, 1977, Kok et al 1992, Blair 1993, Schwarzer and Fuchs 1995) along with the separate but related concept of Health Locus of Control (Rotter 1966, Wallaston and Wallaston, 1984). Since these were considered relevant theories for understanding motivation, but not explicitly considered within some health behaviour models it was necessary to consider integrating them into the theoretical framework when studying mothers' motivation to adopt safety strategies. Only relatively recently has self efficacy surfaced as an implicit addition to the Health Belief Model rather than as an explicit component and there has been criticism that this has not been the most appropriate advancement for understanding health behaviours (Rosenstock et al 1988).

#### **3.1.4 Self efficacy**

Self efficacy is defined as the estimation of the person about his/her abilities to perform specific behaviour in a specific situation (Bandura, 1991). Self efficacy is thought to be situation specific, focusing on a persons beliefs about their own capabilities in a specific setting. For example, a person might feel capable of using an infant car seat in their own car, but not if they are travelling in a friends car. Again a person might perceive themselves to be capable of using an infant car seat, but not of using a window guard in the house. Different situations give rise to different level of self efficacy.

Bandura (1991) described a person's self efficacy as developing from four sources of information, these being an individual's own *experience* with behaviour, *observation* of others performing the behaviour, *verbal persuasion* to perform the behaviour and *physiological state* for example nervousness resulting in sweat and palpitations. It

was suggested that experience is the most influential source of information followed by observation. The first three sources of information from which self efficacy develops have some similarity with the sources of information identified as being important to people when learning and developing knowledge (Belenky 1986, Vaughan 1992, Berger and Luckmann 1966). Self efficacy is an important component to consider when considering mothers' motivation to engage in accident prevention strategies, however it has rarely been examined in the research studies reviewed in the previous chapter.

### **3.1.5 Health Locus of Control**

Rotter (1966) described locus of control as a *generalised* concept about the self which is *not situation specific*. Locus of control relates to how an individual views health behaviour rather than their capabilities to act in a particular way. Locus of control is about whether a person is internally controlled and feels responsible for their own health or externally controlled and believes health is in the hands of other people, perhaps a matter of luck or fate. Locus of control helps us to understand the mother's perceptions of whether safety can be achieved through her own behaviour (internally) or if things are beyond her control (externally). Locus of control does not signify if a person feels capable, rather whether they generally view a controlling influence to be internal or external. Mothers who feel more internal control over their children's safety are more likely to perform safety behaviours which result in greater safety for their children.

Health locus of control is another derivative from social learning theory with the specific premise that a person has 'a generalised expectancy relating to the perceived relationship between one's own action and experienced outcomes' (Norman and Bennett 1995:63). The focus is on expectancies for future events rather than on causes of past events. Examination of earlier work on Rotter's scale (1966) illustrate how people who feel internally controlled are more likely to take make efforts to influence their environment and take responsibility for their actions, actively seek health information and therefore be more likely to engage in health behaviours



(Norman and Bennett 1995:63). However, the evidence suggests that the locus of control scales both at a general and behaviour specific level are poor predictors of health behaviour when used in isolation and other constructs, for example, self efficacy must be considered. In respect of this evidence, locus of control will be analysed for its role in promoting safety behaviours in conjunction with the other constructs described in this chapter.

Several models of value expectancy are being used to explain and modify behaviour in many areas of health promotion work (Schwarzer 1992, Connor and Norman 1995). Only recently are these models being utilised in childhood accident prevention studies (Peterson 1990, Greaves 1990, Glik et al 1991, Russell 1991). The Health Belief Model (Becker, 1974) has been frequently used to research and understand health behaviour and evaluate health promotion programs (Kvis et al 1985, Strecher et al 1986, Rosenstock et al 1988). Several authors have remarked on the similarity of the Health Belief Model to the Social Cognitive Theory of Bandura (Rosenstock et al 1988). For clarity the Health Belief Model is outlined here and its theoretical contribution to explaining accident prevention behaviour analysed. A diagrammatic representation of the model is presented in Figure 3.1.

### 3.2 The Health Belief Model

The basic concepts of the Health Belief Model are that an individual's health behaviour is determined by:

- a) the person's perceived susceptibility to and severity of illness or its sequale (threat).
- b) the person's perceived benefits of taking a particular action minus the perceived costs or barriers to the action.
- c) the person's perceived self efficacy, ( the belief that an individual is personally capable of successfully performing the behaviour or not).

To understand the utility of the model for understanding motivation to develop safety behaviour and prevent accidents the above explanation is related to the following

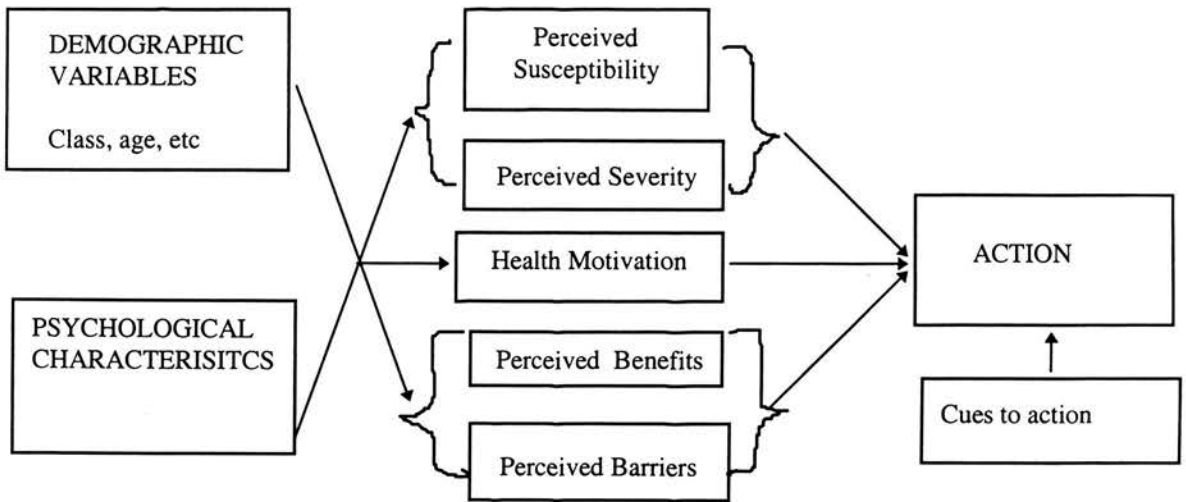


Figure 3.1 The Health Belief Model  
Adapted from Sheeran and Abraham (1995)

scenario. For a person to adopt the safety behaviour of installing a smoke detector the individual must:

- a) perceive an accident of a fire as being possible, that the fire may be severe and that this is a threat to safety (safety is perceived as a value by the person).
- b) the person must perceive the benefit of installing a smoke detector to outweigh the costs of installing the smoke detector. (There is the expectation that having a smoke detector promotes safety). In this instance it may be that the perceived benefits of the smoke detector is its ability to warn the person of danger from a house fire or smoke so that they can avoid burning or smoke inhalation. The cost or barrier to using the alarm may be the perceived financial cost of buying the alarm, the difficulty in installing the alarm, the inconvenience of 'false' alarms and the need to monitor and replace batteries for the smoke detector to function. It is necessary for the benefits to be perceived as greater than the costs for effective safety behaviour to take place.
- c) the person must perceive themselves as capable of having a smoke detector installed. Levels of self efficacy may vary as individuals differ in their own personal abilities to install a smoke detector, but they may feel capable of arranging for a smoke detector to be fitted by someone else. The more a person perceives themselves as being able to carry out the safety behaviour, the more self efficacy they perceive. After having perceived safety as a value, perceived the installation of a smoke detector as an overall benefit to safety and that the person as capable of installing the smoke detector, motivation to adopt action to install the smoke detector can take place.

The concepts outlined above make an important contribution to the understanding of behaviour in the area of accident prevention. Schwarzer (1992) argues that several concepts of the model are not made explicit, but remain implicit, unspecified assumptions of the function of the model or retrospective additions to the model. For

example locus of control and originally self efficacy were considered implicit in the barriers and part of the cost and benefit concept. This is an unsatisfactory inclusion of essentially different, but related concepts to the model. Another important concept subjective norm (the individual's perception of social pressure to behave or not behave in a particular way) is also implicitly included in the cost benefit construct of the model in its present format. It would be advantageous to have such important constructs more clearly represented in the model. It would seem that any construct not explicitly accounted for in the model becomes an assumed part of the cost and benefit construct rather than modifying the model to be more explicit. The limitations of the model were considered throughout the development of the study design and analysis, but essentially the model enabled the development of a theoretical framework in a relatively new area of research.

Self efficacy makes an important contribution to explaining behaviour in this model and several researchers emphasised the importance of self efficacy in their work to explain behaviour (Kok et al 1992, Schwarzer 1992, MacInnes, 1992 Rogers 1983). The concepts of susceptibility, severity and the benefits minus costs construct were also recognised as having an effect on determining behaviour, but it was difficult to quantify the strength of the different individual constructs on determining the actual behavioural decision from the studies to date (Sheeran and Abraham 1995)

The Health Belief Model has been used extensively in health behaviour research (Schwarzer 1992, Sheeran and Abraham 1995) and recently the model has been applied to explain and modify behaviour in the area of childhood accidents and their prevention (Russell 1991, Peterson 1990). Several researchers have utilised the model in a modified way (Greaves 1990, Glik et al 1991). Reports that the Health Belief Model does not fully explain behaviour in the area of childhood accident prevention (Russell, 1991, Peterson, 1990) can be appreciated given the limitations of the model. Several other identified and as yet unidentified concepts may determine behaviour, as well as those accounted for in the Health Belief Model. However, the Health Belief Model has provided a central focus for much work in the

area of behavioural study (Rosenstock et al 1988). Criticism of the model was not intended to undermine the potential of the Health Belief Model, but to ensure it was considered critically in the research design and analysis.

Several other models to explain motivation to adopt behaviour have emerged and often contribute to new dimensions for investigating and understanding behaviour, but as yet no one model seems able to explain comprehensively the different observed behaviours (Weinstein, 1988) in adults when providing safety for pre school children. It was necessary to examine these other models to analyse their contribution to explaining behaviour in the area of child safety so that the important components of the models could be identified and used when developing the theoretical framework for this study. Only Protection Motivation Theory is elaborated on in any detail as this was considered relevant to the development of the theoretical framework for the study.

### 3.3 Protection Motivation Theory

Protection Motivation Theory (Rogers 1975, 1983a) was also derived from Expectancy Value Theory, that is the tendency to act in a particular way is determined by the expectancy that a certain behaviour will be followed by some consequence (outcome) and that the consequence is of value to the person. Protection Motivation Theory specifies that a motivation to protect arises from the cognitive appraisal of a depicted event as noxious and likely to occur, along with the belief that the recommended coping response can effectively prevent the occurrence of the adverse event. For example, for a safety behaviour to occur, a person must perceive being knocked down by a car as a severe and probable event, the person must believe the behaviour of crossing a road at a Pelican Crossing to be an effective way to prevent the accident. A diagrammatic illustration of the model is presented in Figure 3.2.

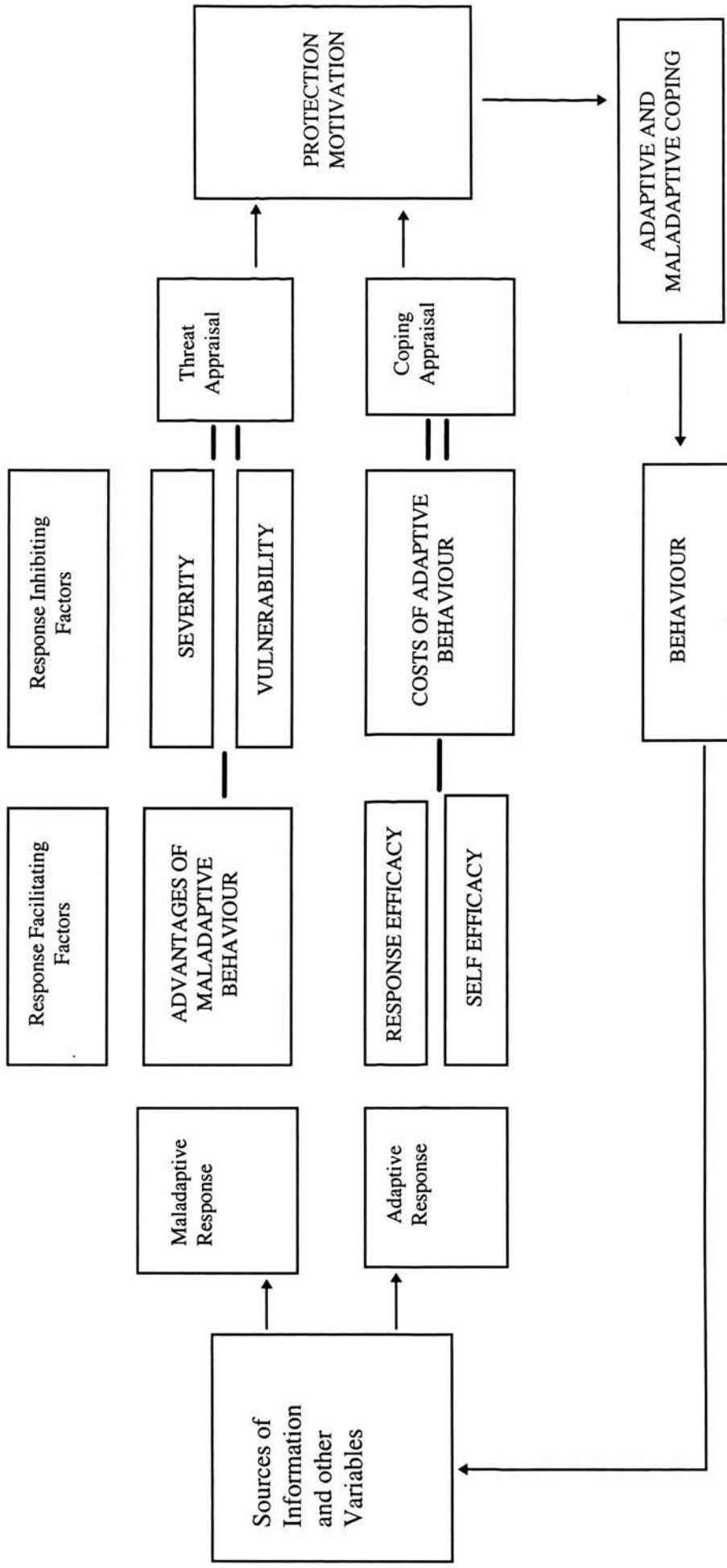


Figure 3.2 Diagrammatic representation of Protection Motivation Theory Adapted from Boer and Seydel (1995)

Protection Motivation Theory builds on the theory of Fear Appeals (Hovland et al, 1953) and the Expectancy Value Theory of the Health Belief Model (Becker 1974). It is necessary to briefly clarify the theory of Fear Appeals to understand their contribution to the development of Protection Motivation Theory. Fear Appeals produce attitude change through the unpleasant emotion of fear. Fear Appeals are recognised as having three crucial stimulus components:

- 1) the magnitude of noxiousness of a depicted event (the value component)- Termed Noxiousness
- 2) the conditional probability that the event will occur provided that no adaptive behaviour is performed or there is no modification of an existing behavioural disposition (an expectancy)-Termed Probability
- 3) the availability and effectiveness of a coping response that might reduce or eliminate the noxious stimulus (efficacy expectancy)-Termed Response Efficacy.

Protection Motivation Theory emphasises the importance of cognitive processes to mediate the effects of the three components of Fear Appeals and applies Value Expectancy Theory to the three components rather than the emotional state of fear as the influence to stimulate behaviour. The emphasis is on cognitive processes of thinking and reasoning to produce protection motivation rather than on fear as an emotion. 'Protection motivation arises from the cognitive appraisal of a depicted event as noxious and likely to occur, together with the belief that a recommended coping response can effectively prevent the threatened event from occurring' (Rogers 1983a:158). For example, a pre-school child falling from a window needs to be seen as noxious and likely to occur and that the coping response of using a window guard can effectively prevent the child from falling.

Protection motivation has the typical characteristic of a motive therefore it arouses, sustains and directs activity. Protection motivation has six essential conditions which need to occur to elicit protection motivation and for appropriate behaviour as is described above to take place. A person must perceive:

- the threat is severe (severity and probability that the event will occur)
- one is personally vulnerable to the threat (susceptibility)
- one has the ability to perform the coping response (self efficacy)
- the coping response is effective in averting the threat (efficacy of the behaviour to stop the threat)
- the rewards associated with the mal-adaptive response are outweighed by the factors decreasing the probability of making the mal-adaptive response (Benefits of adaptive behaviour outweigh the benefits of the mal-adaptive behaviour)
- the costs of the adaptive response are outweighed by the factors increasing the probability of making the adaptive response (Benefits outweigh the costs)

Protection Motivation Theory specifies that one is coping with and avoiding a noxious event rather than escaping from an emotional state of fear. It is evident that many safety behaviours result in situations when fear as an emotion is not present, for example forms of coping such as crossing a street or driving a car when one is not in an emotional state of fear, but still engages in the protective activities of using a Pelican Crossing or a car seat belt.

Rogers (1975) is quite explicit about the fact that Protection Motivation Theory is an attempt to account systematically for some of the variation in people's acceptance of recommended behaviour change. Rogers recognises that other determinants of behaviour exist for example, the cost element, personality and timing of information giving. Rogers (1975:110) states 'that a broader conceptual framework can be achieved through an orderly progression of theory building and empirical research'.

In light of such recommendations the need to draw upon different theoretical frameworks and combine components of different models to understand health behaviour change is evident. The short falls of certain models can be alleviated by combining the important components of the models in the theoretical framework of the study. The Health Belief Model and Protection Motivation Theory have implicitly or explicitly identified self efficacy, response efficacy, locus of control,



severity and probability of an accident as important factors for consideration in attempting to understand mothers' perspectives of accident prevention activities. The models also acknowledge the interaction of the social environment on the cognitive processes leading to motivation to adopt health behaviours.

Human behaviour is a complex phenomenon and is not easily explained in any one theoretical framework. What is emerging is the need to recognise the limits of what is known and pursue further work to elaborate on present theory. The complexity of behaviour makes it necessary to consider several theories simultaneously and simplistic diagrammatic representations of the models of behaviour change often under-estimate the nature of behaviour and at times misrepresent the reality of life. It is for these reasons that several concepts from the models and theories described have been used to guide this study, its method, analysis and interpretation. Rather than test any one specific model with known weaknesses this researcher will draw together important theoretical concepts and use them in a practical approach to help explain and understand different mothers' perspectives of the child accident problem and their activities to reduce childhood accidents.

Work by several researchers who have tested some of the models and demonstrated their inadequacies and limitations raised questions about how a behavioural model can possibly be correctly examined by statistical methods (Schwarzer 1992, Connor and Norman 1995). This study draws on the evidence from earlier studies of the models with an emphasis to build on the theoretical frameworks supplied by the models for the purpose of studying childhood accidents and their prevention and to offer a contribution to knowledge in the area of child safety rather than to test a specific model. Mothers have a set of safety beliefs and these will influence their receptiveness to strategies for preventing accidents and it is important to take these in to account when promoting the safety of children. Through integrating components of the models it is intended to develop a methodology which will elaborate on theory and inform clinical practice

### 3.4 Summary

Many studies of the problem of childhood injury have been epidemiological in approach and made several associations between injury rates, the child's age, sex and level of activity (Forth valley Health Board 1991, Greaves 1990). Epidemiological studies are useful in identifying the magnitude of the problem and directing attention to the injuries studied and for influencing environmental and legislative policies to reduce accidents. There is now an increasing body of literature studying the theoretical and practical aspects of attitude and behaviour change to reduce the problems identified by the epidemiological research. However, despite these epidemiological studies and their findings, the research literature suggests action to reduce accidents is relatively small scale compared to the size of the problem.

The Government and the National Health Service are targeting accident rates for a reduction by the year 2000. Acknowledgement of the impact of accidents on the health of the nation is significant with local and national targets set to reduce accidents. Accident rates have been slow to decline and unintentional injury remains the single leading cause of death to pre-school children in many developed countries. There remains an urgent need for effective strategies to reduce accidents to be developed. A greater understanding of the perspectives of the main carers of pre-school children is intended to help shape future directions for tackling the injury problem in a more comprehensive and sympathetic way than by only considering the health professionals perspectives. Protection Motivation Theory and the Health Belief Model were used to develop a theoretical framework for this study to enable data collection and analysis of maternal perceptions of accidents to pre-school children. The following chapter will present the method for the research study and illustrate how the theoretical framework helped shape the study.

### 3.5 Conclusions on the theoretical framework for the study

- The search for a theoretical focus for this study from published literature revealed that a relatively limited amount of theory has been developed which is specifically relevant to studying the accident problem.
- By examining a small number of research publications which are argued to be highly relevant to this work, the areas of theory which appear to have greatest utility are models of health behaviour drawn from social cognition theory.
- Specifically adopting elements of the Health Belief Model (Becker 1974) allows this study to examine the social and environmental context in which mothers protect their children from injury.
- Protection Motivation Theory (Rogers 1975) clarifies the specific components of self-efficacy and response efficacy and the possibility of adaptive and mal-adaptive responses for health behaviours.
- It is argued that for this thesis the Health Belief Model adapted to incorporate additional elements from Protection Motivation Theory together forms the most applicable framework for understanding maternal motivation to protect pre-school children from injury.
- The need to draw upon different theoretical frameworks and combine components of different models to understand maternal motivation to protect children is evident.
- The short falls of certain models can be alleviated by combining the important components of the different models in the theoretical framework of this study.
- The theoretical framework developed from the above analysis of the literature has shaped the research methodology for this thesis and was used to guide the formulation of hypotheses and research questions, to develop the approach to the study, to design the questionnaire and interview schedule, to frame the analysis and to interpret the subsequent research findings.

# Chapter 4

## Research Methods

### 4.1 Introduction

The purpose of this research was to develop a deeper understanding about how mothers perceive accident risk, how they set priorities and adopt approaches to identifying hazards and preventing accidents to pre-school children. The study therefore placed those who care for children at the centre of the research and goes beyond examining accident statistics, to reveal the relationship between mothers' perceptions of accidents, their social context, experiences of parenting and motivation to protect pre-school children. A deeper understanding was sought of how mothers identified hazards and coped with the risk of accidents to their children, what strategies they followed and deemed as appropriate to their circumstances to keep their children safe and what help they thought they needed from health professionals. This focus on perceived versus objective risk and upon individuals' social context and accident experiences were significant differences in the orientation of this research from that which has gone before. The research sought to establish which actions mothers thought constituted safe practices rather than seeking the health professionals' perspectives of safe practices. The study examined how the health professionals, particularly health visitors were perceived by mothers in their day to day work with families for reducing accidents to children.

#### 4.1.1 The aim of the study

In this study the aims were:

- to analyse mothers' perspectives of accidents to pre-school children;
- to understand how mothers are motivated to adopt accident prevention strategies when caring for their pre-school children,

- to identify the value of the health visitor in facilitating safety practices and
- consequently to form recommendations for future accident prevention programmes.

#### **4.1.2 The specific research questions were:**

- What motivates mothers to adopt safety practices and to take action to prevent accidents to their pre-school children?
- How does social context relate to mothers' perceptions of injury risk and necessary safety practices?
- What is the value of health visiting for preventing accidents to pre-school children?

The aim and research questions above demonstrate the focus for this study.

## **4.2 The study setting**

The pilot study and main study were undertaken in Scotland within a geographically defined Health Board district. The exploratory and pre-test interviews were carried out in a different geographical area of Scotland to the pilot and main studies to ensure that the mothers who were interviewed during the development of the research instruments were not also drawn into the random or post accident sample of the pilot or main study.

### **4.2.1 Gaining access**

Two samples were required for the main study of mothers' perceptions, a random sample of mothers with a pre-school child living within the health board district and a post accident sample of mothers whose pre-school child had attended the Accident and Emergency department within the three months prior to data collection. The post accident sub-sample ensured the views of mothers whose children had recently experienced an accident were considered and enabled a comparison of these views

with the random sample who may or may not have had an accident experience to reflect on when reporting their views. This enhanced representation of mothers whose children had experienced an accident was to enable examination of differences between mothers with and without accident experiences in the main study.

Approval of the Health Board Ethics Committee was given for the study to take place within the Health Board district and access to the relevant data sources was granted. The Health Board Primary Care Manager supplied information from the Community Health Index Data Base for the purpose of drawing a random sample of mothers with a pre-school child within the defined geographical area for both the pilot and main studies. Whilst approval was given for the study, it was necessary to present the Ethics Committee with the research tools for example, covering letters interview schedules and questionnaires at each stage of the research process (Appendix 1-3). This required repeated submissions and attendance at the Ethics Committee meetings for the research to proceed.

Ethical issues considered included ensuring the anonymity of the key informants in any reports or publications and the secure storage of confidential data. It was agreed that the key informant's names would be changed to assumed names or codes in any written communications or data storage systems following data collection. The development of the interview schedule clarified the purpose of the interview study and the line of questioning for the Ethics Committee as the subject was considered a sensitive topic for investigation (Cowles 1988). It was necessary to establish for the Ethics Committee that the study was investigating accidental injury, not intentional injury and that the research interview would be non-judgmental. The covering letters and consent forms complemented the verbal explanations of the researcher for the study and assured the Ethics Committee that the participants were able to make informed decisions about becoming involved with the study and that they could withdraw from the study at any time if they wished. The Accident and Emergency Consultant gave permission to access the Accident and Emergency Register and medical notes to draw the post accident sample of mothers.

## 4.3 The pre-pilot work

This section describes the development of the research tools and methods for the study.

### 4.3.1 Exploratory interviews with mothers

The purpose of the exploratory interviews was to ask the main carers of pre-school children for their perspectives on accidents, safety and the role of the health visitor in preventing childhood accidents. The mothers were considered to be the 'knowers' (DePoy and Gitlin 1994) and able to offer a deeper insight into the phenomenon of developing safety strategies to reduce accidents to pre-school children. Health professionals are often considered to be the authority on health care issues pertaining to young children, but this study aimed to redress the balance of knowledge about protecting children and centre the research on the mothers' perspectives. The data gathered through the exploratory interviews were essential for developing the structured questionnaires for the main survey and identifying preliminary themes for the interviews in the main study.

The informants for the exploratory interviews were recruited through a pre-school nursery in a large Scottish city. Access to the informants was gained through the Pre-school Nursery Manager who, at the request of the researcher, publicised the research and the need for volunteers to discuss safety issues and the role of the health visitor. The parents whose children attended the nursery expected to be involved in different research projects as part of their involvement with the nursery. Several mothers of pre-school children who attended the nursery agreed to be involved in the exploratory and pre-test stages of the research. A copy of the topic guide to be used with the mothers was supplied to the Nursery Committee for their approval (Appendix 1). The topic guide was approved by the Nursery Committee and the

names, telephone numbers and addresses of the mothers wishing to take part in the exploratory and pre-test interviews were released to the researcher.

The convenience sample for the exploratory interviews was eight mothers of at least one pre-school child who lived in Scotland, but not within the geographical boundary of the main study. The mothers were selected for inclusion into the study as they were considered to be able to offer information on caring for a pre-school child and had experienced some aspects of child safety. The mothers attending the nursery were possibly not representative of the general population, but their views on caring for children were recognised to be valuable for developing the research tools. The mothers were telephoned to arrange a date and time convenient for them to meet individually with the researcher and discuss safety issues. An interview room was made available to the researcher by the nursery. However, all the mothers chose to be interviewed in their own home in preference to the nursery. It was explained to the mothers that the interview would be tape recorded and that the information obtained would then be transcribed for further analysis. The researcher assured the mothers all information would be treated confidentially and the data stored securely. A consent form was signed by the mothers prior to the interviews taking place and all the mothers were informed of their right to withdraw from the study at any time or request for the interview to cease.

The interviews took place in the mothers' own homes and lasted approximately one hour. All the mothers agreed to the tape recording of the interview. The topic guide was derived from a preliminary review of the accident literature and was used mainly to introduce child safety as the area of research and to give the mothers 'permission' to express their views on safety.

#### **4.3.2 The qualitative approach and content analysis**

The data obtained from the exploratory interviews was an appropriate starting point for the study and ensured the questionnaires that were subsequently developed reflected the issues pertinent to mothers, rather than issues apparent to health



professionals. Essentially the interviews shaped the development of the quantitative questionnaires to ensure maternal perspectives could be examined appropriately. At the exploratory stage in the study the interpretative approach of content analysis of the interview data gave an understanding of the mothers' meanings of their experiences of caring for their pre-school children and preventing accidents. The knowledge gained from the exploratory stage of the research revealed the themes which were central to the development of the questionnaire for the main quantitative social survey.

### **4.3.3 Data collection and analysis**

The exploratory interviews were tape recorded and then transcribed in to an Atari word processing package for data management, which facilitated analysis of the transcribed data. The data were retained on audio tape and analysed along side the transcribed data to retain the detail and the context of the interview during the analysis. Each informant's interview was transcribed into a separate data file. During data analysis each interview was replayed through the audio tape recorder whilst the transcribed text was read to identify key concepts for analysis. When the key concepts from each interview were identified they were recorded on separate record cards and in concept data files. Coding themes were then developed by grouping several concepts into a category - representing a phenomenon. Each coding theme was developed as a collection of record cards which contained cross references to the respondent number and page number for each emerging theme. The transcribed text of the informants which contained the concepts under investigation, were then grouped from concept data files into theme data files by cutting and pasting the relevant text.

The data recorded on audio tape and within the theme data files and the individual interview files were then analysed together to enable a description and interpretation of the main themes of the study. For example, the phenomenon of 'safety' was investigated in the exploratory study. 'Common sense knowledge' was identified as a theme of the safety phenomenon in this research. The theme 'common sense

knowledge' was developed from several concepts, two of which were 'intrinsic knowing' and 'automatic knowledge'. These concepts and themes were described and interpreted to represent the phenomenon of safety. Coding themes enabled the researcher to organise, analyse and present the findings of the study. The researcher ensured valid coding of the concepts into themes through repeated examination of the grouping of concepts within data files and on record cards. Analysis of the content of each interview and concept data file allowed the researcher to gain a deeper understanding of the mothers' perspectives for preventing accidents and the value of health visiting.

#### **4.3.4 Findings from the exploratory interviews with mothers**

The key themes referring to safety which arose from the exploratory interviews and contributed to the development of the main study are detailed below. Raw data relating to how these themes were developed are presented in Appendix 6. The mothers' perceptions of safety referred to:

- The physical environment outside the home as a major concern as opposed to the home environment where statistically most accidents to pre-school children occur.
- Common sense knowledge.
- Expectations of support from the health visitor which varied in relation to the children's developmental stage.
- The importance of role enactment, particularly the health visitor's relationship with the mother for influencing the acceptability of the health visiting service.
- More concern about the children's safety in the first year of life as opposed to when the children were older and of an age when statistically more accidents happen.
- Concern about rare causes of death and morbidity which were dramatic rather than common, less sensational causes of death and morbidity.
- The efficacy of safety strategies within the context of personal circumstances rather than in the wider social context.
- First aid was considered as supplemental and peripheral to the routine safety behaviours which were perceived as intrinsic for safety.

These findings were considered alongside the literature reviewed and the researcher's practice based experience for developing the research hypotheses, main study survey questionnaires and the sub questions for the qualitative interviews in the main study.

#### **4.3.5 Summary**

The purpose of the interviews was to gain an understanding of mothers' perspectives of accidents to pre-school children, safety and the role of the health visitor in preventing childhood accidents. The data gathered through the exploratory interviews were essential for developing the semi-structured questionnaire for the main survey and identifying preliminary themes for the interviews in the main study. By considering mothers' perspectives in the development of the research questionnaires the main study was sensitive to the safety issues which were important to mothers. The original research questions for the study remained pertinent, but the specific themes and concepts to be explored were modified in response to the findings of the exploratory interviews. Table 4.3.1 summarises the phases of the research studies and the methods used in this thesis.

#### **4.4 Quantitative method**

The quantitative method for developing knowledge about mothers' perspectives was used to allow generalisability of results. This method was considered objective and allowed statistical analyses to test hypotheses about the population under study by using a representative sample which had the characteristics of the population under investigation (Moser and Kalton 1985, Polit and Hungler 1995). The epistemology of positivism guided the social survey method. Positivism involves verification and testing of an accepted theory which is reduced to simple, observable measurable and predictable concepts. Then using standard research techniques which can eliminate bias and achieve results through objective, quantitative measurement the theory is tested through the construction of hypotheses or null hypotheses (Polit and Hungler 1995). The fundamental assumption of positivism is that the world is objectively

<i>Phase of the research</i>	<i>Study Description</i>	<i>Method and Analysis</i>
Pre-pilot	Exploratory study of the views of 8 mothers with a pre-school child.	Qualitative
Pre-test study of the research tools	Pre-test interviews of the questionnaire with 21 mothers who had a pre-school child. Mothers completed and discussed the questionnaire and covering letters designed for the pilot and main survey.	Qualitative & Quantitative
Pilot postal survey	100 mothers with a pre-school child were sent the self completion questionnaire.	Quantitative
Main postal survey study	1000 mothers with a pre-school child were sent the self completion questionnaire. (This included a random sample of 800 mothers who had a pre-school child and 200 mothers whose children had attended the Accident & Emergency Department).	Quantitative
Main qualitative interview study	40 mothers who had returned the completed questionnaire.	Qualitative

**Table 4.3.1 Summary of the research studies and methods.**

knowable and that measurement is through observation that is unbiased and generalisable (De Poy and Gitlin 1994).

The theoretical framework for the study was developed from the theory of Protection Motivation (Rogers 1975, 1983) and the Health Belief Model (Becker 1974) which were reviewed in chapter three. These two models were considered particularly useful for developing an understanding of mothers' perceptions of the prevention of accidents to pre-school children. The models were used in conjunction with the findings from the exploratory interviews and the literature reviewed in the previous chapter to develop the mothers' questionnaire (Appendix 2). The perceived likelihood and severity of injury, in addition to the perceived barriers and benefits to adopting protective behaviours were essential concepts for analysing, understanding and explaining the mothers' perceptions of childhood accidents.

#### **4.4.1 The study hypotheses**

The aim and specific research questions for the study focused the development of the questionnaire and drew on existing theory as a framework. The specific research hypotheses were derived from reviewing the research literature, analysis of the exploratory interviews and from experiential observations made in clinical practice. The specific hypotheses that were posed for the quantitative survey analysis are presented here and later with the relevant results and discussion of results in the following two chapters.

##### **Hypothesis 1**

*Mothers of young maternal age live in relatively more disadvantaged social contexts than older mothers.*

##### **Hypothesis 2**

*Mothers living in different social contexts will have a different perception of injury risk in pre-school children.*

### **Hypothesis 3**

*Mothers living in different social contexts will have different perceptions of the benefits and barriers for injury prevention in pre-school children.*

### **Hypothesis 4**

*Mothers living in relatively more disadvantaged social contexts will perceive greater benefits from safety equipment for injury prevention in pre-school children than mothers in more advantageous circumstances.*

### **Hypothesis 5**

*Mothers living in relatively more disadvantaged social contexts will attribute more importance to professionals for giving information about child safety in pre-school children than mothers in more advantageous social contexts.*

### **Hypothesis 6**

*Mothers living in relatively more disadvantaged social contexts will have more contact with the health visiting service for preventing childhood injury than mothers living in more advantageous circumstances.*

#### **4.4.2 Developing the questionnaire**

The line of systematic investigation for this study required specific research tools to be developed to answer the research questions as previous studies had not had the same purpose. A semi-structured quantitative questionnaire was developed as the research tool for the survey (Appendix 2).

The concepts and indicators of the questionnaire operationalised and linked the abstract, theoretical concepts of the phenomenon of protection motivation. This was a complex process and an example of this logical systematic process is given here. The phenomenon for investigation was identified, for example protection motivation. From the phenomenon several concepts were elucidated to provide more specific detail of the more abstract phenomenon of protection motivation. Protection

motivation, for example, can be conceptualised as perceived accident risk and from this particular concept several indicators were identified to reflect specifically the concept of accident risk. The indicators which were developed to demonstrate this example were injury severity and likelihood. These indicators were developed as Likert scales with a strong relationship between the indicator and concept. The strength of the relationship between an indicator and a concept was seen to be critical for the development of the questionnaire (De Poy and Gitlin 1994). This example explains the logical thought process for developing a questionnaire of indicators which were small components of more abstract concepts and even more abstract phenomena.

The level of measurement for each indicator, how the questions were asked and how the responses should be recorded and coded was considered during the development of the questionnaire (Payne 1951, De Vaus 1990, Oppenheim 1992, Converse and Presser 1986, Moser and Kalton 1985, Bryman and Cramer 1990). The final version of the questionnaire used for the pilot and main study is contained within Appendix 2 for reference. The questionnaire was developed from indicators relating to several concepts and only a brief explanation of the logical thought process for developing the questionnaire is given. More comprehensive descriptions of questionnaire design are contained within the texts referred to above and these were useful in guiding the instrument design and measurement for data collection and analysis.

#### **4.4.3 Quantifying and measurement**

The questionnaire for this study contained a variety of questions, scales and measurement levels. The Likert scale was developed and used to obtain information about several different concepts and those pertaining to injury severity and likelihood are briefly explained here.

Likert scales are able to measure the degree to which people place themselves on a pre-defined attitude continuum (Oppenheim 1992). A Likert scale is based upon the premise of measuring the same thing using several different items. To construct the

Likert scale it was necessary to develop an item pool which was a series of statements in which the respondents were asked to circle one of the five positions above the response they agreed with. (See pages 3 and 4 of the questionnaire in Appendix 2). The response was then scored to indicate a favourable or unfavourable attitude. The scoring must be consistent and clear and for this reason the scoring system was included in the questionnaire to avoid error at the time of data entry. A total score was calculated for all the items in the item pool and all the respondents and then a Cronbach's alpha which is the average of all the split half correlations in the data was calculated (Bryman and Cramer 1990, 1997). Cronbach's alpha is depicted as a correlation coefficient of the total scores calculated and was used to measure internal consistency of the items within the scale as no reliable outside criterion was available. Oppenheim (1992) explained 'the difficulty of correlating each item with some reliable outside criterion of attitude that it is supposed to measure' as a common problem in research and that the researcher needs to assume that 'the best available measure of the attitude concerned is the total pool'. The reliability coefficient of the examples given here for the likelihood scales and severity were 0.78 and 0.83 respectively. These scores demonstrated a high level of internal consistency and the items were shown to be measuring the same concept. The Likert scale offered a reliable ordering of people with regard to their attitude about the likelihood and severity of injury and the concept of accident risk. It is, however, important to recognise that although the scale had a neutral point, for example 3, in the likelihood and severity scales, this was not necessarily the mid point of the scale. The midpoint may be influenced by peoples' lack of knowledge, attitude or by them simply opting for the neutral zone when they were unsure of the answer. A limitation of the Likert scales is the lack of interval measurement and hence no clear sense of magnitude. The scales did however, enable the ordering of the respondents along the continuum of the likelihood and severity of injury statements and afforded precise information about the respondents attitude to specific injuries to pre-school children.



## 4.5 The pre-test survey method and findings

The issues of validity and reliability were addressed in the design of the questionnaire. The wording of questions, response spaces, organisation and presentation of the questionnaire were all critically devised and examined by the researcher. The questionnaire was then critically examined by an expert social scientist and academic supervisors for their opinion on the clarity, content and appropriateness of the tools. They advised a few changes to the content of the questionnaire and these related to the length of the questionnaires. The advice was heeded and the necessary changes were made. The questionnaire was subjected to scrutiny by two readability packages Corporate Voice and Style Writer. Minor modifications were made to the wording of questions on the basis of these tests and the reading age required to understand the final questionnaire was eleven years. A cartoonist was asked to devise an attractive cover to encourage maternal interest in responding to the questionnaire (Appendix 2).

### 4.5.1 Pre-test questionnaire sample

The modified questionnaire was then pre-tested for face validity, clarity, content and ease of completion by a convenience sample of 21 mothers of pre-school children. The setting for the sample of mothers was a pre-school nursery in a Scottish city, different to the exploratory interview setting and outside the pilot and main study area. The mothers volunteered to complete the questionnaire after the Pre-school Nursery Manager publicised the study and the need for volunteers.

### 4.5.2 Pre-test questionnaire survey method

The content of the covering letter and questionnaire for the study was approved by the Pre-school Nursery Committee prior to giving the researcher the names, telephone numbers and addresses of the mothers wishing to take part in the pre-test interviews. The mothers were telephoned to arrange a date and time convenient for them to meet individually with the researcher to complete the questionnaire and discuss its content. The researcher assured the mothers that all information would be

treated confidentially and the data stored securely. A consent form was signed by the mothers prior to the pre-test questionnaire interviews taking place and the mothers were informed of their right to withdraw from the study at any time. The pre-test questionnaire interviews lasted approximately one hour.

It was explained to the mothers that the purpose of the pre-test questionnaire interview was to identify problems, deficiencies in or omissions from the written materials. The researcher impressed upon the mothers the necessity to be critical of any wording or confusion with the questions or the layout and organisation of the response areas. The mothers were asked not to interact with the researcher until they had finished completing the questionnaire to their own satisfaction. The mothers were asked to make a note of their criticisms about the covering letter and questionnaire as they read and completed them. It was explained to the mothers that they would have an opportunity immediately after completing the questionnaire to discuss critically the content of the tools with the researcher.

The mothers were asked to read the covering letter and complete the questionnaire as if it had just come through the door. The researcher timed how long it took each mother to complete the questionnaire then asked the mothers for their criticisms and recommendations for both the covering letter and questionnaire. The mothers were asked in detail about the clarity and appropriateness of the questions for investigating accidents to pre-school children and the role of the health visitor in injury prevention. The interviews assisted in identifying the readability of the questionnaire from the mothers' perspectives and supplemented the readability packages of the computer. The researcher was cautious not to rely totally on the computer programmes for depicting readability, but also to involve the mothers themselves in the interpretation of the readability of the questionnaire. A criticism of self completion questionnaires is the difficulty some members of society will have in reading the questionnaire and following instructions (De Vaus 1990). Through the design and pre-test interviews it was ensured that the questionnaire and covering letters were easy to read, acceptable to mothers and attractive.

### **4.5.3 Mothers' pre-test interview findings**

- On average the mothers completed the questionnaire in 30 minutes.
- The mothers found the covering letter and questions, clear, easy to read and understand.
- The mothers described the questionnaire as easy to complete and commented that despite the questionnaire appearing quite long, it was easy to complete because of the good organisation of response areas.
- The questionnaire was logical in the questions it asked and the order in which they arose.
- The artwork on the front cover was popular.
- The recommendation most mothers made was to offer the questionnaire respondents the opportunity to express their feelings about the circumstances under which accidents had occurred to their pre-school child.
- The mothers recommended that the specific number of times people had contact with the health visitor should be changed to an approximation of numbers, as they found it difficult to recall the exact number.

In response to the mothers' criticisms and recommendations the questionnaire was modified. The final version of the questionnaire is contained in Appendix 2 and question number 13 on page 5, resulted from the mothers' recommendations for an opportunity to express their views about accidents to their pre-school child. Some of the questions on page 17 were changed for example, question 2. In response to the mothers' difficulty in recalling exact number of contacts with health visitors the level of measurement was changed from interval to ordinal. The decision for the researcher to change the level of measurement for the questions on page 17 was complex as the responses affected the levels of analysis by moving from interval to ordinal and nominal data. For this reason the mothers' recommendations were adopted in only some of the questions where they affected the level of measurement.

#### **4.5.4 Summary of the mothers' pre-test questionnaire survey**

Analysis of the questionnaires completed by the mothers confirmed the face validity of the questionnaires. The questionnaire, as a research tool, was welcomed by the mothers as they believed the subject worthy of investigation. The mothers found the questionnaire easy to complete and non-threatening despite accidents being a sensitive topic for many people. They believed that the questionnaire investigated accidents to pre-school children and the health visitor role in a logical manner. They felt the questionnaire addressed important issues and would make a contribution to developing knowledge about the value of health visiting and service provision. The mothers were considered as expert panels for the purpose of validating the questionnaire and establishing the accuracy, clarity and rigour of the items for inclusion in the questionnaire. The questionnaire was modified in only a few areas in response to the pre-test questionnaire survey findings prior to use in the main survey. This was a valuable piece of pre-pilot work which demonstrated the validity of the questionnaire and enabled the researcher to have the confidence to proceed with piloting the questionnaire with a larger sample.

### **4.6 The pilot postal survey method**

#### **4.6.1 The study setting**

The pilot and main study were undertaken in Scotland within a geographically defined Health Board district. The Health Board Ethics Committee considered and approved the proposed study and research tools as a necessary pre-requisite to undertaking the research (Pollock and Pfeffer 1993). The arrangements organised by the researcher for treating the study data confidentially and ensuring secure storage were seen as appropriate by the Ethics Committee. Permission was given by the Ethics Committee to proceed with drawing the study samples through the Primary Care Department, Community Health Index and the Accident and Emergency Department records.

#### **4.6.2 The pilot sample**

The pilot study population was all mothers of pre-school children living in the geographically defined Health Board district in Scotland. The pilot sample of 100 mothers was drawn from the Health Board Community Health Index (CHI Index) Data Base by systematic random sampling. The CHI Index holds all the names and addresses of children registered with a General Practitioner in the study area and there were 7946 pre-school children in March 1994 when the sample was drawn. To select the systematic random sample every 80th record was selected to obtain the required sample of 100, the mothers' addresses were assumed to be identical to the children's. The data were stored as a hard paper copy, address labels and a write protected disk within a locked filing cabinet, inside a locked office.

A limitation of the random sampling frame for the pilot and main study method was the inability to draw into the sample any families, particularly travelling families who did not register with general practitioners within the study area. These mothers may have had a different perception of safety to the mothers who were drawn into the study through the method described here. It is recognised that some travelling families do register with General Practitioners, but a future study may wish purposely to draw a sample of travelling families into the research to compare their views with the findings of this study.

#### **4.6.3 Data collection**

The covering letter with information about the study, the questionnaire and a Freepost addressed envelope to return the questionnaire in, were posted first class to the mothers of the pre-school children in May 1994. To identify the number of mothers that the questionnaire did not reach as opposed to non-respondents who did not wish to complete the questionnaire, the research institution address was stamped on the outside of each envelope with the statement 'If undelivered, please return to' and the address was given (Moser and Kalton 1992, De Vaus 1990). The covering letter and front cover of the questionnaire asked the mother to complete and return

the questionnaire by a specific date and to use the Freepost envelope to return the completed questionnaire to the researcher.

Two weeks after the questionnaire was posted a combined thank you and reminder letter was sent to the mothers. The purpose of this was to encourage non-respondents to complete and return the questionnaire, whilst thanking the mothers who had completed and returned the questionnaire for taking part in the research. Four weeks after the initial questionnaire was sent, a second questionnaire, covering letter and Freepost envelope were posted to the non-respondents.

On receipt of the completed questionnaires the researcher coded the responses in preparation for data entry into the Statistical Package for Social Scientists (SPSS) version 6.0 for Windows (Norusis 1993a). Preliminary analysis of the data was undertaken to test the completeness of the mothers' responses and the coding process prior to the main study.

#### **4.6.4 Results of the pilot study**

The pilot study tested the method of data collection and analysis proposed for the main study. The method was appropriate with a 48% response rate (Nachmias 1992) and 3% of the questionnaires were returned as the mothers no longer lived at the address obtained from the Health Board CHI Index. The distribution, collection, coding and data entry of the questionnaire data were appropriate methods for use in the main study and the researcher proceeded with the same method for data collection in the main quantitative study.

### **4.7 The main quantitative study**

#### **4.7.1 The main study samples**

The main study was undertaken in the same geographically defined Health Board district as the pilot study. The study population was all mothers of pre-school

children living in the geographically defined study area of a Health Board district within Scotland. The sample size for the main quantitative survey was calculated using a standard equation, given in Kirkwood (1988: 197), Moser and Kalton (1992: 146-152).

The equation below estimates the standard error of a proportion ( $p$ ) based on a simple random sample of size  $n$  drawn from a total population of size  $N$ :

$$\text{S.E.}(p) = \sqrt{\left(1 - \frac{n}{N}\right) \frac{\pi(1-\pi)}{n}}$$

By ignoring initially the finite population correction (f.p.c) of  $\left(1 - \frac{n}{N}\right)$ , this formula can be inverted to obtain an expression for  $n$  in terms of  $\pi$  the population proportion, and the standard error  $\text{S.E.}(p)$ :

$$n = \frac{\pi(1-\pi)}{[\text{S.E.}(p)]^2}$$

Hence, by making a rough estimate of the proportion of the population  $\pi$  that may have experienced an accident, and by deciding how small a standard error is desired on the actual estimate, then a first estimate can be made of the required sample size  $n$ .

The largest possible size of sample will be required when 50% of the population have experienced an accident and 50% not. Therefore using  $\pi = 0.5$ , and accepting a standard error ( $p$ ) of 2%, a first estimate of  $n = 625$ . Since 625 subjects is a sizeable proportion of the total population of mothers with young children within the study area (7,946 on the Chi Register), the finite population correction ought to be included. Using a method described by Moser and Kalton (1992: 146-152) the final sample size was obtained by adjusting  $n$  as follows:

$$n' = \frac{n}{1 + (n/N)}$$

Substituting  $n = 625$ ,  $N = 7,946$ , one obtains  $n' = 579$ , which will be the required sample size for a 2% standard error, assuming a 100% response rate. Given that the pilot study indicated an expected response rate around 48%, this suggested that some 1,200 questionnaires would need to be sent out to achieve the 2% standard error for a population in which 50% of mothers had some experience of accidents. Resource limitations constrained the number of questionnaires that could be distributed and analysed to 1,000. In the light of this, the decision was taken purposefully to include a sub-sample of 200 mothers whose children were known to have experienced accidents and 800 mothers who were randomly sampled.

The two samples of mothers for the main study were drawn as a systematic random sample of 800 mothers with a pre-school child living within the geographically defined area and a stratified random sample of 200 mothers whose pre-school child had attended the Accident and Emergency department within the three months prior to the study. Mothers of children who died as a result of their injuries were excluded from the study as it was thought the research could be traumatic for these mothers. This also signifies the exclusion from this study of mothers who were known to have experienced sudden infant death syndrome.

The main systematic random sample of 800 mothers was drawn from the Health Board Community Health Index (CHI Index) Data Base in March 1994 when there were 7946 pre-school children registered on the CHI Index. Every tenth record was selected from the CHI Index to obtain the required sample of 800. The one hundred mothers who were selected for the pilot study were excluded from the main study sample. The post accident sample of mothers of pre-school children was drawn from the Accident and Emergency Register and medical notes. The post accident sample of 200 mothers living in the study area was selected from March to May 1994. These mothers had a pre-school child who had attended the Accident and Emergency Department in the study area following an accident, within three months prior to the survey and were therefore considered able to recollect accident incidents within the preceding three months (Agass et al 1990, Jordan et al 1993).



The researcher examined the names, date of birth and addresses of the post accident sample to ensure they were not already drawn into the random sample. Any subject which was included in both samples was excluded from the post accident sample and a new subject was drawn in to maintain the post accident sample at 200. The mother's contact address was assumed to be the same as the child's for both the random and post accident sample. All confidential data were stored securely within a locked filing cabinet and access was restricted to the researcher only.

#### **4.7.2 Main survey data collection**

The questionnaire, covering letter and Freepost envelope were posted first class to the mothers of the children in June 1994. The method of data collection for the mothers' views was identical to the pilot study described in the previous section of this chapter. The data were coded in the mothers' individual questionnaires and then entered into the new release of SPSS version 6.1 for Windows for analysis. The occupational class of the head of household was coded according to the Standard Occupational Classification (HMSO 1991). For interpretation purposes Social Class 1 was coded 6 (high social class) and Social Class 5 coded 1 (low social class). All codes were maintained in a coding questionnaire, coding manual and embedded in the statistical package. The results of the statistical analysis are presented and discussed in relation to the study hypotheses in chapters five and six.

### **4.8 Statistical methods**

All response data from the questionnaires were coded into numeric variables with the exception of postcode data which was retained as string data. The coded data were then entered into the Statistical Package for Social Scientists (SPSS) (Norusis 1993a, 1995) for data handling and analysis. Descriptive statistics were used to describe and summarise the samples and their perspectives. Further statistical tests were used to identify differences and relationships between the samples, for example, t tests, chi

square statistic, analysis of variance, cronbach's alpha, regression, multiple regression and factor analysis. Detailed statistical theory is not discussed here, but is available in the referenced text books (Norusis 1993a, 1995, Bryman and Cramer 1990, 1997, Greene and D'Oliveira 1994, Moser and Kalton 1992)..

#### 4.9 The main qualitative interview survey

Following the statistical analysis of the main survey data, the main quantitative study findings were found to raise several research questions which necessitated a qualitative approach to gain a deeper understanding of the accident problem from the mothers' perspectives. Further knowledge of the mother's social context and deeper understanding of the meaning of the mothers' views about protecting their pre-school children and the role of the health visitor were sought through qualitative methods to complement the quantitative study methods and findings. To complement the approach of the quantitative survey, content analysis of 40 interviews with mothers who had completed the postal questionnaire followed the statistical analysis.

The qualitative approach was designed to give a deeper insight to the mothers' perspectives of accidents and an understanding of how they developed motivation to protect their children. The findings of the quantitative survey raised several questions about the development of maternal motivation to protect children and the challenges associated with social context. For example, the relationship between social circumstances including social class, housing, marital status, environmental circumstances and maternal perceptions of injury risk and appropriate safety strategies raised questions about how maternal social context affected perceptions of children's safety and their decisions about protecting the pre-school child from unintentional injury. The qualitative study sought to examine mothers' subjective views of their circumstances and how these influenced their safety practices and how they perceived the health visitor role for reducing injuries.

### **4.9.1 Overall aims of the study**

This qualitative study aimed to analyse mothers' perspectives of accidents to pre-school children; to understand how mothers were motivated to adopt accident prevention strategies; to identify the benefits and barriers to maternal intentions; to identify the value of the health visitor in facilitating safety practices and consequently to form recommendations for future accident prevention programmes. The specific research questions presented at the beginning of this chapter remained pertinent for this qualitative study, but additional sub questions were developed following the analysis of the quantitative data. The quantitative data raised several questions about the development of maternal perceptions of injury risk and maternal motivation to adopt safety strategies and the mothers' experiences of health visiting to promote children's safety. To analyse these issues more completely a series of research sub questions were developed to focus the main qualitative study. These sub questions for the qualitative interviews are presented here.

#### **The original and refined sub questions for the qualitative research were:**

- How do mothers learn to protect their pre-school children?
  - \* How does the experience of caring for children assist mothers in their knowledge development and motivation to develop safety strategies?
- How is the mothers' motivation to protect pre-school children related to their social contexts?
  - \* How does caring for children in different circumstances relate to different perceptions of the ways to protect children?
- How are the mothers' perceptions of susceptibility to injury and severity of injury related to their social contexts?
  - \* Why do young and lone mothers have different perceptions of safety when compared with older and supported mothers caring for children?

#### **4.9.2 Qualitative method for the main study**

For the purpose of this study content analysis was the qualitative method used for the main study interviews to obtain and explore the data on the mothers' perspectives of the accident problem and answer the research questions. The qualitative approach is grounded in the epistemology of naturalistic inquiry and proposes that individuals create their own subjective realities from their experiences within the contexts of their social environments (Reason and Rowan 1981). Individuals have 'ideas' and through these ideas individuals come to understand and define their own view of reality. The philosophy assumes that to separate the outside world from an individual's own ideas and perceptions of the world is not possible. Qualitative approaches recognise the importance of knowledge which is based on how the individual perceives experiences and understands their own world. As this knowledge is subjective, multiple realities may exist and an individual's view of reality is based within the context of their lived experiences. This epistemology was seen as an appropriate grounding for this study which sought to reveal new knowledge which was developed from the mothers' reported experiences and perspectives.

Qualitative, inductive inquiry through content analysis of interview data (Hammersley and Atkinson 1983, Morse 1991, Morse and Field 1996) enabled knowledge to be developed from the reported experiences of individuals. Through interpreting the individuals' meanings in social discourse the complexity of the phenomena of accidents to pre-school children can be better understood. This qualitative approach lent itself to the exploratory stage of the research and reaffirmed its importance in the main study for its capacity to reveal new insights into phenomena which would have been unidentified through a positivist approach.

Naturalistic inquiry builds theory from emergent concepts of the research and this approach is often used when the research is in an area with little formal knowledge. This research examined an area of childhood injury where there is some evidence of theory, but not directly related to the purpose of this study for example, the Health

Belief Model (Becker 1974 ) and Protection Motivation Theory (Rogers 1975, 1983). Through using qualitative methods to reveal new knowledge and complement the established theories which were relevant to the research, a fuller understanding of the phenomena was possible. The appropriateness of the theories examined in the earlier literature review for predicting motivation to adopt safety strategies was critically examined from a different perspective in light of the knowledge gained through the exploratory interviews.

Data to answer the research questions were gathered during face to face in-depth interviews (Rubin and Rubin 1995). Data analysis using qualitative methods of content analysis (Lofland and Lofland 1984, Strauss and Corbin 1990) enabled a description, understanding and interpretation of maternal views on the issue of childhood injury and the prevention of accidents.

#### **4.9.3 Key informants**

The participants in this component of the study were 40 mothers living in a defined geographical Health Board district in Scotland. The mothers were selected as key informants for the study from the respondents who had previously completed the postal questionnaire. Participants were drawn on the principles of theoretical sampling (Glaser and Strauss 1967) as the mothers best able to provide information which would add depth of understanding to complement the quantitative data previously gathered in the postal survey.

The mothers had generally offered detailed and interesting qualitative responses to the open ended questions in the self completion questionnaire and were perceived as able to offer an insight in to their motivation to develop safety strategies. Through the key informants it was expected that a greater understanding of issues pertinent to mothers in different social circumstances would be revealed than was possible through the quantitative survey method.

#### **4.9.4 Gaining access**

Mothers in the sample were contacted by a covering letter and consent form to invite them to participate in the in-depth interview study (Appendix 3). A stamped, addressed envelope was provided for the mothers to return the signed consent form if they agreed to take part in the study. The completed consent form then allowed the researcher to telephone or write to the mother to arrange a convenient date, time and place for the interview. Thirty eight mothers chose to be interviewed at home and two mothers were interviewed at their local health centre in a private office. The researcher confirmed the signature of the written consent form to be that of the mother's prior to commencing the tape recorded interviews. Four mothers asked not to be tape recorded, but were happy for the interviewer to make notes, it was not the sharing of their thoughts that concerned the mothers, but the use of equipment in the interview (Cowles 1988).

Criteria for non response and refusal to take part in the study were developed, but not required as all mothers were available for interview on the first or second visit. Non response was to be determined following three unsuccessful visits to interview the informant. Non response or refusal by an informant to participate was to result in another mother being drawn in to the theoretical sample to maintain it at 40 subjects.

#### **4.9.5 Developing and pre-testing the research instrument and method**

The research instrument was an interview schedule developed from the researcher's knowledge of the research literature, from the results of the quantitative study and clinical practice. The schedule contained a series of questions designed to enable identification and understanding of the mothers' perspectives of childhood accidents and their views on how to reduce childhood injury (Appendix 3). The interview schedule and the researcher's interview technique were pre-tested prior to data collection. An audio visual tape recording of one pre-test interview was made by the researcher and the academic supervisor in the university setting with a volunteer mother of two pre-school children. Analysis of the tape recording indicated that the instrument was valid and the method appropriate for the purpose of this study.

#### **4.9.6 Data collection and management**

The interviews were tape recorded and then transcribed in to a Microsoft Word for Windows, word processing package for data management, which facilitated analysis of the transcribed data. During transcription certain dialect words were translated to English to ensure readers unfamiliar with Scottish terminology could understand the subsequent interpretations, reports and publications. The data were retained on audio tape and analysed alongside the transcribed data to retain the detail and the context of the interview during the analysis. Duplicate tape recordings were made of each interview to ensure that if damage occurred to the tapes through repeated use during the analysis there would be no loss of data. An interview face sheet was developed for each informant and the field notes, demographic information and context of the interview were documented immediately after each interview (Appendix 3). The interview face sheet, the tape recorded interview and transcribed data were maintained in a separate file for each informant. The data were stored securely in a locked filing cabinet in a locked office and computer files were pass word protected. Mothers' names were assigned number codes for the analysis and interpretation to ensure anonymity.

#### **4.9.7 Qualitative data analysis**

The key concepts from each interview were identified and recorded on separate record cards and in concept data files. Coding themes were then developed by grouping several concepts into a category - representing a phenomenon. Each coding theme was developed as a collection of record cards which contained cross references to the respondent number and page number for each emerging theme. The transcribed text of the informants which contained the concepts under investigation, were then grouped from concept data files into theme data files by cutting and pasting the relevant text. The data recorded on audio tape and within the theme data files and the individual interview files were then analysed together to enable a description and interpretation of the main themes of the study. Coding themes were developed by grouping several concepts into a category - representing a phenomenon.

For example, the phenomenon of ‘maternal motivation to prevent accidents’ was investigated in this study. ‘Accident experience’ was identified as a theme of the motivation phenomenon in this research. The theme ‘accident experience’ was developed from several concepts, two of which were ‘learning from mistakes’ and ‘near miss experiences’ (Figure 4.1).

Coding themes were used to illustrate, organise, analyse, interpret and present the phenomena under investigation. Analysis of the content of each interview allowed a deeper understanding of the mothers’ perceptions of accidents and how different social contexts related to their views for preventing accidents.

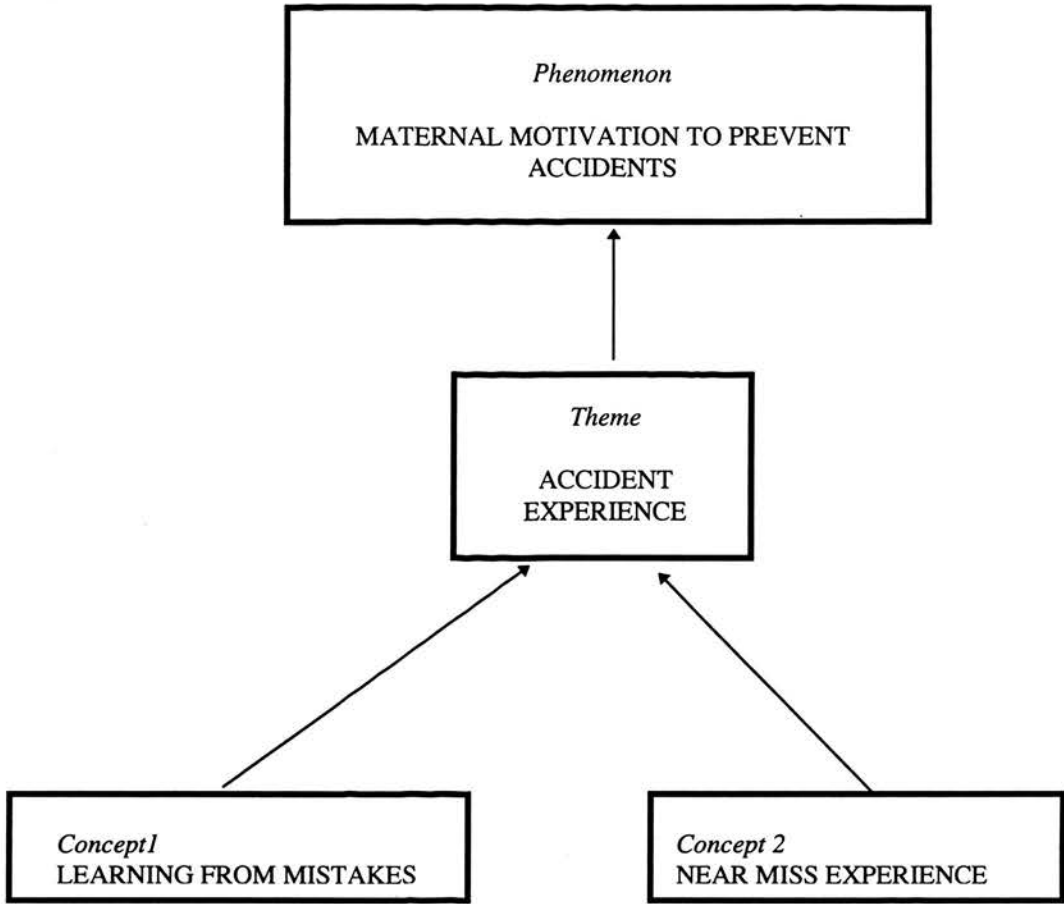
The findings of the study were examined for new dimensions and insights which would enable the development of theory about preventing accidents to pre-school children. The data were also examined for evidence which contradicted or confirmed the theory reviewed in chapter three and the results obtained from the quantitative method presented in chapter five and discussed in chapter six.

#### **4.9.8 Summary**

The different research methods of this study are from different epistemological perspectives and embrace different ways of knowing to answer the research questions of this study and to develop knowledge about reducing accidents to pre-school children. Various continua have been used to explain different research designs from the opposing epistemologies (De Poy and Gitlin 1994) and are useful for demonstrating how this study integrates methods to fulfil the mid range of the continuum of the opposing schools of philosophical thought.

The quantitative survey, although in the tradition of positivism, was a descriptive study and had less investigator-imposed structure, control or manipulation than other positivist approaches for example, quasi experimental and experimental design research. For the interviews, the inductive, qualitative methods of the naturalistic inquiry were used to develop knowledge through mothers’ personal insights and





**Figure 4.1** Analysing qualitative data

although some structure was imposed by the interviewer, the control and direction of the research interview was placed mainly with the mothers involved in the study. The use of these different methods to answer the research questions draws attention to the mid-range of the continuum where the opposing schools of thought may meet and transcend to fulfil the purpose of a more comprehensive understanding of the phenomena of childhood injury. The logical connections built between quantitative and qualitative research are complementary and enable a fuller understanding of the research phenomena than through a single method approach (Cowman 1993). The strengths of the integrated methods allows new knowledge not predetermined by theory to reveal itself and be transferred in context, whilst allowing confirmation and generalisation of statistical results to the wider population.

The results of the quantitative method for answering the research hypotheses are contained in the following chapter and in chapter six the results are discussed. The subsequent chapters contain a description and interpretation of the findings from the qualitative study. The evidence from the two studies is finally drawn together in chapter nine and related to the theoretical framework described earlier in chapter three.

#### 4.10 Concluding on integrated research methods

- The range and depth of the research questions developed to investigate maternal perceptions about childhood accidents required examination through integrated research methods.
- This methods were necessary to enable a deeper and fuller understanding of the complex issues under investigation than was possible through a one method approach.
- Both the quantitative and qualitative methods were considered necessary to reveal knowledge relevant to answering the research questions.

- The integration of methods was seen to be able to develop a more detailed picture of mothers' perceptions of childhood injury and to fulfil the purpose of meeting the aims of this study more comprehensively than through a single method approach.
- No one method was attributed more importance for a bearing on the research findings.
- The integration of different methods was chosen to identify and reaffirm what is valuable about the health visiting service for reducing childhood injury, whilst revealing new avenues for improving the role of the health visitor to prevent injuries and to understand more comprehensively and deeply the mothers' motivation to adopt safety strategies from their perspectives.
- The different methods were used logically to enable a fuller understanding of the issues of childhood injury from the mothers' perspectives.
- The specific issues of the different methods were considered at each stage of the research process and are documented in this chapter.

# Chapter 5

## Quantitative Results

### 5.0 Introduction

This chapter presents the results of the quantitative survey method described in chapter four. The chapter has six sections in which results are presented in relation to the research hypotheses for this study. Section 5.1 presents the data which identify the different social and demographic circumstances of mothers in this study. A range of statistical methods were used to identify relationships between the social and environmental variables. The purpose of these analyses was to help understand not only the specific social circumstances in which each mother was attempting to keep her children safe, but also to see whether various social and environmental factors were associated. For instance, whether being married or being a single mother was associated with living in a particular type of housing or having a certain level of employment, factors which in turn may help or hinder the ability of a mother to provide a safe environment for her children. The variables were recorded using a mixture of interval, ordinal and nominal data.

Section 5.2 presents the mothers' views on hazards and risks which presented a concern for safety when caring for the pre-school child. Section 5.3 identifies the benefits and barriers to safety whilst Section 5.4 identifies the specific benefits and limitations of safety equipment. In Section 5.5 the ways in which the mothers' developed knowledge for protecting the pre-school child are displayed. Finally the mothers' views on the health visiting service are presented in Section 5.6.

An array of data was produced from the analysis and the following pages are intended to offer a meaningful presentation of a large number of research findings. A conventional method is used for presenting the results in this chapter and then discussing them in the subsequent chapter. This requires the reader to identify with the relevant research hypotheses in each of the two chapters.

## 5.1 Demographic profile of the respondents

The hypothesis for this first section states:

### **Hypothesis 1**

*Mothers of young maternal age live in relatively more disadvantaged social contexts than older mothers.*

This section reports the results of the demographic data and identifies significant differences in the social and demographic circumstances of the mothers.

#### **5.1.1 Response to the main survey**

In total 474 mothers completed and returned their questionnaires, resulting in an overall response rate of 47%. The random sample of 800 mothers yielded n=388 (49%) respondents and the post-accident sample of 200 mothers yielded 86 responses (43%). Of the non-respondents, thirty one mothers (3%) no longer lived at the address where the questionnaire was sent and the Post Office returned the questionnaires to the researcher. The response rate for the main survey was very similar to that of the pilot study.

Most mothers in the random sample n=326 (85% of those that responded) had accident experiences which they could relate to for the purpose of this study.

Assuming that this sample proportion is representative of the proportion of accident experiences in the overall population, then using the equation described in chapter 4, setting  $\pi=0.85$  and n=326 and recalculating with this higher proportion of accident experience, the actual sample size required to achieve a 2% standard error for this study would be n=319 and this was achieved. The initial target sample size of 579 mothers was calculated assuming the proportion of mothers in the random sample whose children had experienced accidents to be 50%. This suggests that, although the initial target sample size could not be achieved due to resource constraints, the sample obtained of 326 mothers actually allowed for precision of the sampling estimates within the original specification of 2%.

Where significant differences were found between the two samples random and post accident results are presented. The two samples which were broadly similar were then pooled and the majority of the results presented are based on the analysis of this pooled sample, unless otherwise stated.

### **5.1.2 Social and environmental situation**

A demographic profile of the respondents is provided in Tables 5.1.1 to 5.1.8 summarising the demographic variables responding to questions in Section 5 of the mother's questionnaire (Appendix 2). Maternal age, number of children and number of adults in the home are summarised in Table 5.1.1. The social classification is summarised in Table 5.1.2 and the housing circumstances in Table 5.1.3. The outside play area facilities are presented in Table 5.1.4 and the crowding conditions of the home in Table 5.1.5. Table 5.1.6 presents the outside play area facilities by housing circumstances. The mothers' marital status is presented in Table 5.1.7 and the head of household employment in Table 5.1.8. Interrelationship of the social and environmental variables is presented in Table 5.1.9. Only results significant at  $p < 0.05$  are presented.

### **5.1.3 Maternal age**

The mean age of the respondents is presented in Table 5.1.1. Maternal age was related to several significant differences in social circumstances (Table 5.1.9). The mean age of married mothers was 31 (SD 4) years and was significantly greater than the mean age of single mothers at 26 (SD 5) years. Maternal age and social class were correlated with younger mothers represented in the lower social classes (Table 5.1.9). In families with younger mothers, the head of household was more frequently unemployed or worked part-time. Younger mothers tended to live in local authority housing, with unfenced gardens, or no access to gardens compared with older mothers who tended to live in private housing or had fenced play areas (Table 5.1.9). Young motherhood was significantly associated with fewer adults living at home (Table 5.1.9).

**Demographic profile of maternal age, number of adults and the number of children in the home.**

	Minimum	Maximum	Mean	SD
age	19	45	30	4.70
adults	1	4	2	0.40
children	1	7	2.	0.90

**Table 5.1.1**

**Profile of the social classification of the samples derived from the head of household's employment.**

	Sample				Total	
	Post accident		Random		n	%
	n	%	n	%		
social class 5	7	8%	36	10%	43	10%
social class 4	16	19%	84	23%	100	22%
social class 3 manual	28	34%	108	30%	136	30%
social class 3	15	18%	36	10%	51	11%
social class 2	15	18%	62	17%	77	17%
social class 1	2	2%	37	10%	39	9%
<b>Total</b>	<b>83</b>	<b>100%</b>	<b>363</b>	<b>100%</b>	<b>446</b>	<b>100%</b>

**Table 5.1.2**

**Profile of the housing circumstances of the samples.**

		Sample				Total	
		Post accident		Random		n	%
		n	%	n	%		
Housing	privately owned	41	48%	224	58%	265	56%
	privately rented	2	2%	4	1%	6	1%
	rented local authority housing	39	46%	138	36%	177	38%
	rented scottish special housing	3	4%	14	4%	17	4%
	rented tied housing			6	2%	6	1%
Total		85	100%	386	100%	471	100%

**Table 5.1.3**

**Profile of the outside play area for the samples.**

		Sample				Total	
		Post accident		Random		n	%
		n	%	n	%		
Type of immediate outside play area for the pre-school child	fenced garden or yard	66	80%	296	77%	362	78%
	unfenced garden or yard	8	10%	37	10%	45	10%
	shared garden or yard	2	2%	17	4%	19	4%
	no garden or yard	7	8%	31	8%	38	8%
	farm land			1	0%	1	0%
Total		83	100%	382	100%	465	100%

**Table 5.1.4**



**Profile of crowding within the home for the samples.**

		Sample				Total	
		Post accident		Random		n	%
		n	%	n	%		
Is the home perceived as crowded	yes	3	4%	27	7%	30	6%
	no	82	96%	351	93%	433	94%
Total		85	100%	378	100%	463	100%

**Table 5.1.5**

Profile of housing type and type of outside play area.

Type of immediate outside play area for the pre-school child	housing												Total
	privately owned		privately rented		rented local authority housing		rented scottish special housing		rented housing		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	
fenced garden or yard	240	93%	5	83%	105	59%	7	44%	4	67%	361	78%	
unfenced garden or yard	10	4%			33	19%	1	6%	1	17%	45	10%	
shared garden or yard	3	1%			9	5%	6	38%	1	17%	19	4%	
no garden or yard	5	2%	1	17%	30	17%	2	13%			38	8%	
farm land, opengarden	1	0%									1	0%	
<b>Total</b>	<b>259</b>	<b>100%</b>	<b>6</b>	<b>100%</b>	<b>177</b>	<b>100%</b>	<b>16</b>	<b>100%</b>	<b>6</b>	<b>100%</b>	<b>464</b>	<b>100%</b>	

Table 5.1.6

**Profile of the marital status of the respondents by samples.**

		Sample				Total	
		Post accident		Random		n	%
		n	%	n	%		
Marital status	married	61	72%	314	81%	375	80%
	single with partner	5	6%	24	6%	29	6%
	single without partner	9	11%	23	6%	32	7%
	divorced living alone	3	4%	9	2%	12	3%
	divorced living with partner	1	1%	8	2%	9	2%
	widowed living alone	3	4%			3	1%
	widowed living with partner			1	0%	1	0%
	separated	3	4%	6	2%	9	2%
	single living with mother			1	0%	1	0%
	<b>Total</b>	<b>85</b>	<b>100%</b>	<b>386</b>	<b>100%</b>	<b>471</b>	<b>100%</b>

**Table 5.1.7**

**Profile of employment for the samples.**

		Sample				Total	
		Post accident		Random		n	%
		n	%	n	%		
Employment Details	full time paid employment	59	70%	266	71%	325	70%
	part time paid employment	5	6%	12	3%	17	4%
	unemployed	18	21%	54	14%	72	16%
	long term sickness			4	1%	4	1%
	self employed	1	1%	38	10%	39	8%
	job training scheme			2	1%	2	0%
	student	1	1%	1	0%	2	0%
<b>Total</b>		<b>84</b>	<b>100%</b>	<b>377</b>	<b>100%</b>	<b>461</b>	<b>100%</b>

**Table 5.1.8**

### Interrelationships between social and environmental variables.

	Maternal Age	Marital Status	Social Class	Employment	Housing	Play Area	Number of Children
Maternal Age							r=0.267* p<0.01
Marital Status	F p<0.001						F p<0.001
Crowding							t p<0.001
Social Class	r=0.229** p<0.001	X <sup>2</sup> p<0.001					
Employment	F p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001				
Housing	F p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001			
Play Area	F p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001	X <sup>2</sup> p<0.001		
Number of Adults in the Home	r=0.269* p<0.01	F p<0.001	F p<0.004	X <sup>2</sup> p<0.007	X <sup>2</sup> p<0.001	F p<0.001	r=0.194* p<0.01

**Table 5.1.9**

Abbreviation	Statistical Test
r*	Pearson's Correlation Coefficient
r**	Spearman's Rank Correlation Coefficient
X <sup>2</sup>	Chi Square Test
F	One Way Analysis of Variance (ANOVA)
p	Significance
t	t -test

Young maternal age was significantly associated with being the only adult in the home and caring as a lone parent. Maternal age was also associated with several other variables described in the subsequent sections of this chapter.

#### **5.1.4 Marital status and number of adults living in the home**

Most mothers were married or living with a partner (Table 5.1.7). Mothers caring for their children alone constituted 13% of the total respondents. There was a greater percentage of lone, unsupported mothers in the post-accident sample (23%) than in the random sample (10%) and there was a significant difference between marital status and mean maternal age (Table 5.1.9). Mothers who were married, widowed or divorced with or without a partner were significantly older than single mothers with or without a partner. Significantly more mothers with partners were located in the higher social classes than lone mothers without a partner. There were also significant differences in marital status and housing circumstances and play areas. The mothers who were married, single with a partner, divorced or widowed with a partner tended to live in private housing with fenced gardens whereas the lone, unsupported mothers (who included the divorced and widowed mothers without a partner) lived predominantly in local authority housing. Married and supported mothers had more access to fenced play areas than lone, unsupported mothers who had to cope with no play areas or unfenced play areas. The presence of two more adults in the home was significantly associated with older maternal age of the respondents, higher social class status, increased full time employment, private housing and fenced play areas (Table 5.1.9). However, mothers reported significantly more over-crowding in homes with two or more adults (Chi Square Test,  $p < 0.04$ ). The post-accident sample had significantly fewer adults living in the home than the random sample and more lone mothers caring for children (t-test,  $p < 0.04$ ).

#### **5.1.5 Social class**

Analysis of the social classification by occupation of the head of household indicated that mothers from all social classes had responded to the survey (Table 5.1.2). Analysis indicated a significant difference and correlation between social class and mean maternal age (Table 5.1.9): young mothers tended to be classified in the lower

social classes and vice-versa for older mothers. More mothers caring for their children alone were in social classes 4 and 5 than married mothers or mothers with partners (Table 5.1.9). Significant differences in housing facilities were also evident between the different social classes (Table 5.1.9). More mothers in social classes 1 and 2 lived in private housing than mothers in social classes 4 and 5.

### **5.1.6 Employment of head of household**

In the majority of households the head of the household was employed full time (Table 5.1.8). Only a minority of families had the head of household in part-time employment or reported that they suffered a long term illness and were not working. Almost one sixth of the head of households were unemployed. There was a significant difference between the employment circumstances of the random and post-accident samples (Chi Square Test,  $p < 0.05$ ). Significantly more of the head of households in the post-accident sample were unemployed or working part-time than the random sample. Mothers were significantly older in households where the head of household worked full-time or was self-employed (Table 5.1.9). The results identified that younger mothers lived in households where unemployment and part-time work were significantly more evident. Families where the mother had a partner had significantly more head of household full-time employment than lone mother families. Significantly more lone mothers (whether single, widowed, divorced or separated) were living in households where the head of the household was unemployed. Social class was significantly associated with employment circumstances: full-time head of household employment was associated with the higher social classes, whereas unemployment and part-time head of household work were associated with lower social class.

### **5.1.7 Housing and the presence of an associated play area**

Respondents from both the random and post-accident samples lived mainly in either private housing or local authority housing (Table 5.1.3). Few people lived in Scottish Special Housing, privately rented accommodation or tied housing. Travelling families were not represented in the study. A higher percentage of mothers in the

post-accident sample lived in local authority housing than the random sample, but this was not statistically significant. Mothers who lived in local authority housing with no garden or unfenced gardens were significantly younger than mothers in private housing with fenced play areas (Table 5.1.9). Significantly more lone, unsupported mothers lived in local authority housing than supported mothers. The percentage of mothers living in private housing declined with declining social class. In social class one 89% of respondents lived in private housing and in social class five only 12% lived in private housing. The percentage of mothers living in local authority housing in social class one was 3% and in social class five was 86%. Families where the head of household was in full time employment lived predominantly in private housing whereas families with an unemployed head of household tended to live in local authority housing. Mothers who lived in local authority housing reported significantly less fenced gardens for their children or no garden, compared to mothers living in private housing (Table 5.1.9). Mothers who reported no garden and unfenced gardens were significantly associated with local authority housing, younger maternal age, lone parenthood, lower social class and part-time employment or unemployment within the family.

### **5.1.8 The number of children**

The number of children a mother had was significantly associated with reports of over-crowding and positively correlated with the presence of two or more adults in the home including a partner (Table 5.1.9). In households with four or more children overcrowding was reported in one third of the families (33%). This was in contrast to only 2% of mothers reporting overcrowding in homes with one child and 4% in homes with two children. Reports of overcrowding increased to 15 % in homes with three children. More children were evident in families with significantly older mothers (Table 5.1.9). The mean age of mothers with one child was 29 increasing to a mean age of 36 in homes with six children. Married mothers and mothers with partners reported significantly more children than lone mothers, regardless of whether they were single mothers who had never married or were divorced and alone, widowed or separated and alone. The presence of two or more adults in the family



was significantly related to more children than lone parent families.

### **5.1.9 The post-accident sample and random sample**

The post-accident sample differed significantly from the random sample in only two areas. The post-accident sample had significantly fewer adults present in the families and more lone parent families in contrast to the random sample (t-test,  $p < 0.04$ ). The post-accident sample also had significantly more unemployed and part-time employed head of households than the random sample (Chi square,  $p < 0.05$ ). The post-accident sample had significantly more households where one female adult carer was present and this variable was associated with unemployment or part-time work for the head of the household (Table 5.1.9). Therefore lone mothers often cared for their family on the lower income associated with social security benefits or part-time income.

### **5.1.10 Summary**

The mothers cared for their pre-school children in a variety of social and demographic circumstances. The results identify an association of several demographic variables with one another and it is evident that some mothers were living in more adverse circumstances than others. The following sections will examine the relationship between these associations, the mothers' perceptions of childhood injury, their perceptions of the benefits and barriers to injury prevention and the health visiting service.

## **5.2 Maternal Perceptions of Childhood Injury Risk**

This section presents the results of the mothers' perceptions about injury hazards and their safety concerns when caring for their pre-school children. The mothers' perceptions of risk are compared and contrasted in relation to their different social context. Social context is operationalised through several variables, for example, social class, housing circumstances, marital status, number of children and outdoor play facilities. The significant differences in injury risk between mothers in different social, demographic groups and samples are identified. The factor analysis and

subsequent statistical tests for each of the Likert scales are presented. The results presented in the tables are all significant at  $p < 0.05$  unless otherwise stated.

The hypothesis for this section states:

## **Hypothesis 2**

*Mothers living in different social contexts will have a different perception of injury risk in pre-school children.*

### **5.2.1 Injury risk**

The mothers' perceptions of injury risk inside and outside the home were identified through a series of open and closed questions. To distinguish the mothers' worries and priorities for child safety, they were asked through open ended questions to list the things that they worried might hurt their pre-school child in and outside the home. Mothers' worries in the home were varied and the most frequently reported perceived hazards are presented in Table 5.2.1. The stairs, the cookers and the fires concerned mothers most, whilst relatively few mothers were concerned about poisonings. The post accident sample whose children had experienced an accident within the last three months were significantly more worried than the random sample about the fire as a hazard (Chi square,  $p < 0.02$ ) and injuries resulting from poisonings (Chi square,  $p < 0.02$ ). The mothers' main worries outside the home were traffic and people harming the child (Table 5.2.2).

### **5.2.2 Perception of home and traffic accidents**

Mothers were asked to indicate two things that worried them most for predisposing their pre-school child to an accident. Again mothers most frequently indicated that the traffic was a major hazard in placing the child at risk (Table 5.2.3). Half of the respondents perceived the child's own 'curiosity' as predisposing them to injury. The playground facilities were also a concern for almost a quarter (24%) of the mothers. Less of a perceived risk to the child was the people living in the local area but, relatively few mothers reported the house or garden to be problematic despite most accidents to pre-school children which require medical attention occurring in the home environment.

**Mothers' main worries inside the home.**

	N	%
stairs	176	40%
cooker	164	38%
fire	128	29%
plug sockets	88	20%
burns & scalds	80	18%
boiling liquid	70	16%
falls	61	14%
iron	58	13%
electrocution	56	13%
solvent poisoning	50	11%
		Total n=474

**Table 5.2.1**

**Mothers' main worries outside the home.**

	N	%
traffic	356	78%
people harming the child	120	26%
broken glass	88	19%
falling	64	14%
bullying	50	11%
poor playgrounds	49	11%
abduction	36	8%
steps	34	8%
		Total n=474

**Table 5.2.2**

**Mothers' main worries.**

	N	%
traffic in the street	240	51%
child's curiosity	228	49%
local traffic	183	40%
playground facilities	111	24%
People in the area	64	14%
home	31	7%
garden	30	6%

Total n=474

**Table 5.2.3**

**Reasons why it is hard to stop the pre-school child from getting hurt.**

	N	%
lack of safe play areas	287	64%
inability to watch the child all the time	276	62%
child needs a lot of watching	182	41%
mothers not knowing all the dangers	97	22%
unsafe areas in the home	85	19%
cost of safety equipment	65	15%
busy mother	49	11%
design of the house	33	7%
maternal stress	17	4%

Total n=474

**Table 5.2.4**

Difficulties in stopping children from getting hurt and preventing accidents are presented in Table 5.2.4. The lack of safe play areas and difficulties in supervising the child were the main reasons mothers identified. Almost a quarter of mothers (22%) felt a lack of knowledge about hazards made it difficult for them to prevent injuries. Less of a problem was the home environment or the cost of safety equipment. Relatively few mothers felt busy (11%) or stressed lifestyles (4%) made it difficult for them to protect their child.

### **5.2.3 Comparing perceived accident risk and observed accident rates**

Looking in detail at the mothers' perceptions of accidents and comparing the findings with local injury data places the mothers' worries and priorities about accidents in the context of the local accident experiences (Table 5.2.5). Analysis of the mothers' perceptions and accidents statistics draws attention to misperceptions about the risk of accidental injury to pre-school children.

Mothers were asked to state two types of accidents that they worried most might happen to their pre-school child (Table 5.2.5) and these included 'being run over' and burns and scalds. However, relatively few mothers worried about poisonings. It can be seen that traffic accidents were uncommon in this study area, whilst poisonings led to many children being admitted in the study area. There is a disparity between the mothers' perceptions of children's susceptibility to accidents and the real causes of hospital admissions.

### **5.2.4 Mothers' perceptions of the likelihood of injuries**

To ascertain the mothers' perceptions about injury susceptibility and to obtain a picture of the mothers' views on the probability of certain injuries in pre-school children, mothers were asked to think generally about the likelihood of certain injuries happening to a pre-school child. The Susceptibility to Injury Scale (SIS1) was developed to ascertain how susceptible mothers thought the pre-school child was to injury (Appendix 2, page 3 of the mother's questionnaire). A rating of 1 indicated

injury as considered definitely likely to occur. Table 5.2.6 summarises the results of the mothers' perceptions of the likelihood of the different injuries.

The majority of mothers perceived falls (mean 4.7, SD 0.6) and cuts (mean 4.3, SD 0.9) as injuries that children would encounter. Head injuries (mean 3.2, SD 0.9) and broken bones (mean 2.9, SD 1.0) were perceived as less probable. Burns (mean 2.5, SD 0.9) and choking (mean 2.5, SD 1.0) were not perceived as particularly common injuries in the pre-school child, but more common than poisonings (mean 1.8, SD 0.8). Mothers did not perceive poisoning as an injury that was likely to happen to a pre-school child, they were considered to be as rare as electric shock injuries (mean 1.8, SD 0.8) and drowning (mean 1.8 SD, 0.9).

### **5.2.5 Mothers' perceptions of the severity of injuries**

The mothers' perceptions about severity of different injuries in pre-school children were analysed through the Severity of Injury Scale (SIS2). Mothers were asked to think generally about the seriousness of certain injuries happening to a pre-school child. A rating of 1 indicated an injury to be thought least serious and a rating of 5 indicated an injury was considered very serious (Appendix 2, page 4 of the mother's questionnaire). Table 5.2.7 summarises the results of the mothers' perceptions of the seriousness of the different injuries.

Mothers perceived most of the injuries as very serious if these were experienced by a pre-school child (Table 5.2.7). The mean ratings for the injuries in the SIS2 scale were, poisoning (mean 4.7, SD 0.8), electric shocks (mean 4.7, SD 0.7), head injuries (mean 4.5, SD 0.8), choking or suffocation (mean 4.5, SD 0.8), and drowning (mean 4.7, 0.7). Broken bones (mean 3.5, SD 0.9) were perceived to be less serious than other injuries, except for falls (mean 2.4, SD 1.0) and cuts (mean 2.6, SD 1.0) these mothers' perceived to be relatively superficial injuries. There was less variation and generally higher scores in the Likert scale for severity of injury than the responses to the susceptibility to injury scale. This indicates that most injuries were perceived as serious, but children were perceived to be less susceptible to certain injuries.

**Comparisons of mothers' subjective concerns about accidents with reasons for accident hospital admissions in 1993.**

	Accidents mothers worried most might happen		Accident admissions to the local hospital in 1993.		
	N	%	n	%	
run over by car	308	67%	head injury	93	58%
burns & scalds	192	42%	poisoning	53	33%
falls	181	40%	burns & scalds	12	7%
head injury	51	11%	near drowning	2	1%
choking	29	6%	choking	1	1%
poisoning	19	4%			
drowning	16	4%			

**Table 5.2.5**

**Mothers' perceptions of the likelihood of injury to the pre-school child.**

	least likely	less likely	likely	very likely	definitely likely	Total
mother's perception of how likely it is that a fall could happen to a pre-school child	n	5	30	81	356	472
	%	1%	6%	17%	75%	100%
mother's perception of how likely it is that a burn could happen to a pre-school child	n	58	176	191	39	471
	%	12%	37%	41%	8%	100%
mother's perception of how likely it is that a poisoning could happen to a pre-school child	n	206	184	66	14	471
	%	44%	39%	14%	3%	100%
mother's perception of how likely it is that an electric shock could happen to a pre-school child	n	188	192	74	17	472
	%	40%	41%	16%	4%	100%
mother's perception of how likely it is that a head injury could happen to a pre-school child	n	15	73	222	122	472
	%	3%	15%	47%	26%	100%
mother's perception of how likely it is that choking or suffocation could happen to a pre-school child	n	75	173	153	56	470
	%	16%	37%	33%	12%	100%
mother's perception of how likely a drowning or near drowning is for a pre-school child	n	196	179	71	22	471
	%	42%	38%	15%	5%	100%
mother's perception of how likely it is that a cut could happen to a pre-school child	n	5	8	73	127	472
	%	1%	2%	15%	27%	100%
mother's perception of how likely it is that broken bones could occur in a pre-school child	n	31	136	200	79	472
	%	7%	29%	42%	17%	100%

**Table 5.2.6**



**Mothers' perceptions of the severity of injury to the pre-school.**

	least serious	mildly serious	moderately serious	serious	very serious	Total
mother's perception of how serious a fall is to a pre-school child	n 97 % 21%	n 156 % 33%	n 145 % 31%	n 58 % 12%	n 14 % 3%	n 470 % 100%
mother's perception of how serious a burn is to a pre-school child	n 9 % 2%	n 21 % 4%	n 74 % 16%	n 179 % 38%	n 186 % 40%	n 469 % 100%
mother's perception of how serious a poisoning is to a pre-school child	n 9 % 2%	n 8 % 2%	n 7 % 1%	n 81 % 17%	n 363 % 78%	n 468 % 100%
mother's perception of how serious an electric shock is to a pre-school child	n 7 % 1%	n 8 % 2%	n 12 % 3%	n 66 % 14%	n 377 % 80%	n 470 % 100%
mother's perception of how serious a head injury is to a pre-school child	n 3 % 1%	n 9 % 2%	n 42 % 9%	n 135 % 29%	n 281 % 60%	n 470 % 100%
mother's perception of how serious choking or suffocation is to a pre-school child	n 10 % 2%	n 7 % 1%	n 24 % 5%	n 111 % 24%	n 316 % 68%	n 468 % 100%
mother's perception of how serious drowning or near drowning is to a pre-school child	n 9 % 2%	n 4 % 1%	n 11 % 2%	n 70 % 15%	n 374 % 80%	n 468 % 100%
mother's perception of how serious a cut is to a pre-school child	n 67 % 14%	n 137 % 29%	n 186 % 40%	n 65 % 14%	n 15 % 3%	n 470 % 100%
mother's perception of how serious broken bones are to a pre-school child	n 10 % 2%	n 52 % 11%	n 168 % 36%	n 175 % 37%	n 65 % 14%	n 470 % 100%

**Table 5.2.7**

### **5.2.6 Accident repeaters**

Few mothers  $n=37$  (8%) believed that a child who experienced an accident needing medical attention would be more likely to have a serious accident again in the future than a child who had never had an accident. The majority of mothers  $n= 289$  (61%) believed that a child who experienced an accident needing medical attention would be no more likely to have a serious accident again in the future than a child who had never had a previous accident. However, almost a third of mothers  $n=142$  (30%) were uncertain about the future likelihood of injury.

### **5.2.7 Accident rates in the samples**

The accident rate for the respondents was identified and cross examined through several questions. The majority of mothers reported their pre-school child as having experienced an accident (Table 5.2.8) and only a minority of mothers reported no accidents. There were no significant differences in the self reported accident rates for the random and post accident sample, despite the higher percentage of reported accidents in the post accident sample. Accidental injury was as prevalent in the random sample as the post accident sample, reinforcing the scale of the problem of accidental injury in pre-school children.

The majority of mothers reported treating some accidents at home (Table 5.2.8), however, almost half of the mothers (46%) reported that their pre-school child had attended the Accident and Emergency Department following an accident. Almost one fifth of mothers (17%) reported that their child had attended the doctors surgery for treatment following an accident whilst a minority had the doctor visit the child at home (8%). Some children had been admitted to hospital, most staying three days or less (6%) with a few staying four days or more (2%).

### **5.2.8 Location and description of injuries**

Mothers were asked to indicate places where injuries had occurred and their views on the severity of the injuries. The results are summarised in Table 5.2.9. Mothers reported most injuries to have occurred in the house and garden. The house was also

**Accident experience and treatment.**

	N	%
pre-school child experienced an accident	412	87%
pre-school child experienced no accident	60	13%
treated at home	311	66%
Accident & Emergency department	216	46%
doctor's surgery	80	17%
doctor visited the home	39	8%
hospital admission (1-3 days)	29	6%
hospital admission (4+ days)	8	2%
visited the dentist	2	0%
Total n=472		

**Table 5.2.8**

**Places where mothers reported injuries to have occurred and their perceived severity.**

Place	Severity of injury to child						Total Incidents
	n	Mild %	n	Moderate %	n	Severe %	
house	252	53%	129	27 %	34	7 %	415
garden	192	41%	54	11%	11	3%	257
car	24	5 %	14	3%	4	1%	42
road	8	2%	10	2%	6	1%	24
playgroup or nursery	80	17%	23	5%	1	0%	104
playground	50	11%	24	5%	7	2%	81
cycling	57	12%	14	3%	4	1%	75
walking	80	17%	21	4%	7	2%	108
other	7	2%	8	2%	3	1%	18

**Table 5.2.9**

Number and percentage of respondents in each category

the place where the majority of mothers reported severe and moderate injuries to have occurred. Fewer mothers reported accidents when the child was walking or at the playgroup or nursery. Mothers reported least accidents to have happened on the road or in the car. Car injuries were reported to be mainly mild, however, the severity of injury was more evenly distributed for accidents that occurred on the road. Almost as many mothers reported injuries to have been severe compared with mild when they occurred on the road.

The opportunity to write about accidents that had happened to the pre-school children was suggested by mothers during the pre-test work for the questionnaire. This opportunity was taken up by over half the respondents in the main survey. The reported accident experiences were varied and a selection of the responses are presented in Table 5.2.10. The diversity of contexts gave some insight into the complexity of accidental injury, however some specific injuries featured prominently in the voluntary reporting. Falls and childhood bumps featured prominently in the mothers' descriptions of injury incidents. Head injuries were described by some mothers and the activity of the child was considered to be the cause of the injury in some situations. Siblings and friends fighting were also described whilst the parent was reported to be present at the time of the injury by one fifth of mothers. Falls from stairs and broken bones were specifically described by some mothers as the outcome of the accident. Burns and scalds and poisonings were reported by few mothers. The data gave a more qualitative insight into the mothers' views of accidents and the contexts in which they occurred. The amount and quality of data supplied in response to this open question indicated that more in-depth interviews with mothers would help to further understand the contexts in which accidents occurred.

### **5.2.9 Susceptibility to injury scale factor analysis**

The 'Susceptibility to Injury Scale' (SIS1) from the mothers' questionnaire was examined using factor analysis. A two factor structure was derived which represented the underlying structure of the scale whilst retaining the information of

**Mothers' descriptions of injury incidents.**

	n	%
falls	109	43%
bumps	80	32%
head injuries	75	30%
activity of the child was the cause	35	14%
sibling and friends fighting	23	9%
parents present	20	8%
falls from stairs	19	8%
broken bones	19	8%
burns & scalds	18	7%
poisonings	9	4%
		Total n = 251

**Table 5.2.10**

the original nine items. Factor 1 was identified as the ‘Uncommon Injuries’ factor and Factor 2 was identified as the ‘Common Injuries’ factor. Factor 1 related mainly to the more unexpected types of injuries in pre-school children and were unlike the common injuries of factor 2 which were considered part of the ‘everyday bumps and knocks’ that pre-school children are expected to sustain. Cronbach’s alpha indicated good reliability for both the original scale and the new factors, the scale description and factor analysis of the scale are summarised in Table 5.2.11.

Factor scores were created using the Likert scale responses. The items loading on the factors and the relationship of the two new factors to social and demographic data were analysed. The results of the analysis of the two new factors are presented in Table 5.2.12. To assist interpretation of the factor scores and the results of the principal components analysis of the likelihood and severity scales, a brief explanation is given here. A negative factor score towards minus one corresponds towards a score of one on the Likert scale (least likely or serious). A positive factor score towards plus one corresponds towards a score of five on the Likert scale (definitely likely or very serious).

Maternal age and the number of adults in the home correlated positively but very weakly with both the uncommon injuries factor variable and the common injuries factor variable. Older mothers perceived uncommon and common injuries as more likely to happen to pre-school children than younger mothers. The mothers perceived uncommon and common injuries as more likely when they were supported by other adults in the home. Lone, unsupported mothers did not perceive the likelihood of uncommon or common injuries to the same extent as supported mothers.

#### **5.2.10 Factor analysis of the Severity of Injury Scale**

Factor analysis of the ‘Severity of Injury Scale’ for the mothers’ questionnaire also identified two main factors that indicated the underlying structure of the original nine-item scale. Factor 1 was identified as the ‘Traumatic Injuries’ factor and Factor 2 was identified as the ‘Superficial Injuries’ factor. Factor 1, the traumatic injuries variable related mainly to the more serious types of injuries in pre-school children,

**Principal components analysis followed by oblique rotation of the  
Susceptibility to Injury Scale (SIS1 Scale).**

Variable	Communality	Uncommon injuries Factor 1	Common injuries Factor 2
Electrocution	.619	<b>.820</b>	-.179
Poisoning	.638	<b>.820</b>	-.087
Drowning	.522	<b>.738</b>	-.061
Burns	.490	<b>.612</b>	.205
Choking	.455	<b>.603</b>	.174
Head injury	.443	<b>.442</b>	.385
Cut	.611	-.058	<b>.797</b>
Fall	.569	-.100	<b>.777</b>
Broken bones	.415	.265	<b>.515</b>
Eigen values (unrotated factors)		3.4	1.4
Cronbach's alpha		.79	.57

**Table 5.2.11**

\*Cronbach's alpha is 0.78 for the 9 item Likert scale on page 3 of mothers' questionnaire.

\*\* n= 469.

**Relationships of the Uncommon Injuries and Common Injuries Factors  
with maternal age and number of adults in the home.**

Factor variable	Maternal age	Number of adults in the home
Factor 1 Uncommon injuries	r* .101 p< 0.05 1 tailed	r* .097 p< 0.05 1 tailed
Factor 2 Common injuries	r* .092 p< 0.05 1 tailed	r* .138 p< 0.05 1 tailed

**Table 5.2.12**

r\* Pearson's Correlation Coefficient

often requiring medical attention and a period of time for recovery. Factor 2, composed of the more 'superficial' injuries experienced by pre-school children in the course of their usual play activities. The scale description, Cronbach's alpha and factor analysis of the scale are summarised in Table 5.2.13. Cronbach's alpha indicated that this scale and the new factors had good reliability.

Analysis of the factor from the severity of injury scale revealed some significant differences between the groups of mothers. These are summarised in Table 5.2.14 and 5.2.15. The traumatic injuries factor variable was weakly and positively correlated with the social class of the respondents (Table 5.2.14). Mothers in social class one perceived the injuries as more traumatic than mothers in social class five. The more adults there were in the home, the more traumatic the injuries were perceived to be, the unsupported, lone mothers did not feel injuries were as traumatic as the supported mothers (Table 5.2.14). Maternal age correlated weakly, but negatively with the traumatic injuries factor scores (Table 5.2.14). This indicates that the older mothers generally perceived traumatic injuries to be less serious than younger mothers. The number of children correlated negatively, but weakly with factor scores for the traumatic and superficial injuries, the more children the mother had, the less serious the superficial injuries and traumatic injuries were perceived to be (Table 5.2.14 and 5.2.15). The more children the mother had the less serious she perceived injuries to be.

The mothers in local authority housing perceived superficial injuries as more serious (mean factor score 0.277) than the mothers in private housing (mean factor score -0.142; Table 5.2.15). Different perceptions of the superficial injuries related to the marital status of the mothers (Table 5.2.15). Single, unsupported mothers (mean factor score 0.388) perceived the superficial injuries as more serious than married mothers (mean factor score -0.003) or divorced mothers with a partner (mean factor score -0.523), however, on applying the Bonferroni test this was not significant at  $p < 0.05$ .



**Principal components analysis followed by oblique rotation of the Severity of Injury Scale (SIS 2 Scale).**

Variable	Communality	Traumatic injuries Factor 1	Superficial injuries Factor 2
Drowning	.787	<b>.908</b>	-.141
Poisoning	.769	<b>.896</b>	-.119
Electrocution	.750	<b>.882</b>	-.094
Choking	.725	<b>.854</b>	-.013
Head injury	.432	<b>.594</b>	.181
Burns	.511	<b>.574</b>	.319
Cut	.738	-.047	<b>.869</b>
Fall	.652	-.112	<b>.525</b>
Broken bones	.506	.372	<b>.529</b>
Eigen Value (unrotated factors)		4.2	1.7
Cronbach's alpha		.88	.67

**Table 5.2.13**

\*Cronbach's alpha is .84 for the 9 item Likert scale on page 4 of mothers' questionnaire.

\*\* n= 466.

**Relationships of the traumatic injuries factor scores of the Severity of Injury Scale (SIS 2) with different social and demographic groups.**

Factor	Social class	Number of adults in the home	Maternal age	Number of children
Factor 1 Traumatic injuries	r** .19 p< 0.02	r* .095 p< 0.05	r* -.09 p< 0.05	r* -.075 p< 0.05

**Table 5.2.14**

r\* Pearson's Correlation Coefficient  
r\*\* Spearman's Rank Correlation Coefficient

### **5.2.11 Multiple regression analysis of the SIS 1 and SIS 2 scales**

Stepwise multiple regression was the statistical method used for identifying the independent social and demographic variables which explained the most variance in the factor scores. The Beta Partial Regression Coefficient was used to indicate the independent variables which related to the factor scores and high tolerance scores above 0.8 were used to avoid reporting relationships with strong multicollinearity effects. The significance level of the independent variable was used to indicate the explanatory relationship with the factor variable. The stepwise multiple regression required a significance of  $p < 0.05$  to include a variable in the model. Adjusted  $R^2$  was used to measure the overall explanatory capability of the variables in the model.

The number of adults and maternal age explained most variance in the mothers' perceptions of uncommon injuries (Table 5.2.16). The number of adults also explained the most variation in the perceptions of common injuries (Table 5.2.17) of the susceptibility to injury scale (SIS1). Social class explained most variance in the traumatic injuries factor variable (Table 5.2.18) and the number of children the mother had explained the most variance in the superficial injuries (Table 5.2.19) of the severity of injury scale (SIS 2).

### **5.2.12 First aid**

A minority of mothers had attended a first aid course  $n=170$  (36%). Significant differences were identified in the mothers' social class and attendance at a first aid course (Chi square test,  $p < 0.02$ ). Fewer mothers in social classes four and five had attended first aid courses than the mothers in social classes one, two or three manual and non manual.

The mothers' self reported, perceived knowledge for treating injuries is summarised in Table 5.2.20. Most mothers felt particularly confident about treating injuries resulting from falls and cuts and least confident about treating poisonings or electric shock injuries. Mothers in the lower social classes reported less knowledge for treating choking injuries (Chi square test,  $p < 0.02$ ).

**Relationships of the superficial injuries factor scores of the Severity of Injury Scale (SIS 2) with different social and demographic groups.**

Factor	Housing circumstances	Number of children	Marital Status
Factor 2 Superficial injuries	F p< 0.006	r* -.096 p< 0.04	F p< 0.01

**Table 5.2.15**

r\* Pearson's Correlation Coefficient  
F F Test for Analysis of Variance (ANOVA)

**Uncommon Injuries Factor 1 Regression Analysis.  
Explanatory capability of the independent variables number of adults and maternal age on factor scores for Uncommon Injuries.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Number of adults	.146	.019	<.003
Maternal age	.107	.027	<.032

**Table 5.2.16**

**Common Injuries Factor 2 Regression Analysis.  
Explanatory capability of the independent variable number of adults on factor scores for Common Injuries.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Number of adults	.122	.017	<.003

**Table 5.2 17**

**Traumatic Injuries Factor 1 Regression Analysis.**  
**Explanatory capability of the independent variable social class on**  
**factor scores for Traumatic Injuries.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Social class	.192861	.030	<.0001

**Table 5.2.18**

**Superficial Injuries Factor 2 Regression Analysis.**  
**Explanatory capability of the independent variables number of children,**  
**housing and marital status on factor scores for Superficial Injuries.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Number of children	-.110495	.009	<.0168
Local authority housing	.171796	.027	<.0004

**Table 5.2.19**

**Mothers' perceived first aid knowledge for treating injuries.**

	Has first aid knowledge		No first aid knowledge		Not sure about first aid knowledge		Total respondents	
	n	%	n	%	n	%	n	%
cut	450	95%	6	2%	16	3%	472	100%
fall	412	87%	18	4%	38	8%	468	99%
burn or scald	400	85%	30	6%	42	9%	472	100%
choking	362	76%	43	9%	65	14%	470	99%
broken bones	255	48%	147	31%	95	20%	467	99%
head injury	244	52%	121	26%	101	21%	466	98%
drowning	244	52%	126	27%	97	21%	467	99%
poisoning	184	39%	176	37%	108	23%	468	99%
electric shock	176	37%	180	38%	111	23%	467	99%

**Table 5.2.20**

The mothers' perceived knowledge for treating injuries differed significantly according to whether they had attended a first aid course. Mothers who attended first aid courses reported themselves as more knowledgeable for treating injuries including burns or scalds (Chi square test,  $p < 0.004$ ), poisoning (Chi square test,  $p < 0.001$ ), electric shock (Chi square test,  $p < 0.001$ ), head injury (Chi square test,  $p < 0.001$ ), choking (Chi square test,  $p < 0.001$ ), drowning (Chi square test,  $p < 0.001$ ) and broken bones (Chi square test,  $p < 0.001$ ). There was, however, no significant difference in perceived knowledge for treating falls and cuts for the mothers who had attended a first aid course compared with mothers who had not attended a first aid course. The mothers who attended a first aid course perceived head injury and electric shock injuries as more serious or very serious (Chi square test,  $p < 0.017$ ) when compared to mothers who had not attended a first aid course.

The number of years since the mothers attended their first aid course varied from 1 to 22 years (mean 7.6, SD 5.2). Mothers' maternal age and the number of years since they attended a first aid course were significantly correlated (Pearson's  $r = 0.23$ ,  $p < 0.001$ ). Younger mothers tended to have attended first aid courses more recently than older mothers. Mothers self reported knowledge for treating certain injuries was associated with the time elapsed since attending the first aid course. Mothers who had attended first aid courses more recently perceived themselves as more knowledgeable about treating most injuries in contrast to mothers who had attended the courses in earlier years (Table 5.2.21).

Mothers were asked if they felt that they needed to attend a first aid course to help with child safety (Table 5.2.22). Almost half the mothers (45%) felt they needed to attend a first aid course whilst, almost a third (29%) did not. About a quarter of the mothers (26%) were not sure if they needed to attend a first aid course to help with child safety. There were significant differences between the mothers' perceived need to attend a first aid course and their perceived knowledge for treating certain injuries. Mothers who reported not having enough knowledge for treating the following injuries perceived more need to attend a first aid course, for example, poisonings

**Mean years since mothers had attended a first aid course and their self reported, perceived knowledge for treating injuries.**

	Has first aid knowledge Mean years since attended first aid course (SD)	Has no first aid knowledge Mean Years since attended first aid course (SD)
choking	7.4 (5.2)	16.0 (2.8)
broken bones	6.8 (5.0)	9.4 (6.0)
head injury	6.8 (5.1)	11.9 (4.7)
drowning	6.6 (5.0)	13.6 (5.1)
poisoning	6.5 (5.2)	9.4 (4.9)
electric shock	6.4 (4.8)	10.6 (5.4)

**Table 5.2.21**

**Mothers' perceptions of their need to attend a first aid course.**

	N	%
needs to attend a first aid course	212	45%
no need to attend a first aid course	136	29%
not sure if needs to attend first aid course	119	26%
		Total n = 467

**Table 5.2.22**

**Mothers' intentions to attend a first aid course.**

	N	%
intends to attend a first aid course	383	81%
no intention to attend a first aid course	28	6%
not sure of intention to attend a first aid course	56	12%
		Total n = 467

**Table 5.2.23**

(Chi square test,  $p < 0.003$ ), electric shocks (Chi square test,  $p < 0.001$ ), head injuries (Chi square test,  $p < 0.001$ ), drowning (Chi square test,  $p < 0.001$ ) and burns or scalds (Chi square test,  $p < 0.001$ ). The need to attend a first aid course was not significantly associated with the mothers' knowledge for treating falls, cuts, choking and burns or scalds. The mothers who felt no need to attend a first aid course also perceived poisoning injuries as least likely (Chi square test,  $p < 0.015$ ).

When the question was made specific to a local course, a majority of mothers reported that they would go to a first aid course locally (Table 5.2.23) and only a minority of mothers reported that they would not attend or were unsure. A mothers' intention to go to a local first aid course was not significantly related to social circumstances or self reported knowledge for treating injuries. The mothers who intended to go to a local first aid course perceived drowning as more serious (Chi square test,  $p < 0.022$ ), but there were no significant differences in the likelihood or severity of the other injuries when the mothers' intention to go to a first aid course was analysed.

### **5.2.13 Summary of maternal perceptions of injury risk**

Significant differences in maternal perceptions of injury risk can be identified in relation to social and demographic characteristics. However, the social and demographic characteristics studied explained little of the variation in the mother's perceptions of injury risk. It would seem that other variables not analysed in this study may further explain the variation in the mothers' perception's of injury risk.

## **5.3 Benefits and Barriers to Injury Prevention**

This section identifies mothers' perceptions of issues which influence child safety and the prevention of accidents. Gaining insight into the mothers' perceptions of these issues helps us to recognise a mother's opinion of different benefits and barriers to adopting safety strategies and taking actions. The Benefits and Barriers to Injury Prevention Scale (BB Scale) are contained in Appendix 2, pages 8 to 11 of the

mother's questionnaire. First the BB Scale was explored for the frequencies of opinion and then factor analysed to reduce the data prior to examining the data for differences between groups of mothers. Following the presentation of results on the BB Scale, the responses to several open ended questions are presented which identified the mothers' opinions on the benefits and barriers to injury prevention. These responses gave some insight to the mothers' expectations for how barriers to injury prevention should be tackled and illuminates the most beneficial approaches for improved child safety from their perspective.

The hypothesis for this section states:

### **Hypothesis 3**

*Mothers living in different social contexts will have different perceptions of the benefits and barriers for injury prevention in pre-school children.*

#### **5.3.1 Benefits and Barriers to Injury Prevention Scale (BB Scale)**

The frequency of responses to the statements on the BB Scale identified that the majority of mothers agreed or strongly agreed with the statements addressing the benefits of injury prevention (Table 5.3.1 and Table 5.3.2). The majority of mothers perceived the issues described in the benefit statements as positive measures for preventing accidental injury and promoting safety. Mothers felt particularly strongly about legislation for the installation of smoke alarms in all houses and were consistent in their views of what constituted benefits to safety.

The mothers were more varied in their views about the barriers to injury prevention (Table 5.3.3 and Table 5.3.4). The statements regarding the local outside environment were perceived as barriers to safety by the majority of mothers, however most mothers did not perceive the home environment to be a barrier to preventing accidents. The mothers' primary concern regarding barriers to safety related to the environment outside the home and not within it.



**Mothers' perceptions of the benefits to injury prevention.**

	strongly agree	agree	neither agree or disagree		strongly disagree	Total
			disagree	agree		
mother's perception of whether safety equipment is essential for pre-school child safety	n 253 % 54%	174 37%	27 6%	12 3%	6 1%	472 100%
mother's perception of whether 'parents need to teach children about how to avoid accidents and be safe'	n 283 % 60%	175 37%	8 2%	4 1%	3 1%	473 100%
parents needing to be more aware of the importance of watching their children to prevent accidents from happening	n 140 % 30%	232 49%	75 16%	23 5%	3 1%	473 100%
many accidents are preventable and I feel I can stop my child from getting hurt most of the time	n 59 % 12%	318 67%	73 15%	22 5%	1 0%	473 100%
mother's perceptions of 'making regulations and laws are a good way to reduce accidents'	n 229 % 48%	219 46%	17 4%	8 2%		473 100%
having smoke alarms in all houses should be made a law	n 361 % 76%	104 22%	8 2%	1 0%		474 100%
educating children about their own safety is essential for preventing accidents to pre-school children	n 250 % 53%	196 41%	23 5%	4 1%	1 0%	474 100%

**Table 5.3.1**

**Mean scores of mothers' perceptions of the benefits to injury prevention.**

	n	Mean	SD
Mother's perception as to whether accidents happen when adults are too busy to keep an eye on the children	472	2.26	.97
Mother's perception of whether 'parents need to teach children about how to avoid accidents and be safe'	473	1.45	.64
Parents needing to be more aware of the importance of watching their children to prevent accidents from happening'	473	1.98	.84
Many accidents are preventable and I feel I can stop my child from getting hurt most of the time	473	2.13	.68
Mother's perceptions of 'making regulations and laws are a good way to reduce accidents'	473	1.59	.65
Having smoke alarms in all houses should be made a law	474	1.26	.49
Educating children about their own safety is essential for preventing accidents to pre-school children	474	1.54	.65

**Table 5.3.2**

**Mothers' perceptions of the barriers to injury prevention.**

		strongly agree	agree	neither agree or disagree	disagree	strongly disagree	Total
mother's perception as to whether accidents happen when adults are too busy to keep an eye on the children	n	99	218	101	42	12	472
	%	21%	46%	21%	9%	3%	100%
mother's perception of 'through minor accidents children learn to avoid more serious injuries'	n	17	182	135	126	13	473
	%	4%	38%	29%	27%	3%	100%
many accidents happen to children when parents do not have enough money to buy safety equipment	n	40	153	109	137	34	473
	%	8%	32%	23%	29%	7%	100%
mother's perception of accidents happening because the area where they live has many dangers and is not safe'	n	56	187	134	86	9	472
	%	12%	40%	28%	18%	2%	100%
parents do not have enough knowledge about how to keep their children safe from accidents	n	21	120	139	175	18	473
	%	4%	25%	29%	37%	4%	100%
parents are not aware of the different dangers as their child grows older	n	17	188	116	141	11	473
	%	4%	40%	25%	30%	2%	100%
parents expect too much of their child's abilities to do things	n	17	168	124	151	13	473
	%	4%	36%	26%	32%	3%	100%
many accidents happen to children because our home is not safe enough	n	3	77	122	232	38	472
	%	1%	16%	26%	49%	8%	100%
there are not enough safe places where children can play	n	125	268	58	22	1	474
	%	26%	57%	12%	5%	0%	100%

**Table 5.3.3**

**Mothers' perceptions of the barriers to injury prevention.**

	n	Mean	SD
mother's perception as to whether accidents happen when adults are too busy to keep an eye on the children	472	2.26	.97
mother's perception of 'through minor accidents children learn to avoid more serious injuries'	473	2.86	.94
many accidents happen to children when parents do not have enough money to buy safety equipment	473	2.94	1.11
mother's perception of accidents happening because the area where they live has many dangers and is not safe'	472	2.59	.98
parents do not have enough knowledge about how to keep their children safe from accidents	473	3.10	.97
parents are not aware of the different dangers as their child grows older	473	2.88	.96
parents expect too much of their child's abilities to do things	473	2.95	.96
many accidents happen to children because our home is not safe enough	472	3.48	.88
there are not enough safe places where children can play	474	1.96	.77

**Table 5.3.4**

The majority of mothers did not perceive lack of knowledge as a major problem for safety, but issues relating to the outside environment were perceived as barriers (Table 5.3.3 and Table 5.3.4). The lifestyles of 'busy parents' were perceived as a barrier to safety by the majority of mothers along with 'parents lack of awareness of dangers in relation to the development of the child'. Parental expectations of their child's abilities and lack of money were also perceived as barriers to safety by some mothers, but there was a fairly even distribution between respondents who agreed and disagreed. Many mothers' were of the opinion that through having minor accidents children learn to avoid more serious injuries and that having minor injuries was not a barrier to preventing accidents, but a benefit to safety. The diversity of perceptions identified that there were complex issues underlying the mothers' perceptions of barriers to safety.

Questions which examined the mothers' self efficacy identified a diversity of opinion about the mothers' own abilities to prevent accidents (Table 5.3.5 and Table 5.3.6). Many mothers, for example, felt many accidents just happened and that there was little they could do to stop their child from getting hurt and that many accidents are bound to happen.

### **5.3.2 Factor analysis of the Benefits and Barriers (BB) Scale**

The results of the factor analysis for BB Scale are presented in Table 5.3.7. The eighteen item scale was reduced to 5 factors following principal components analysis and oblique rotation. Factor 1 was identified as the 'Knowledge of Risk and Internal Barriers' factor as it was constructed from the barrier statements about parental knowledge, awareness of dangers and expectations of the child's abilities. Factor 2 was identified as the 'Legislation and Benefits' factor as it was constructed from the benefit statements examining regulations or law and safety equipment. Factor 3 was the 'Environmental and External Barriers' factor and it included statements primarily about the local area and the home. Factor 4 the Self Efficacy factor was constructed from the self efficacy statements and Factor 5 the 'Supervision' factor was derived from statements about parents watching children or being too busy to watch children

**Mothers' perceptions of their self efficacy for preventing injuries.**

	strongly agree		neither agree or disagree		strongly disagree		Total
	n	%	n	%	n	%	
mother's perception of whether 'many accidents are bound to happen'	49	10%	101	21%	83	3%	473
mother's perception of 'many accidents just happen and their is little I can do to stop my child from getting hurt'	21	4%	99	21%	140	7%	471
many accidents are preventable and I feel I can stop my child from getting hurt most of the time	59	12%	318	67%	22	0%	473

**Table 5.3.5**

**Mothers' perceptions of their self efficacy for preventing injuries**

	n	Mean	SD
Mother's perception of whether 'many accidents are bound to happen'	473	2.54	.99
Mother's perception of 'many accidents just happen and their is little I can do to stop my child from getting hurt'	471	2.96	1.06
Many accidents are preventable and I feel I can stop my child from getting hurt most of the time	473	2.13	.68

**Table 5.3.6**

Table 5.3.7 Principal components analysis followed by oblique rotation of the Benefits and Barriers to Injury Prevention scale (BB Scale).

Variable	Communitarity	Knowledge of risk and Internal barriers. Factor 1	Legislation and benefits Factor 2	Environmental and External barriers Factor 3	Self efficacy Factor 4	Supervision Factor 5
1j) Not enough Knowledge	.745	<b>.874</b>	-.028	-.105	-.056	-.008
2a) Not aware of danger	.741	<b>.863</b>	-.091	-.010	-.096	.062
2b) Parents' expectations	.452	<b>.607</b>	-.037	.015	.114	-.154
2g) Smoke alarms law	.664	.104	<b>-.812</b>	.039	.131	.216
2f) Regulations and laws	.513	-.034	<b>-.685</b>	.167	-.021	.039
2h) Educate children	.543	.047	<b>-.638</b>	-.161	.041	-.267
1a) Use safety equipment	.324	.030	<b>-.325</b>	.262	-.205	-.217
1l) Area dangerous	.598	-.091	.034	<b>.778</b>	.085	-.038
1h) Not enough money	.575	.082	.022	<b>.723</b>	.011	-.106
2e) Not enough safe places	.517	-.083	-.291	<b>.641</b>	-.041	.091
2d) Home not safe	.345	.335	.156	<b>.393</b>	.083	-.013
1f) Accidents 'bound to happen'	.659	.006	-.056	.051	<b>.809</b>	.019
1g) Accidents 'just happen'	.661	.017	.008	.083	<b>.795</b>	.150

**Table 5.3.7 Principal components analysis followed by oblique rotation of the Benefits and Barriers to Injury Prevention scale (BB Scale) (continued).**

Variable	Communality	Knowledge of Risk and Internal barriers. Factor 1	Legislation and benefits Factor 2	Environmental and External barriers Factor 3	Self efficacy Factor 4	Supervision Factor 5
1c) Learn from minor accidents	.461	-.085	-.063	-.088	<b>.524</b>	-.416
1e) Parents to watch child	.587	.122	-.014	.010	-.060	<b>-.727</b>
1b) Parents busy	.522	.133	.166	.206	.034	<b>-.646</b>
1d) Teach child to be safe	.571	-.052	-.444	-.105	-.095	<b>-.534</b>
Eigen Value (unrotated factors)		3.1	1.9	1.8	1.5	1.1
Cronbach's alpha		.72	.56	.61	.57	.53

**Table 5.3.7**

\*\* n= 465.

\*Cronbach's alpha is .70 for the 18 item Likert scale ) in Section 2 of mothers' questionnaire, questions 1a to 2h inclusive. (excludes 2c)



and the need to teach the child to maintain his or her own safety.

Factor scores were calculated for each respondent following the factor analysis and used for the subsequent analysis of differences between the mothers' responses to this section of the questionnaire. The interpretation of the factor scores for this section of the questionnaire is clarified here. A 'strongly disagree' statement would score 5 on the Likert scale and have a more positive factor score towards plus one. A 'strongly agree' statement scoring one on the Likert scale would correspond to a more negative factor score towards minus one.

### **5.3.3 Knowledge of risk**

Social classification and the 'Knowledge of Risk and Internal Barriers' scores were negatively, but weakly correlated (Table 5.3.8). This indicated mothers in a higher classes perceived 'Knowledge of Risk and Internal Barriers' as more of a barrier (strongly agreed with statements) than mothers in lower social classes who had higher factor scores (disagreed with such statements). For example, mothers in social class one perceived not having enough knowledge of the dangers prevented parents from taking safety action.

### **5.3.4 The benefits of Legislation**

The 'Legislation and Benefits' factor was analysed for differences in scores between different groups of mothers based on their social and demographic status. No significant differences were found based on the independent variables obtained for the study. The majority of mothers had strongly agreed or agreed with the benefit statements making up this factor and this may have resulted in there being little difference to detect.

### **5.3.5 Environmental barriers**

Certain social and demographic situations were related to the mothers' perceptions of 'Environmental and External Barriers' factor 3 (Table 5.3.9). Social classification and 'Environmental' factor scores were positively, but weakly correlated. This

indicated mothers in a lower social class perceived environmental barriers as more of a problem (strongly agreed with statements) than mothers in higher social classes who had higher factor scores (disagreed with statements). Maternal age was weakly, but positively correlated with 'Environmental' factor scores and older mothers perceived the environment as less of a barrier than the younger mothers.

Mothers who reported the home as crowded also perceived the environment as significantly more of a barrier with a mean factor score of -0.46 as opposed to a mean factor score of 0.01 for mothers who reported no crowded conditions (t-test,  $p < 0.01$ ). Mothers in local authority housing (mean factor score -0.28) perceived the environment as more of a barrier than mothers in private housing (mean factor score 0.19). Mothers in local authority housing were more concerned about 'Environmental Barriers' than mothers in private housing. The mothers who reported having a fenced garden or yard (mean factor score 0.01) perceived the environment as less problematic than mothers with shared gardens (mean factor score -0.52) or no garden (mean factor score -0.42).

Mothers in different marital circumstances also perceived the environmental factor differently. Married mothers (mean factor score 0.01) perceived environmental barriers as significantly less of a problem than single mothers (mean factor score -0.43). Single mothers with a partner also perceived the environment as more problematic than married mothers (mean factor score -0.26), but this was not significant after the Bonferroni test was applied.

### **5.3.6 Self efficacy**

Maternal age and the 'self efficacy' factor scores had a significant, but weak, positive correlation (Table 5.3.10). Older mothers had reported greater self efficacy for preventing injury than younger mothers. Mothers in private housing (mean factor score 0.009) also perceived more self efficacy than mothers living in local authority housing (mean factor score -0.13). The mothers who reported a fenced garden (mean factor score 0.006) perceived significantly more self efficacy than mothers with other types of unfenced gardens (mean factor score -0.20), shared gardens (mean factor

**Relationships with the 'Knowledge of Risk' factor 1.**

Factor	Social classification
Factor 1	$r^* -.133$
Knowledge	$p < 0.01$

**Table 5.3.8**

$r^*$  Pearson's Correlation Coefficient

**Relationships with the 'Environmental' factor 3.**

Factor	Social classification	Maternal age	Crowded conditions	Housing type	Play area	Marital status
Factor 3	$r^* .193$	$r^* .091$	t	F	F	F
Environmental Safety	$p < 0.01$	$p < 0.05$	$p < 0.009$	$p < 0.05$	$p < 0.01$	$p < 0.01$

**Table 5.3.9**

$r^*$  Pearson's Correlation Coefficient  
 F One Way Analysis of Variance (ANOVA)  
 t t-test

**Relationships with the 'Self efficacy' factor 4.**

Factor	Maternal age	Housing type	Play area
Factor 4	$r^* .144$	F	F
Self efficacy	$p < 0.01$	$p < 0.05$	$p < 0.05$

**Table 5.3.10**

$r^*$  Pearson's Correlation Coefficient  
 F One Way Analysis of Variance (ANOVA)

**Relationships with the 'Supervision' factor 5.**

Factor	Social classification	Play area
Factor 5	$r^{**} .134$	F
Supervision	$p < 0.01$	$p < 0.01$

**Table 5.3.11**

$r^{**}$  Spearman's Rank Correlation Coefficient  
 F One Way Analysis of Variance (ANOVA)

score -0.49) and no gardens (mean factor score -0.17)

### **5.3.7 Supervision**

The supervision factor scores for mothers differed between the social classes and in relation to the types of garden facilities (Table 5.3.11). Social class and the supervision factor score were significantly, but weakly and positively correlated. Mothers in the higher social classes generally perceived supervision as less of a problem than mothers in the lower social classes. Mothers with fenced gardens also perceived supervision as less of a barrier (mean factor score 0.01) compared with mothers with unfenced gardens (mean factor score 0.002), shared gardens (mean factor score -0.01) and no gardens (mean factor score -0.23).

### **5.3.8 Regression analysis of the benefits and barriers scale**

The social classification of the mother explained the most variance in the knowledge of risk factor 1 (Table 5.3.12), environmental factor 3 (Table 5.3.13) and supervision factor 5 (Table 5.3.14) of the benefits and barriers to injury prevention scale (BB Scale). Maternal age explained the most variance in the self efficacy factor of the BB Scale (Table 5.3.15). The variance in the legislative benefits factor was not explained by the independent variables selected for the study. There was also more consensus for the legislative benefits factor as the majority of mothers 'strongly agreed' or 'agreed' with the statements constructing this factor.

### **5.3.9 Mothers' views on the best ways to prevent accidents**

The open ended questions sought to identify the mothers' perspectives on the issues of safety and preventing accidents. Mothers were asked for their views on the best way of preventing accidents to children (Table 5.3.16). Most respondents gave a qualitative response to this question (89%). The mothers reported a mainly educational approach to preventing accidents with little emphasis on environmental or legislative approaches. Although the mothers reported a need for themselves to be knowledgeable, they were also placing a strong onus on the child for being responsible for some safety practices. For example mothers felt that 'explaining the risks to the child and telling them not to touch things was a reasonable safety practice

**Knowledge of Risk Factor 1 Regression Analysis.  
Explanatory capability of the independent variable social classification  
on factor scores for 'knowledge of risk'.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Social classification	-.133	.015	<0.005

**Table 5.3.12**

**Environmental Factor 3 Regression Analysis.  
Explanatory capability of the independent variable social classification  
on factor scores for 'environmental' barriers.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Social classification	.193	.035	<0.001

**Table 5.3.13**

**Self Efficacy Factor 4 Regression Analysis.  
Explanatory capability of the independent variable maternal age on  
factor scores for 'self efficacy'.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Maternal age	.144	.019	<0.002

**Table 5.3.14**

**Supervision Factor 5 Regression Analysis.  
Explanatory capability of the independent variable social classification  
on factor scores for 'supervision'.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
Social classification	.156	.022	<0.001

**Table 5.3.15**

**Mothers' views on the best ways to prevent accidents to children.**

	N	%
educate the child in safety	152	36%
supervise the child	117	28%
explain the risks to the child	92	22%
help parents to understand the dangers	50	12%
use safety equipment	50	12%
raise the mother's awareness of dangers	42	10%
parents to make the home environment as safe as possible	40	10%
tell the child not to touch or do certain things	27	6%
parents to be aware of what the child is doing	19	5%
		Total n=420

**Table 5.3.16**

**Mothers' views on priorities for action in the local area.**

	N	%
improve local playgrounds	415	44%
traffic calming	272	29%
remove broken glass	84	9%
		Total n=424

**Table 5.3.17**

**Mothers' views on things to do to help keep children safe.**

	N	%
include safety in parentcraft	27	6%
classes on child safety	23	5%
council to improve features of the local area	21	5%
more information on child safety	19	4%
introduce safety equipment loan schemes	14	3%
improve play parks	11	3%
introduce first aid courses	11	3%
more television programmes on safety	11	3%
		Total n=220

**Table 5.3.18**

with a child. This finding is important to consider in light of a pre-school child's limited cognitive development and capabilities. Many pre-school children cannot be relied upon to do or not do things even when they have been taught a safety practice.

Only when mothers were asked to focus on the local environment did they express safety concerns in the wider context of environmental, engineering and enforcement approaches. The mothers were asked what things could be done to stop children from getting hurt in their local area. They reported their expectations for specific improvements for example, mothers wanted to see improvements locally in the playground facilities, traffic calming and the removal of broken glass (Table 5.3.17). These improvements related to their most frequently reported outside worries reported in section two (Table 5.2.2) and emphasised the mothers' concerns and priorities for improvements in child safety within the local area.

Mothers were asked to comment whether help with child safety had been poor and to describe what more could be done to help them keep their children safe (Table 5.3.18). Almost half of the mothers responded to this open question. About a third of the mothers (37%) who responded commented that help with safety had been poor. A minority of mothers (15%) identified the health visitor as not having done enough safety work. The mothers expected a variety of educational approaches to improve child safety, for example, classes on child safety and parentcraft. The council was also identified as having a role to play in improving the local area and housing, reflecting a more environmental approach to child safety. Safety equipment loan schemes, first aid courses and television programmes were also mentioned by a few mothers. Mothers primarily expected educational approaches to reduce accidents, but environmental approaches were also valued.

Mothers were asked about the people or places they felt were important for improving the safety of pre-school children other than health professionals, nurseries and immediate family or friends. A quarter of the mothers responded to this question



n=116 (25%). The council n=55 (28%) and police n=21 (11%) were the two groups mothers mentioned most frequently.

At the end of the questionnaire the mothers had an opportunity to volunteer any information they felt was important. Few mothers n=64 (14%) reiterated potential safety improvements at the very end of the questionnaire, but those that did, identified mainly the local council n=53 (27%) and the police n=21 (11%) as having a greater role to play in child safety. The environmental role of the council and the legislative enforcement powers of the police were important to mothers and they expected these organisations to help reduce accidental injury and develop safer communities.

### **5.3.10 Summary**

This section identified the benefits and barriers to injury prevention from the mothers' perspectives. Analysis of the BB Scale identified variations in mothers' perceptions of the barriers to injury prevention for mothers in different social and demographic circumstances. The barriers related to perceived lack of knowledge and deficits in environmental circumstances. The open ended questions elicited responses which indicated that the mothers perceived the foundations for barriers to safety to be related to inadequate preparation of parents through educational approaches and inadequate physical environments. The mothers expected improvements in educational and environmental approaches to reduce the barriers to injury prevention. The responses also illuminated the need for the qualitative study to look at how mothers in different social circumstances perceived the barriers to safety differently in relation to both educational and environmental approaches to preventing accidents. Whilst the mothers were of a consensus opinion about the benefits of legislation, they did not spontaneously or personally envisage this as a method for improving child safety.

## 5.4 Safety Equipment

The hypothesis for this first section states:

### **Hypothesis 4**

*Mothers living in relatively more disadvantaged social contexts will perceive greater benefits from safety equipment for injury prevention in pre-school children than mothers in more advantageous circumstances.*

This section presents the results of the analysis of the equipment benefit and efficacy scale (EBES). This scale was developed to measure the perceived usefulness of safety equipment and identified which safety equipment was perceived as most beneficial to the mothers (Appendix 2, page 5 of the mothers' questionnaire). The majority of safety equipment items in the scale were perceived as very useful, but some more than others. (Table 5.4.1). The three items perceived as most useful by the mothers were the child car seats (mean 4.94), car seat belts (mean 4.93) and smoke alarms (mean 4.89). The items which were still perceived as useful but to a lesser extent included fire blankets (mean 3.89) and corner protectors (mean 3.49).

### **4.4.1 The Equipment Benefit and Efficacy Scale**

Factor analysis of the EBE scale identified six factors, which are presented in Table 5.4.2. Factor 1 was identified as the 'Burns and Cuts Safety Equipment' factor, factor 2 as the 'Car Safety' factor, factor 3 as the 'Daily Activities Safety' factor, factor 4 as 'Barrier Safety Items' factor, factor 5 as 'Protective Clothes' and factor 6 as the 'Fire Fighting Safety Items' factor. Factor scores were then calculated for the responses. A factor score towards minus one indicated that the items were perceived as least useful and a factor score towards plus one signified that the items were thought of as very useful. Significant differences were identified in the perceived usefulness of safety equipment in relation to demographic and social variables.

**Mothers' perceptions of how useful safety equipment is**

	n	Mean	SD
safety gates	472	4.42	.98
safety catches	473	3.89	1.21
fireguard	473	4.68	.81
radiator guards	467	3.59	1.38
smoke alarms	472	4.89	.44
plug socket covers	471	4.39	.97
safety glass in doors	471	4.46	.88
safety glass in windows	472	4.10	1.12
cooker guard	469	4.11	1.06
hob guard	468	4.03	1.15
curly or short flexed kettle	472	4.20	1.02
curly or short flexed iron	468	3.98	1.18
water temperature control valve	469	3.84	1.29
carseat	474	4.94	.31
seatbelt	473	4.93	.38
child safety locks on car doors	471	4.73	.64
fireblanket	470	3.89	1.09
fire extinguisher in the house	474	4.12	.99
fire extinguisher in the car	468	3.86	1.13
corner protectors	467	3.49	1.22
non slip bath mat	470	4.09	1.07
safety harness	471	4.20	1.05
electricity circuit breaker	466	4.42	1.00
toys designed for the age of the child	473	4.27	.94
reflective outdoor clothing bands	469	4.03	1.03
bike helmets	471	4.72	.67

**Table 5.4.1**

**Table 5.4.2. Principal components analysis followed by oblique rotation of the Equipment Benefit and Efficacy scale (EBE Scale).**

Variable	Communality	Burns & cuts Factor 1	Car safety Factor 2	Daily activity Factor 3	Barrier items Factor 4	Clothes protect Factor 5	Fire safety Factor 6
Hobguard	.724	<b>.803</b>	.090	-.047	-.190	-.004	-.017
Cooker guard	.743	<b>.782</b>	.061	-.120	-.219	.074	-.061
Kettle flex	.619	<b>.758</b>	.126	.052	.104	-.046	-.053
Iron flex	.634	<b>.742</b>	.096	.059	.118	-.086	-.111
Window glass	.677	<b>.605</b>	-.214	-.014	-.063	.432	.103
Radiator guard	.464	<b>.518</b>	-.112	.221	.081	-.148	-.120
Safety glass	.486	<b>.466</b>	-.165	.015	-.199	.357	.107
Water temperature valve	.447	<b>.433</b>	-.006	.059	.169	.030	-.311
Corner covers	.526	<b>.399</b>	-.057	.349	.038	-.027	-.193
Car seat	.688	.661	<b>.825</b>	-.010	.063	.111	-.018
Seat belt	.655	.885	<b>.788</b>	.118	-.075	-.061	.081
Harness	.674	-.014	.161	<b>.779</b>	-.094	-.046	-.047
Toys	.550	-.08	-.000	<b>.763</b>	-.083	.044	.105
Bath mat	.569	.060	-.042	<b>.564</b>	-.045	.217	-.157
Safety gate	.606	-.030	-.001	.222	<b>-.727</b>	-.005	-.021
Catches	.565	.151	-.117	.209	<b>-.574</b>	-.260	-.174
Fireguard	.461	.023	.161	-.114	<b>-.526</b>	.291	-.145
Helmet	.622	-.058	.090	.058	-.031	<b>.751</b>	-.120
Clothes	.614	.134	-.010	.302	.054	<b>.496</b>	-.204

Table 5.4.2 continues over the page.

**Table 5.4.2 continued. Principal components analysis followed by oblique rotation of the Equipment Benefit and Efficacy scale (EBE Scale).**

Variable	Communality	Burns & cuts Factor 1	Car safety Factor 2	Daily activity Factor 3	Barrier items Factor 4	Clothes protect Factor 5	Fire safety Factor 6
Circuit breaker	.439	.016	-.047	.276	.276	<b>.382</b>	-.223
Fire extinguisher	.792	-.043	.006	-.037	-.118	.041	<b>-.896</b>
Fire blanket	.796	.095	-.016	-.655	-.019	-.018	<b>-.869</b>
Car fire extinguisher	.794	.031	-.057	.040	-.041	.056	<b>-.836</b>
Eigen Value (unrotated)		7.4	1.6	1.6	1.3	1.2	1.1
Cronbach's alpha		.87	.72	.67	.51	.62	.88

**Table 5.4.2**

Cronbach's alpha is .90 for the 23 item Likert scale on page 5 of mothers' questionnaire (excludes door lock, socket covers and smoke alarms).

Cronbach's alpha is .89 for the 26 item Likert scale.

\*\* n=432.

**Relationships with the burns and cuts factor scores of the Equipment Benefit and Efficacy scale (EBES) for different social and demographic groups.**

Factor	Housing circumstances	Employment Status
Factor 1: Burns and cuts safety equipment	F* p< 0.013	F p< 0.015

**Table 5.4.3**

F\* One Way Analysis of Variance (ANOVA) and significant after the Bonferroni test

#### **5.4.2 Burns and cuts factor variable**

Significant differences in relation to the benefits of the 'Burns and Cuts' factor were identified in relation to different types of housing and different head of household employment (Table 5.4.3). Mothers in private housing had a mean factor score of -0.15 and mothers in local authority housing had a mean factor score of 0.21. The difference between the groups was significant after the Bonferroni test was applied. Mothers in private housing perceived safety equipment for burns and cuts as less useful than mothers in local authority housing. Safety equipment to protect against burns and cuts was also perceived as significantly less useful by mothers living in families where the head of household was self employed (mean factor score -0.41) compared to households where the head of household worked part-time (mean factor score 0.56).

#### **5.4.3 Car safety factor variable**

Analysis of the 'Car Safety' factor identified significant differences between groups of mothers, which are summarised in Table 5.4.4. Significant differences were identified after the Bonferroni test was applied between the mean factor scores of mothers living in private housing (0.16) and local authority housing (mean factor score - 0.24). Mothers in private housing perceived car safety equipment as more useful than the mothers in local authority housing. The 'Car Safety' factor scores were negatively correlated with the number of children in the family (Table 5.4.4). As the number of children increased the factor score decreased, indicating that with more children in the family, car safety equipment was apparently considered less useful.

#### **5.4.4 Fire fighting safety factor variable**

Analysis of the 'Fire Fighting' factor identified significant differences between the groups of mothers. These are summarised in Table 5.4.5. Mothers in private housing (mean factor score 0.15) perceived fire fighting safety equipment as significantly more useful than mothers in local authority housing (mean factor score -0.25).

**Relationships with the car safety factor scores of the Equipment Benefit and Efficacy scale (EBES) for different social and demographic groups.**

Factor	Housing circumstances	Number of children
Factor 2: Car safety	F* p< 0.003	r*-.127 p< 0.01

**Table 5.4.4**

r\* Pearson's Correlation Coefficient

F\* One Way Analysis of Variance (ANOVA) and significant after the Bonferroni test

**Relationships with the fire safety factor scores of the Equipment Benefit and Efficacy scale (EBES) for different social and demographic groups.**

Factor	Housing circumstances
Factor 6: Fire safety	F* p< 0.002

**Table 5.4.5**

F\* One Way Analysis of Variance (ANOVA) and significant after the Bonferroni test

#### **5.4.5 Mothers' views on safety equipment**

In response to an open ended question mothers listed the safety equipment they perceived as useful with a pre-school child which was not represented in the EBE Scale (Table 5.4.6). Of the 474 respondents only (27%) of the mothers reported additional equipment not mentioned in the equipment benefit and efficacy scale (Appendix 2, page 5 of the mother's questionnaire). The most frequently reported additional safety items included window locks, bed guards, refrigerator locks, a baby listener or monitor and a video cover. Few mothers reported a locked medicine cabinet which could help to reduce poisonings. The equipment benefit and efficacy scale (EBES) was comprised of the major safety equipment items recognised and understood by mothers.

Through their responses to an open ended question over half of the mothers (56%) gave reasons why they did not use safety equipment (Table 5.4.7). The most frequently reported reasons were related to the cost and expense of the equipment, some mothers did not perceive the child to be at risk or to need equipment or the mother was not aware some equipment existed and that equipment was not useful. Some mothers explained that they were careful with dangerous items rather than using equipment and that certain safety equipment items were not a priority for them. The mothers also explained they felt the child could cope with the dangers or they supervised the child and did not perform some hazardous activities if the child was about. The results gave some insight as to why safety equipment was not used. The use of equipment was dependent on some complex decision making and the cost of safety equipment remained a barrier to its use by some mothers. The lack of knowledge about the availability of some equipment was also reported and resulted in mothers not using the equipment. The results indicated that mothers were making decisions about the hazard exposure and injury risk to the child in conjunction with their perceptions as to the usefulness of safety equipment in the home for preventing injury. At times the equipment was not perceived as necessary by the mothers as they decided their own or their child's behavioural approaches limited the child's exposure to hazards and risk.



**Additional safety equipment mothers reported as useful.**

	n	%
window locks	31	17%
bed guard	30	17%
fridge lock	12	7%
baby listener or monitor	11	6%
a video cover	10	6%
locked medicine cabinet	5	3%
		Total n=128

**Table 5.4.6**

**Reasons why mothers did not use safety equipment.**

	n	%
cost and expense of the equipment	82	17%
child not at risk	67	14%
was not aware equipment existed	29	6%
equipment was not useful	28	6%
mother careful	27	5%
safety equipment items were not a priority	23	5%
child copes with the dangers	21	4%
supervised the child	17	3%
mother did not perform some hazardous activities if the child is about	17	3%
		Total =263

**Table 5.4.7**

**Mothers' intention to use a safety equipment loan scheme.**

	n	%
would use an equipment loan scheme	260	55%
would not use an equipment loan scheme	74	16%
unsure if they would use an equipment loan scheme	139	29%
		Total n=473

**Table 5.4.8**

**Identifying the British Standard Kite Mark when selecting safety equipment.**

	n	%
looked for British Kite Mark	421	89%
did not look for British Kite Mark	33	7%
did not know what the British Kite Mark was	17	4%
		Total n=471

**Table 5.4.9**

#### 5.4.6 Safety equipment loan schemes

In response to being asked through an open ended question if they would use a safety equipment loan scheme in their area half the mothers replied they would use the scheme whilst almost a fifth said they would not (Table 5.4.8). Almost a third of mothers said they were unsure as to whether they would use the scheme. The loan scheme was perceived as useful by about half of respondents, but a sizeable proportion had reservations or did not perceive a personal use for such a scheme. Analysis by the mother's social class revealed mothers in social classes 3 Manual, 4 and 5 would use the loan scheme more than mothers in social classes 1, 2 and 3 (Chi square test,  $p<0.01$ ). Mothers in social classes 1 and 2 were more uncertain of their use of the scheme than mothers in social classes 5, 4, 3 and 3 Manual.

Mothers in local authority housing reported more intention to use a loan scheme than mothers living in private housing who had less intention and more uncertainty as to their use of the loan scheme (Chi square test,  $p<0.04$ ). Married mothers also reported less intention and more uncertainty of their use of the scheme than mothers in the other marital status groups for example, single with a partner and single living alone (Chi square test,  $p<0.04$ )

The majority of mothers reported looking for the British Standard Kite Mark (BSKM) when choosing safety equipment (Table 5.4.9). Few mothers reported not knowing what the BSKM was. Mothers were attempting to select safety equipment which was of good quality amongst an array of products portrayed as safety equipment. More mothers living in private housing reported looking for the BSKM than mothers in local authority housing and other types of housing who were more uncertain of what the BSKM was (Chi square test,  $p<0.05$ ). Mothers who were married reported looking for the BSKM more than mothers in the other marital status groups (Chi square test,  $p<0.03$ ). The mothers who reported that they would use a safety equipment loan scheme also reported that they looked for the BSKM more than mothers who did not intend to use a loan scheme (Chi square test,  $p<0.001$ ).

#### **4.4.7 Summary**

In this section mothers living in different social and demographic circumstances were identified as perceiving a variety of safety equipment items to be useful. However, certain items of safety equipment were perceived as more beneficial for protecting children than others and these perceptions were related to the mothers' social and demographic context.

### **5.5 Knowledge for the development of safety strategies**

In this section the sources of information are identified which assisted mothers to develop their knowledge about safety practices. By distinguishing where mothers received information from we can begin to identify how and where misperceptions may arise and how best to inform the delivery of positive safety information in the future. A variety of open and closed questions were formulated to enable the mothers to share their views on developing knowledge to prevent accidents to the pre-school child.

The hypothesis for this section states:

#### **Hypothesis 5**

*Mothers living in relatively more disadvantaged social contexts will attribute more importance to professionals for giving information about child safety in pre-school children than mothers in more advantageous social contexts.*

#### **5.5.1 Common sense**

Most mothers (n=300, 65%) thought they remembered how they learned to keep their pre-school child safe. Although, many mothers reported that their routine safety practices were common sense and not specifically learnt from any individual source. Mothers reported several other sources which they remembered as contributing to developing their knowledge, the most frequently reported are presented in Table 5.5.1. The mothers' own parents and child care books were considered important.

**Sources from which routine safety practices developed.**

	n	%
common sense	134	42%
knowledge		
own parents	99	31%
child care books	72	22%

**Table 5.5.1**

### **5.5.2 Mothers' perceptions of the importance of other people for giving information about child safety**

The mothers' perceptions about how important certain people had been for giving information about pre-school child safety were analysed through the kinship and organisational network scale (KONS) for injury prevention, developed for this study. Mothers were asked to think generally about the importance of certain people for giving information about child safety. The kinship and organisational network scale (KONS) for injury prevention comprised of a Likert scale of 1 to 5 to ascertain the perceived importance of people. A rating of 1 indicated that the people were not important, whilst a rating of 5 indicated they were very important. Table 5.5.2 summarises the frequency results of the perceived importance of different people for giving information about pre-school child safety. Generally, the mothers' own parents were perceived as most important for giving information about pre-school child safety (mean 4, SD 1). The health visitor (mean 3, SD 1) and friends (mean 3, SD 1) were considered the next most important people.

### **5.5.3 Factor analysis of the kinship and organisational network scale**

After factor analysis was applied, two new factors were identified from the seven item Kinship and organisational network scale (KONS) for injury prevention. These were factor 1 the 'Professional and Organisational Support' factor and factor 2 the 'Lay Support' factor. The scale description, Cronbach's alpha and factor analysis of the scale are summarised in Table 5.5.3. Each respondent was calculated a factor score corresponding to their responses to the Likert scale items and the two new factors. A negative factor score towards minus one corresponded with a score towards one on the Likert scale (not important). A positive factor score towards plus one corresponded with a score towards five on the Likert scale (very important). The two new factor variables were analysed for relationships with the social and demographic data. The statistical tests distinguished several significant differences between groups of mothers in different social and demographic groups (Table 5.5.4 and Table 5.5.5).

**How important different lay and professional people had been in giving information for child safety.**

		not important	mildly important	moderately important	very important	Total
how important my own parents have been	n	25	35	65	189	469
	%	5%	7%	14%	40%	100%
how important my friends have been	n	52	97	130	35	471
	%	11%	21%	28%	7%	100%
how important the midwife has been	n	121	93	89	65	469
	%	26%	20%	19%	14%	100%
how important the health visitor has been	n	64	79	97	104	471
	%	14%	17%	21%	22%	100%
how important the mother and toddler group has been	n	122	81	120	22	430
	%	28%	19%	28%	5%	100%
how important the nursery or playgroup leaders have been	n	87	78	105	36	418
	%	21%	19%	25%	9%	100%
how important the doctor has been	n	101	77	99	94	468
	%	22%	16%	21%	20%	100%

**Table 5.5.2**

**Principal components analysis followed by oblique rotation of the  
Kinship and Organisation Networks scale (KON Scale)  
for injury prevention.**

Variable	Communality	Professional & organisational support. Factor 1	Lay support  Factor 2
Health visitor	.736	<b>.887</b>	-.103
Doctor	.666	<b>.829</b>	-.042
Midwife	.662	<b>.812</b>	.005
Playgroup	.584	<b>.736</b>	.074
Mother & Toddler group	.528	<b>.691</b>	.091
My friends	.696	.030	<b>.824</b>
Own parents	.690	-.017	<b>.813</b>
Eigen Value (unrotated)		3.4	1.1
Cronbach's alpha		.85	.56

**Table 5.5.3**

\*Cronbach's alpha is .81 for the 7 item Likert scale on Page 12 of the mothers' questionnaire, questions 6a to 6g inclusive.

\*\* n= 397.



**Relationship of the Professional and Organisational Support factor  
with social class.**

Factor variable	Social class
Professional and organisational support	r** -.157 p< 0.01 1 tailed

**Table 5.5.4**

r\*\* Spearman's Rank Correlation Coefficient

**Relationships of the lay support factor with maternal age, number of adults  
and housing circumstances.**

Factor variable	Maternal age	Number of adults in the home	Housing
Lay support	r* .176 p< 0.01 1 tailed	r** .147 p< 0.01 1 tailed	F p<0.05

**Table 5.5.5**

r\* Pearson's Correlation Coefficient  
r\*\* Spearman's Rank Correlation Coefficient  
F One Way Analysis of Variance (ANOVA)

**Professional and organisation support factor 1 regression analysis.  
Explanatory capability of the independent variable social class on factor  
scores for professional and organisational support.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
social class	-.167	.025	<.001

**Table 5.5.6**

**Lay support factor 2 regression analysis.  
Explanatory capability of the independent variables maternal age and number  
of adults on factor scores for lay support.**

Variable	Beta Partial Regression Coefficient	Adjusted R <sup>2</sup>	Significance
maternal age	.148	.030	<.000
number of adults	.115	.040	<.027

**Table 5.5.7**

#### **5.5.4 Professional and organisational support**

The 'Professional and Organisational Support' factor correlated weakly and negatively with the social class of the respondents (Table 5.5.4). The trend was for mothers in the higher social classes to perceive the professional and organisational support as less important (mean factor score -0.41) than mothers in the lower social classes (mean factor score was 0.38). Mothers in social class one perceived the professional and organisational support as less important than mothers in social class five.

#### **5.5.5 Lay support**

The 'Lay Support' factor variable correlated weakly and positively with the maternal age of the respondents and number of adults in the home (Table 5.5.5). The trend was for older mothers to perceive lay support as more important than younger mothers and those mothers living alone as a single parent. Where there were two or more adults in the home, lay support was perceived as generally more important. For comparative purposes, the mean factor score for one adult in the home was -0.33, whilst for four adults the mean factor score was 0.81. Housing circumstances and the mothers' perception of lay support were also related. Mothers in the local authority housing (mean factor score -0.21) also perceived the lay support as less useful than mothers in private housing (mean factor score 0.12). The difference was significant after applying the Bonferroni test for multiple groups.

#### **5.5.6 Regression analysis of the factors**

Stepwise multiple regression was used for identifying the independent social and demographic variables that explained the most variance in the factor scores (Table 5.5.6 and Table 5.5.7). The Beta Partial Regression Coefficient was used to measure the relationship between the independent variables and the factor scores. High tolerance scores above 0.8 indicated the absence of multicollinearity. A significance of  $p < 0.05$  was required for inclusion of the independent variable in the regression model. Adjusted  $R^2$  indicated the overall explanatory or predictive capability of all the variables in the model. Social class explained the most variance in the

'Professional and Organisational Support' factor, whilst maternal age and number of adults in the home explained the most variance in the 'Lay Support' factor.

### **5.5.7 Sources of knowledge**

Since common sense had been an important aspect of knowledge development in the exploratory interviews and the mothers' opinions of this form of knowledge were further examined in the survey. Through a fixed response question most mothers agreed and strongly agreed (mean 1.7, SD 0.8) with the statement that child safety is mainly common sense (Table 5.5.8). The results indicated that many mothers did not attribute the learning of safety to a particular source.

### **5.5.8 Methods for promoting child safety practices**

In a fixed response question seeking information to improve the educational approach to safety, mothers reported that the best ways to receive more information would be through television programmes, safety leaflets and child safety classes (Table 5.5.9). The national safety campaign *Play it Safe* was televised a few months prior to the survey. Mothers were asked how many of the programmes they remembered watching. Only about a third of the mothers (36%) remembered watching between one and seven programmes. The mean and mode number of programmes watched was three. Although the television was a popular method for educating parents, comparatively few mothers reported watching the recently televised campaign.

The mothers' responses to a fixed response question indicated the sources of information that they perceived to be most important for child safety (Table 5.5.10). Common sense knowledge followed by safety leaflets were perceived as most important, child care books and television programmes were also important and to a lesser extent safety classes and parenting magazines. Through an open ended question, the mothers were asked to identify their single most useful source of information on child safety and the prevention of accidents. The most frequently reported responses were common sense, child care books the mothers' own mother

**Mothers' perceptions of child safety as common sense.**

		strongly agree	agree	neither agree or disagree	disagree	strongly disagree	Total
child safety is common sense	n	211	218	18	20	3	470
	%	45%	46%	4%	4%	1%	100%

**Table 5.5.8**

**The best ways for mothers to receive more information about  
child safety.**

	n	%
television programmes	357	77%
safety leaflets	210	45%
child safety classes	172	36%
		Total n=462

**Table 5.5.9**

**Sources of information perceived as most important for child safety.**

	n	%
common sense	286	28%
knowledge		
safety leaflets	283	21%
child care books	267	19%
television programmes	261	19%
safety classes	98	7%
parenting magazines	65	5%
		Total n=474

**Table 5.5.10**

and safety leaflets (5.5.11). Fewer mothers reported their most useful source of information as the television, other mothers or learning from their own experience.

Experiential learning was examined further through a fixed response question which asked mothers to indicate the type of learning experience they associated with protecting their child. Most mothers gained experience from caring for their own children and through their own experience as a child at home (Table 5.5.12). Some mothers considered caring for other people's children and their own experiences at school as important. Less common experiences for learning to prevent injury were from the mother's work and from attending first aid courses to treat injuries.

Almost three quarters of the respondents (n=259, 71%) felt they needed more information about keeping their children safe from accidents, whilst about one third of mothers (n=108, 29%) did not need more information. Mothers who were older (mean 31 years) tended to have less need for more information than younger mothers (mean 29 years)(t-test,  $p < 0.01$ ). Mothers who had fenced gardens also had less need for more information than mothers without this facility (Chi square test,  $p < 0.01$ ).

The mothers each selected their three best ways to receive more safety information from a fixed response list (Table 5.5.13). The most popular ways to receive further information included the television, safety leaflets and classes on child safety. Other media sources were less frequently reported as acceptable for receiving more information, for example, videos on safety, newspaper articles and parenting magazines or radio programmes.

Mothers were asked if specific people within professions would be approached for information on how to prevent accidents to the pre-school child. These results are summarised in Table 5.5.14. The health visitor was identified by the majority of mothers as a person to approach for information as was the nursery or playgroup teachers.

**The mothers' single most useful source of information on child safety.**

	n	%
common sense knowledge	81	17%
safety leaflets	69	15%
child care books	56	12%
safety leaflets	39	9%
television	34	7%
other mothers	30	6%
learning from their own experience	19	4%
		Total n=358

**Table 5.5.11**

**The mothers' experiential learning for child safety.**

	n	%
caring for their own children	406	87%
their own experience as a child	277	60%
caring for other people's children	151	32%
their own experiences at school	136	11%
the mother's work	124	10%
first aid courses to treat injuries	89	19%
		Total n=473

**Table 5.5.12**

**The best ways to receive more safety information.**

	n	%
television	357	77%
safety leaflets	210	45%
classes on child safety	189	41%
birth to five years booklet	169	36%
books	135	29%
videos	116	25%
newspapers	109	24%
parenting magazines	64	14%
radio programmes	9	21%
Total n=474		

**Table 5.5.13**

**Mothers' perceptions of professionals who can help with child safety.**

		yes	no	don't know	Total
police	n	162	225	72	459
	%	35%	49%	16%	100%
fire brigade	n	184	196	77	457
	%	40%	43%	17%	100%
ambulance services	n	213	171	72	456
	%	47%	38%	16%	100%
housing department staff	n	47	338	61	446
	%	11%	76%	14%	100%
nursery or play group leaders	n	286	114	55	455
	%	63%	25%	12%	100%
social worker	n	95	285	68	448
	%	21%	64%	15%	100%
health visitor	n	383	68	15	466
	%	82%	15%	3%	100%
local councillor	n	77	307	57	441
	%	17%	70%	13%	100%

Table 5.5.14

### **5.5.9 Summary**

This section clarified how mothers perceived their knowledge development. Much of child safety knowledge was perceived as common sense knowledge, although some specific sources of information were identified. Most mothers needed more information to protect their children. Health visitors were perceived as credible professionals for undertaking safety work, whilst the television was a popular method for developing knowledge about pre-school child safety. The qualitative study which will be discussed in chapters six to eight builds upon the results of this survey to seek a deeper understanding of knowledge development for child safety through organisational and lay sources of information. The knowledge transfer from one generation to the next and the role of the health visitors were identified as particular aspects of knowledge development that would benefit from qualitative inquiry.

## **5.6 The health visitor role in injury prevention**

In this section the mothers' perceptions of health visiting with respect to reducing childhood injury are identified. The evaluation of the health visiting service signified what was perceived as valuable about health visiting and where gaps in service provision existed. The mothers' social and demographic circumstances were used to frame the analysis and to explore the relationships between mothers in different groups and their perceptions of the health visiting service. The mothers were asked through fixed response and open ended questions for their views on the health visiting service. The health visitor safety scale (HVS Scale) (Appendix 2, page 21 of the mother's questionnaire) was used to measure the value of the health visitor for safety work reported by mothers.

The hypothesis stated:

### **Hypothesis 6**

*Mothers living in relatively more disadvantaged social contexts will have more contact with the health visiting service for preventing childhood injury than mothers living in more advantageous circumstances.*



#### **4.6.1 Establishing the health visitor contact with mothers**

Mothers reported last speaking to a health visitor between one and fifty months previously. The mean number of months since the last contact was 7 (SD 8). About a quarter of the mothers reported speaking to the health visitor within the last month, whilst the majority had spoken with the health visitor within twelve months (Table 5.6.1). Maternal age and the length of time since the health visitor and mother spoke were weakly, but significantly correlated (Pearson's  $r=0.098$ ,  $p<0.05$  one tailed). Generally, the younger mothers had spoken to the health visitor most recently.

Mothers were asked to indicate through a fixed response question how often they talked with a health visitor (Table 5.6.2). Half the respondents  $n=247$  (52%) said they talked rarely, whilst almost a quarter of the respondents said at regular visits. About one fifth often talked with the health visitor and a few mothers said they talked very often with the health visitor. Three mothers (1%) said they had never spoken to the health visitor.

The frequency of perceived opportunities to talk with the health visitor and the time since mothers reported last speaking to a health visitor were significantly and negatively correlated (Spearman's rho  $r=-0.44$ ,  $p<0.01$  one tailed). That is the mothers who reported talking to the health visitor less frequently also reported a longer time to have elapsed since speaking to the health visitor.

The mothers living in local authority housing reported talking to the health visitor significantly more often compared with mothers in private housing (Chi square,  $p<0.03$ ) who tended to talk with the health visitor only rarely or at regular visits.

#### **5.6.2 Raising safety issues**

A little over half of the respondents reported that the health visitor had not spoken to them about ways to prevent accidents to the pre-school child, whilst a third of mothers reported that the health visitor had and the remainder were uncertain (Table 5.6.3). Mothers who reported talking to the health visitor more often or very often

**Time elapsed since last speaking with the health visitor.**

	n	%
within one month	128	28%
within six months	305	67%
within 12 months	398	87%
Total n=474		

**Table 5.6.1**

**How often mothers spoke with the health visitor.**

	n	%
very often	39	8%
often	86	18%
regular intervals	98	21%
rarely	247	52%
never	2	1%
Total n=473		

**Table 5.6.2**

**Identifying whether the health visitor had spoken about ways to prevent accidents to the pre-school child.**

	n	%
health visitor had spoken about ways to prevent accidents	154	33%
health visitor had not spoken about ways to prevent accidents	273	58%
mother was unsure if the health visitor had spoken about ways to prevent accidents	45	9%
Total n=472		

**Table 5.6.3**

also reported the health visitor to have spoken about ways to help prevent accidents more than mothers who talked rarely or at regular visits with the health visitor (Chi square test,  $p < 0.001$ ). Mothers who reported that the health visitor spoke to them about ways to help prevent accidents were significantly younger (mean years 29, SD 4) than mothers who reported that the health visitor had not spoken about preventing accidents (mean years 30, SD 5, t-test,  $p < 0.02$ ). The mothers whose health visitor spoke to them specifically about safety also reported speaking with the health visitor significantly more recently (mean months 4, SD 5) compared with mothers whose health visitor had not spoken to them about safety (mean months 8, SD 9, t-test,  $p < 0.001$ ).

The mothers were asked in a fixed response question if they had ever asked the health visitor for information on child safety. The majority of mothers had not ( $n=374$ , 80%). These mothers reported speaking to the health visitor significantly more recently (mean months 5, SD 6) than the mothers who had not asked for information (mean months 7, SD 8, t-test,  $p < 0.001$ ). Also the mothers who talked often or very often with the health visitor also reported asking the health visitor about safety more than mothers who talked with the health visitor rarely or only at regular visits (Chi square test  $p < 0.001$ ). Mothers living in local authority housing were more likely to ask for information on child safety than mothers in private housing (Chi square test,  $p < 0.03$ ). The younger mothers (mean years 29, SD 4) also reported asking for information on safety more than older mothers (mean years 30, SD 5, t-test,  $p < 0.02$ ).

In response to an open ended question mothers were asked to indicate the number of times the health visitor raised the topic of child safety and how to prevent accidents with them. About half of the mothers ( $n=266$ , 56%) reported that the health visitor 'mainly just gave out safety leaflets'. Only a small number ( $n=41$ , 9%) said the health visitor discussed safety with them on numerous occasions.

### **5.6.3 Place of contact**

Half of the respondents, who reported that the health visitor had discussed safety stated that discussions had occurred in the home and clinic (Table 5.6.4). Relatively few mothers spoke with the health visitor on the telephone or at a group talk in the community. The mothers were asked for their views on the two best places for them to talk with the health visitor about safety. The majority of respondents indicated the home as the most appropriate place followed by the clinic. Relatively few mothers believed a group talk or class would be appropriate, whilst a minority of mothers did not want to speak to the health visitor about child safety.

### **5.6.4 Accident prevention, the work of health visitors?**

In answer to a fixed response question almost half the mothers reported that they did not perceive accident prevention as part of the work of the health visitor (Table 5.6.5). Only about one third of mothers recognised the health visitor as having a role in safety and the prevention of accidents to pre-school children. Mothers in the lower social classes perceived accident prevention as part of the health visitors work significantly more than mothers in the higher social classes (Chi square test,  $p < 0.04$ ).

The majority of mothers reported that accident prevention was work that health visitors should undertake (Table 5.6.5). Respondents who perceived accident prevention as the work of the health visitor, also felt that accident prevention was a job health visitors should do more than mothers who did not perceive accident prevention as the work of the health visitor (Chi square test,  $p < 0.001$ ).

Through an open ended question mothers were asked to suggest the people who they felt were most able to help parents prevent accidents to pre-school children. Only the most frequently reported suggestions are presented here (Table 5.6.6). Almost a third of the responses related to the health visitor. The pre-school teachers, the doctor, the family and other mothers or parents were also suggested.

**Places where safety was discussed and where mothers preferred to discuss safety.**

	Where safety was discussed		Preferred place to discuss safety	
	n	%	n	%
no discussions about safety	266	48%	30	4%
at home	139	26%	366	45%
at the clinic	118	22%	241	29%
on the phone	17	3%		
at a group talk	4	1%	127	16%
no preference			57	6%
Total n=474				

**Table 5.6.4**

**Is preventing accidents the work of health visitors?**

	Accident prevention is the work of health visitors		Accident prevention should be the work of health visitors	
	n	%	n	%
yes	161	34%	367	77%
no	214	45%	33	7%
not sure	94	20%	70	15
Total n=470				

**Table 5.6.5**

**People suggested to help mothers prevent accidents to pre-school children.**

	n	%
health visitor	216	31%
pre-school teachers	102	14%
doctor	79	11%
family	60	9%
other mothers or parents	35	5%
Total n=356		

**Table 5.6.6**

Mothers were asked through a fixed response question if they felt they needed more contact with their health visitor to help them stop their child from getting hurt. The majority of mothers (n=346, 73%) did not feel they needed more contact with the health visitor for this purpose. The mothers who perceived accident prevention as part of the work of health visitors reported significantly more need for increased contact (Chi square test,  $p<0.006$ ) than those mothers who did not see accident prevention as part of their work.

The majority of mothers reported that they had not asked the health visitor about ways of protecting their pre-school child or about the use of safety equipment (n=370, 78%). Mothers in the post accident sample reported asking about ways to protect their child more frequently than the random sample (Chi square test,  $p<0.004$ ). Mothers in local authority housing also reported asking about ways to protect their child more than mothers in private housing (Chi square test,  $p<0.001$ ). Mothers who perceived their housing circumstances as crowded also reported asking more about safety compared with mothers who reported no crowding (Chi square test,  $p<0.04$ ). The mothers who were slightly younger (mean years 29, SD 5) requested more information than older mothers (mean years 30, SD 6, t-test,  $p<0.008$ ). The mothers who saw accident prevention as part of the work of the health visitor also asked about ways to protect their child more than mothers who did not see not see accident prevention as part of the health visitors' work (Chi square test,  $p<0.001$ ).

When asked through a fixed response question if it was better for the mother or the health visitor to bring up the topic of child safety, almost three quarters of the mothers (n=326, 69%) felt it was better if the health visitor brought up the topic of child safety with parents. About one quarter of mothers (n=131, 28%) said 'it was better if the mother brought up the topic of child safety. Mothers were asked to indicate through a fixed response question how health visitors should discuss safety with mothers. The majority of mothers (n=382, 81%) indicated that health visitors should be direct and make a point of discussing safety with mothers. There were no

significant differences in the responses in relation to the mothers social and demographic circumstances. The onus on discussing safety and preventing accidents was firmly placed with the health visitor.

### **5.6.5 When and with whom should health visitors do child safety work?**

The mothers were asked in a fixed response question to indicate the three most important times when health visitors should do more child safety work (Table 5.6.7). The most favoured and frequent response related to when the child was 7 to 18 months old, followed by at all ages and when the child was 19-36 months. Safety work prior to the birth of the baby was supported in addition to when the child was over 3 years. The least favoured timing was when the child was under six months of age and a minority of mothers felt health visitors should never do more child safety work.

Mothers were asked to indicate through a fixed response question for whom safety advice was most important. The mothers were asked to make two choices and the most favoured choices were for all parents (n=428, 50%) followed by first time parents (n=383, 45%). Few respondents selected parents with 2 or 3 children (n=21, 2%) or parents with 4 or more children (n=15, 2%) and a minority (n=8, 1%) felt safety advice was not important. This gave a clear indication of the most appropriate timing for accident prevention work and established safety advice with first time parents as a priority if working with parents of all age groups was not feasible.

A fixed response question allowed mothers to indicate their preference for up to three types of information they would most like to receive (Table 5.6.8). The mothers identified information to treat specific injuries (first aid), followed by advice about safety practices and information to prevent specific injuries as the types of information they would like to receive. Fewer mothers wanted advice about different types of safety equipment or information about how to campaign for a safer environment.

**The most important times for health visitors to undertake more child safety work.**

	n	%
when the child is 7-18 months old	310	24%
at all ages	276	21%
prior to the birth of the baby	181	14%
when the child is over 3 years	180	14%
when the child is under six months old	115	9%
never	8	1%
		Total n=474

**Table 5.6.7**

**The type of information mothers would like to receive.**

	n	%
information to treat specific injuries (first aid)	373	29%
advice about safety practices	350	27%
information to prevent specific injuries	318	25%
advice about different types of safety equipment	147	11%
information about how to campaign for a safer environment	109	8%
		Total n=474

**Table 5.6.8**



### **5.6.6 The value of the health visitor for child safety and preventing accidents.**

In response to a closed question, almost half the mothers reported the health visitor as not giving enough practical advice to parents on child safety and preventing accidents (n=213, 45%), whilst only a quarter of the respondents (n=112, 24%) reported the health visitor as giving enough practical advice. About one third of mothers (n=143, 30%) did not know if the health visitor gave enough practical advice on child safety or about preventing accidents. Mothers with more children reported that the health visitor gave more practical advice (Chi square test,  $p<0.03$ ). Mothers who reported crowded housing conditions also reported the health visitor as giving practical advice (Chi square test,  $p<0.04$ ) as opposed to mothers who reported no crowding.

### **5.6.7 The health visitor safety scale**

The reliability of the HVS scale had a Cronbach's alpha of 0.8 and factor analysis identified only one factor which could not be rotated and explained 57% of the variance in the responses. No significant differences were found in the factor scores for mothers in different social or demographic groups. The items in the scale were found to be significantly correlated with each other (Table 5.6.9). A positive rating for one item of the scale was associated with a positive rating for the other items. The mothers who tended to perceive the service negatively did so on most aspects of the scale and vice versa.

The mean responses for the scale are summarised in Table 5.6.10. Most mothers perceived the health visitor as easy or very easy to see and knowledgeable or very knowledgeable about child safety and preventing accidents. The relationship with the health visitor was perceived as mainly very important and important by the majority of mothers. The health visitor was seen as generally useful and very useful, but one third of mothers reported not having found the health visitor personally useful for helping them with child safety (mean 3, SD 2). The overall view was favourable for health visiting, but when the mothers gave their opinion on how useful health visitors had been for helping them with child safety specifically the results

**Spearman's rank correlation of variables for the Health Visitor Safety scale.**

Variable				
Knowledge of health visitor	.491			
Relationship with health visitor	.261	.351		
How useful health visitors are	.261	.435	.437	
How personally useful health visitors were	.436	.444	.372	.493
	Easy to see	Knowledge	Relationship	Useful

**Table 5.6.9**

**Mean responses to the Health Visitor Safety Scale.**

	Mean	SD	Total
how easy it is to see or difficult it is to see the health visitors	4.0	1.2	470
how knowledgeable health visitors are	4.4	1.1	471
how important a good relationship with the health visitor is for talking about child safety	4.1	1.0	470
how useful the work of health visitor is for preventing accidents to pre-school children	4.0	1.3	469
how useful mothers found health visitors when helping them with child safety	3.1	1.8	463

**Table 5.6.10**

were less favourable. Mothers who perceived the health visitors as most easy to see also perceived them as offering more practical advice than mothers who found the health visitors difficult to see (Chi square test,  $p < 0.001$ ).

The ease of access to the health visitor correlated significantly and positively with social class (Spearman's rho  $r = 0.10$ ,  $p < 0.04$ ), maternal age (Spearman's rho  $r = 0.11$ ,  $p < 0.02$ ) and the number of children (Spearman's rho  $r = 0.11$ ,  $p < 0.02$ ). Older mothers, with more children in the higher social classes, perceived the health visitor as most accessible.

The post accident sample perceived the relationship with the health visitor as significantly more important than the random sample (t-test,  $p < 0.02$ ). Whilst older mothers perceived the health visitor as most useful to them personally (Spearman's rho  $r = 0.09$ ,  $p < 0.04$ )

The mothers' comments in response to an open question on the health visiting service were fairly evenly split between positive and negative remarks. The most frequently reported comments are listed in Table 5.6.11. These comments gave some indication of what mothers valued about the health visiting service.

### **5.6.8 The health visitor role following an injury**

Mothers were asked through a series of fixed response questions whether the health visitor had discussed first aid for specific injuries (Table 5.6.12). The majority of mothers indicated that first aid for treating injuries had not been discussed. Most mothers indicated in a fixed response question that health visitors should talk with mothers about first aid ( $n = 377$ , 80%). Mothers in the lower social classes expected the health visitor to talk about first aid more than mothers in the higher social classes (Chi square test,  $p < 0.03$ ).

Most mothers reported that the health visitor did not come to visit at the home following an accident to the pre-school child who needed medical treatment ( $n = 307$ ,

**Comments on the health visiting service.**

	n	%
health visitors do not visit enough and mothers needed more visits	73	12%
health visitors do a first class job of guiding parents	64	11%
the health visitor is helpful	54	9%
the health visitor never discussed safety	41	7%
the health visiting service is not good enough at present	36	6%
the health visitor was approachable'	32	5%
knowing where the health visitor is and can always make contact	31	5%
		Total n=263

**Table 5.6.11**

**Health visitor discussions on first aid.**

		yes	no	Total
HV discussed first aid for a fall	n	71	364	435
	%	16%	84%	100%
HV discussed first aid for burns	n	59	374	433
	%	14%	86%	100%
HV discussed first aid for poisonings	n	26	396	422
	%	6%	94%	100%
HV discussed first aid for electric shocks	n	20	401	421
	%	5%	95%	100%
HV discussed first aid for a head injury	n	62	366	428
	%	14%	86%	100%
Hv discussed first aid for choking	n	69	364	433
	%	16%	84%	100%
HV discussed first aid for drowning	n	23	400	423
	%	5%	95%	100%
HV discussed first aid for a cut	n	60	365	425
	%	14%	86%	100%
HV discussed first aid for broken bones	n	29	392	421
	%	7%	93%	100%

**Table 5.6.12**

**What health visitors can do to help parents following an accident to a pre-school child.**

	n	%
help in any way they can to prevent the accident reoccurring	77	11%
give advice on the prevention of accidents	71	10%
inform parents how to prevent accidents	71	10%
give reassurance	67	9%
the health visitor should offer support	64	9%
that health visitors should do post accident follow up	42	6%
the health visitor should find out what happened	37	5%
Total n=311		

**Table 5.6.13**

**Comments on what health visitors can do to help parents keep their children safe.**

	n	%
to speak regularly about safety	187	27%
do home visits to specifically discuss safety	66	9%
give safety leaflets	59	8%
give advice to prevent and treat injuries	45	6%
give classes in first aid	39	6%
give safety classes	3	4%
		Total n=366

**Table 5.6.14**

65%) whilst a few mothers (n=95, 21%) reported that their pre-school child had never had an accident needing medical attention, so the question did not apply to them. Only a minority of mothers (n=61, 13%) reported the health visitor coming to the house after an accident needing medical treatment. Of the small sub group of mothers who did receive a visit following an accident, most (n=39, 64%) found the health visitor helpful, but about one third (n=22, 36%) did not. It was evident that relatively few mothers received post accident support visits.

In response to an open ended question, mothers suggested what they felt health visitors should do to help parents following an accident to a child that needed medical attention. Only the most frequently reported comments are given here (Table 5.6.13). Mothers suggested that health visitors should help in any way they can to prevent the accident reoccurring, give advice on the prevention of accidents and inform parents about how to prevent accidents. Mothers also wanted reassurance and for the health visitor to offer support. Some mothers commented that health visitors should do post accident follow up and find out what happened. The role of the health visitor could be seen as essentially two-fold. They were expected to address the practical issues of preventing injuries and promote the emotional health of the mother.

Mothers were asked through an open ended question to identify what health visitors could do to help parents keep their children safe. Only the most frequently reported comments are summarised here (Table 5.6.14). These were to speak regularly about safety, do home visits to specifically discuss safety, give safety leaflets, give advice to prevent and treat injuries, give classes in first aid and give safety classes.

### **5.6.9 Summary**

Most mothers had seen the health visitor within the last six months and younger mothers saw the health visitors most frequently, perhaps because they were being targeted for support. About half of the mothers had not discussed safety with the health visitor, but the younger mothers who saw the health visitor most frequently

reported the more opportunity for safety discussions. The most appropriate place for safety discussions was in the home, but the mothers reported that almost as much safety work took place in clinics as opposed to the home. Almost all of the mothers felt that the health visitor should do more safety work, but did not want more contact specifically to receive help with safety. Mothers were quite passive and expected the health visitor to raise safety as a topic for discussion and be direct in their approach. The mothers identified first time parents as a priority for safety work and at the time when the child was between seven and eighteen months old. Mothers were interested in developing knowledge to treat injuries although they perceived the prevention of accidents as important. Health visitors were considered to do little post accident support, but the majority of mothers who received this aspect of the service found it beneficial. The quantitative study raised several questions about how mothers perceived the process of the health visitor contact with them which were investigated further in the qualitative study.

Section one identified how several demographic variables were associated together and that some mothers were living in relatively more disadvantaged circumstances than others. The study identified significant differences in perceived injury risk between mothers living in different social contexts in section two. The specific benefits and barriers to injury prevention were identified in section three where the results presented signified some consensus on the beneficial aspects which contributed to safety, but a diversity of opinion on what factors constituted the barriers to injury prevention. The perceived different barriers to preventing injuries were identified in relation to the mothers' different social and demographic circumstances. In section four the utility of safety equipment was identified and that mothers in relatively more disadvantaged circumstances tended to perceive the equipment as most useful. The mothers' sources of knowledge for learning to prevent injuries and the different types of social networks that informed these knowledge bases were presented in section five. The final section presented the mothers' views on the health visitor role in injury prevention and on the health visiting service in general.



## 5.1 Conclusions

- Data has been presented which illustrates the social and demographic status of the mothers who responded to the survey and their perceptions of issues pertinent to protecting children from accidental injury.
- Through the quantitative method, significant relationships between social circumstances, the mothers' perceptions of children's accident risk, the barriers to providing safety and the different types of social support they value for promoting protective strategies have been identified.
- In the following chapter a discussion of these findings is presented.

# Chapter 6

## Discussion of the quantitative results

### 6.0 Introduction

This chapter presents a discussion of the results presented in chapter five. The results are discussed in sections corresponding to the six hypotheses for the study around which discussion is framed. First the survey method and generalisability of the findings are discussed briefly.

### 6.1 The survey method and response rate

The response rate was as expected and typical for a postal survey to a random sample of the population (Nachmias and Nachmias 1992). Both the main and pilot studies had a similar response rate and change of address rate. One criticism of social surveys conducted by self completion questionnaire is that results are obtained mainly from a middle class group of respondents and do not reflect all social classes. In this study it was possible to analyse the views of mothers from different social backgrounds as they were all represented and respondents reflected the general social classification structure of the study area (HMSO Social Trends 1993). Travelling families were not represented in the study as they are often not registered with a General Practitioner and tend to move frequently. The travellers have been identified as having poorer health and greater risk of injury (Pahl and Vaile 1988). Future research should focus on these families as they will possibly have different safety concerns to the respondents of this survey. A limitation of the survey relates to the possibility that the mothers who responded to the survey might differ from the non-respondents in their views of preventing accidents to pre-school children. The limitations of the study and the self completion questionnaire survey method which have been described in other work by Moser and Kalton (1985), De Vaus (1990) and Oppenheim (1992). The interpretation and discussion of results acknowledge these limitations.

## 6.2 Social context and demographic influences on pre-school child safety

The relationship between the mothers' demographic variables and their social context are considered in this section.

### **Hypothesis 1**

*Mothers of young maternal age live in relatively more disadvantaged social contexts than older mothers.*

Statistical analysis of the social and demographic variables identified that the mothers lived in diverse social and environmental circumstances, but with some common features and that maternal age was related to the different social contexts. Thus the above hypothesis was accepted. Mothers who were young, were more often a lone parent and young maternal age was associated with other aspects of social disadvantage and deprivation. **Disadvantage** can be identified by the multiplicity of lower social class, less employment, local authority housing, poor garden facilities, lack of a supportive partner and young maternal age reflecting less experience in life and childcare.

### **6.2.1 Disadvantage**

There was evidence of an effect of multiple disadvantage or advantage for the mothers in relation to their social context. The impact of being a single and lone mother was also associated with being young, being in the lower socio-economic groups, living in more local authority housing, having poorer access to enclosed gardens and having less paid employment than mothers with a partner, whether they were married or not. Lone mothers on income support in the United Kingdom have been identified as living in poorer circumstances than mothers in some other countries (Bradshaw et al 1993, Moore 1996). The effect of multiple disadvantage and subsequent deprivation was particularly worrying in relation to accidents in childhood. Accidents to children have been associated with social deprivation since the 1980's (Townsend et al 1988,

Alwash and McCarthy 1988, Acheson 1998). The government's recent health policy emphasis of reducing accidental injury has made little impression on the accident rates to pre-school children and home injuries in this age group have increased (Forth Valley Health Board Accident Statistics 1996). The importance of social and demographic variables in studies seeking to understand perceptions and behaviours has been well documented (Pill et al 1993a). The researchers concluded that health behaviours of the individual were less important than the socio-economic environment in which people were living for influencing health (Pill 1993b).

### **6.2.2 Lone mothers**

The results present a picture of some mothers, mainly young and without a partner living in social contexts of multiple disadvantage and deprivation, whilst other mothers, mainly older and married or living with a partner live in environments more conducive to health and safety. This picture is not intended to polarise the debate on disadvantaged versus advantaged, but to throw some light on to the complexity of living situations for many mothers when caring for their children. Moore (1996) discussed the feminisation of poverty and the accumulation of evidence of disadvantage of female headed house as they suffer from an unequal distribution of labour and income within families. Perhaps many mothers will vary along the continuum of disadvantage and advantage as their social circumstances evolve in life. This continuum resembles Macintyre's (1994) description of a linear relationship between socio-economic status and health rather than a threshold relationship. The view of a continuous, possibly linear relationship allows for the fluctuations in socio-economic circumstances and related health or safety for mothers in different circumstances at different stages in their lives.

These differences in social circumstances were used to frame much of the analysis. Social context variables such as social class, age and marital status 'are not in themselves explanations, but markers of specific material, environmental or psycho-social processes or conditions which may, in measurable ways, be health promoting or damaging' (Macintyre 1994:58). The association of the advantageous

or disadvantageous characteristics were important for interpreting the social contexts within which mothers were protecting their children. Advantage and disadvantage were used to examine the mothers' views and to identify similarities or differences in their perceptions, but this description does not necessarily reflect how the mothers saw themselves in society. Some mothers who were lone parents may have found this situation preferable to living with an abusive partner and may not have considered themselves disadvantaged in life. The purpose of the descriptions are to help explain the relative disadvantage in society as a whole. The clear association suggests that health professionals wishing to enhance the quality of life and safety of children should focus their attention on the most disadvantaged families and address the social deprivation and health issues affecting them.

In examining mothers caring for children alone, without a partner, I adopted the term lone mother similar to that recently described by Standing (1998). I had no intention to contribute to the disparaging analysis of lone mothers (Phoenix 1996), but to identify the depth of hardship for some mothers when caring for young children.

The results reflected the trends of recent years evident in the national picture of socio-economic circumstances. For example, in the last decade the number of lone parents has increased to 5 per cent of all households and one in six children lived in lone parent households with the highest proportion of lone parents being amongst black households (Pearce and White 1994). *The 1991 Census of Great Britain: summary of results* indicated that the number of people remaining single had increased between 1981 and 1991, whilst the proportion of the population who divorced had almost doubled. The proportion of lone parent families with dependent children had increased to 19.2% in 1991 and nine out of ten of these families were headed by women (Haskey 1994). The number of households renting from a local authority or Scottish Homes had decreased by ten per cent, whilst owner occupiers increased to two thirds of households, however half the households comprised of lone parents rented local authority housing. Economically, women made up nine tenths of

part-time employment and one third of full time employment in Great Britain (Pearce and White 1994).

Comparison of the survey results with the census drew attention to the higher than average proportion of mothers in this study who lived in local authority or Scottish Special Housing and the higher than average percentage of mothers caring for their children alone and who were mainly unemployed or working part-time. Disadvantage in the social circumstances of respondents to this survey was apparent and this reaffirmed that the survey was not completed solely by middle class respondents. The fact that mothers from different social circumstances took time to respond to this survey could signify that child safety and the prevention of accidents is an issue of importance for mothers within very diverse social circumstances.

### **6.2.3 Summary: Health and social policy to improve safety**

It has been suggested that a more comprehensive approach is needed to tackle the inequalities in health (Benzeval et al 1995, Acheson 1998, The Scottish Office 1999). Issues addressing health which also include the prevention of injury can be better achieved through a policy of social and economic justice rather than individual attitude and behaviour change. Clearly the evidence from this study indicates a diversity of social characteristics which can be seen to compound and reinforce the adversity of social contexts. The findings from this study suggest that political action is required to address the imbalance in socio-economic conditions as an ultimate pre-requisite to reducing childhood injury. Health professionals, particularly health visitors working with families of young children, need to work at addressing issues of multiple social disadvantage to positively influence the health of the family. The findings of this survey suggest the need to emphasise health in relation to the context of the family and the need for health visitors to be aware of the potential for injuries resulting from disadvantage. Future action to improve safety and reduce injuries needs to be framed within health and social care policy which aims to improve the socio-economic context of the family and the wider community to redress the deep rooted imbalance in social circumstances. Greater attention should be given to

encouraging policies to improve housing, play facilities, transport networks and local childcare centres. Injury prevention should not be perceived as solely a health issue, but a social issue, which when injuries occur, result in a health problem and often social hardship when the injury is severe (Child Accident Prevention Trust 1992, 1996).

It became apparent from the results of the quantitative study that a closer examination of mothers caring for children in different social contexts would deepen our understanding of the multiplicity of social disadvantage and whether this had an influence on how mothers protected children from accidental injury. The importance of developing studies to investigate and explain health behaviour by considering the social context in which the behaviour occurs has been emphasised (Dawson 1994). Chapters seven and eight present and discuss the findings of the qualitative method used to develop a deeper understanding of the mothers' perceptions of child safety and particular attention is given to lone mothers as they were identified to live in relatively disadvantaged social circumstances and have particular difficulties for maintaining their child's safety. First, however, the following sections discuss the findings of the quantitative study and the relationship between maternal social context and perceptions of childhood injuries.

### 6.3 Perception of injury risk inside and outside the home

Having established that mothers cared for their children and kept them safe from injury in a diversity of social contexts, it is now necessary to consider whether mothers who lived in these different contexts had the same or different views of the risk of injury to their children.

#### **Hypothesis 2**

*Mothers living in different social contexts will have a different perception of injury risk in pre-school children.*

### **6.3.1 The likelihood and severity of injury**

The above hypothesis was supported. Specifically, the likelihood and severity of injuries were perceived differently by the mothers in different social and demographic circumstances. The mothers' relative lack of concern about safety in the home and their overriding anxiety about the outside environment permeated their responses to this survey.

### **6.3.2 Susceptibility to injury**

The uncommon sensational injuries worried the mothers most, for example road traffic accidents and abduction, but the common injuries such as poisonings were less of a concern. Conversely, Scottish Accident Data Sources (1993) indicated that road traffic accidents were relatively rare in the pre-school population, but head injuries and poisoning had the highest hospital admission rates for this age group in Scotland (Scottish Accident Statistics 1994). The same data identified fires as the main single cause of fatalities in pre-school children, but responsible for relatively few hospital admissions in Scotland. Many mothers were not perceiving the potential risk of childhood poisoning and this may be a predisposing factor in the increase admissions for poisoning in young children identified within the study area (Forth Valley Accident Statistics 1996). This disproportionate appraisal of risk has also been reported by Glik et al (1991) and Slovic et al (1977).

Mothers need to be aware of the 'real' objective hazards as depicted by the accident data for them to formulate an understanding of the potential injuries to which a pre-school child is susceptible. The findings suggest that mothers rarely drew upon this type of objective knowledge for formulating their perceptions of injury. There was considerable disparity between mothers' perceived concerns and injury risk compared with the circumstances and types of injuries which led to hospital attendance or admission within the study area. Health professionals, particularly public health departments and health visitors, should aim to clarify to mothers the relative probability of different injuries within the local area so that mothers may develop a more complete understanding of injury risk. Drawing attention to risk also



requires professionals to be able to discuss solutions to the problems, so as not to be seen simply as increasing concern and anxiety in mothers (Roberts et al 1995). In the study area, presenting information and devising strategies to reduce poisonings should be a priority with mothers of pre-school children. A systematic review of the evidence of the effectiveness for specific safety strategies has been published and would be a useful source for health professionals wishing to understand and develop effective safety strategies (Nuffield Institute for Health and NHS Centre for Reviews and Dissemination 1996).

### **6.3.3 Accident rates and accident repeaters**

Accidents have been established as a common occurrence in children's lives through the mothers' self reported accident experiences with their young children in this study and evidence from the Department of Trade and Industry (1993) and Scottish Accident Statistics (1994). About half of the total sample in this study reported that their pre-school child had required medical attention for treatment of an accidental injury. Accidents are prolific in society and not a rare event for the unfortunate few. As well as the number of accidents in total a particular cause for concern are the group of children who are repeatedly admitted to hospital for serious injuries. The mothers in this study viewed accidents as events unlikely to be repeated and the majority of mothers believed that a child was no more likely to be in need of subsequent medical attention for the treatment of an injury, given that they had previously experienced an injury requiring medical attention. This finding is in contrast to the evidence presented by Sellar et al (1991) and Kendrick (1993) who reported attendance at Accident and Emergency Departments by pre-school children to be predictive of future hospital admission as a result of an injury.

### **6.3.4 Lone Mothers**

Young and lone mothers perceived less injury probability in young children than older mothers with a partner. It may well be that young, lone mothers underestimated injury susceptibility and this is perhaps why there were significantly more young, lone mothers in the post accident sample than the random sample. Increased injury risk

has been associated with lone parenting (Rivara and Mueller 1987) and also with young parents (McCormick et al 1981). Young, lone mothers may have been unrealistically optimistic (Weinstein 1980 and 1982) in their appraisal of injury susceptibility and perhaps due to this optimism their children experienced relatively more childhood injuries which needed medical attention than older supported mothers. The data suggest many mothers knew about potential injuries, but did not relate the risk of injury to their own family as high as there were possibly other competing demands and stresses of family life which took priority (Dawson 1994). Mothers who were older and had a partner may have had more experience in child care and observed more hazards and risk taking behaviour in their children and consequently been more realistic about the probability of injury resulting from accidents.

Glik et al (1991) identified families with higher objective risk environments as having lower perceived risk. The lone, young mothers in this study are associated with disadvantage and the results suggest they are living in more hazardous environments. Congruent with the findings of Glik et al (1991) the more disadvantaged mothers perceived less subjective risk than the relatively more advantaged mothers living in environments with fewer objective hazards.

The findings suggest that health professionals need to make their work on child safety a priority with young mothers, particularly lone mothers, to encourage an understanding of injury risk that relates not only to the mothers local environment which is important, but also to local accident data. It is not feasible to suggest whether the social and physical environment or evidence from local accident data would be most accurate in predicting the probability of a certain child experiencing a specific injury. As Roberts et al (1995) point out in their study of a deprived area in Scotland, more accidents would be expected when the socio-economic and environmental circumstances of the child are considered.

Lone mothers, unlike mothers with a partner or supportive adult had little opportunity to discuss potential hazards and injury risk with another adult in the course of caring for their pre-school child. The notion of 'two heads are better than one' when trying to understand the risk of injury to pre-school children was evident. Adults in the family may have shared knowledge and information about the potential for injury in their social context and established a picture of injury risk which better reflected the evidence that poisonings, burns and head injuries are serious but increasingly common injuries. The lone mothers may have perceived less injury risk as they did not have the same experiences or opportunity for discussing injury risks with a partner. As the mothers caring alone were also often the younger mothers, they possibly also had less childcare experience and knowledge on which to develop their understanding of childhood injury and risk. The disparity in risk perception amongst mothers and between the accident data was further investigated in the qualitative study and the findings presented in subsequent chapters seven, eight and nine.

### **6.3.5 Severity of injury**

There was, generally, more consensus between the mothers' perceptions of severity of injury than of the susceptibility of the pre-school child to injury. The items in the severity scale were predominantly rated as serious and very serious. It was evident, however, that mothers frequently made a distinction between traumatic injuries and superficial injuries in their appraisal of injury risk. The mothers perceived falls and cuts mainly as moderately to mildly serious injuries and broken bones as less serious than the remaining injuries in the scale, for example poisonings, burns and choking. Analysis following data reduction using factor analysis identified that mothers in different circumstances did perceive traumatic and superficial injuries differently.

The mothers' perceptions of the severity of injury varied in relation to their social and demographic circumstances. Mothers in the higher social classes perceived traumatic injuries as more severe than the lower social classes. It may be that mothers in the lower social classes were more optimistic about the treatment of injuries and the efficacy of health professionals when caring for injured children. Perhaps in context

with all the other stresses and pressures in the mothers' lives, serious injuries were perceived as less serious as they were mediated by the other concerns and worries the mothers had. For example, the mothers in the lower social classes may have had multiple worries regarding finances, meeting the basic needs of the family and with coping on limited resources. Amongst such stresses, the seriousness of an injury may be attenuated to some degree.

Mothers in local authority housing perceived the superficial injuries as more severe than mothers in private housing. The differing perceptions could have related to their poorer living conditions and many features in the environment which were hazards through which the child could become injured. The mothers may have perceived the pre-school child as being exposed to hazards which in safer environments might only have resulted in a superficial injury, but in their social context a more serious injury was more realistic. For example, there is a considerable difference in the outcome of an injury resulting from a fall from a third floor balcony in a local authority flat as opposed to a fall down one or two steps in a private bungalow. In assessing the severity of injuries mothers were considering the context in which they might have occurred. The mothers living in environments less conducive to safety perceived the injuries as more severe. It is possible that the more superficial injuries worried mothers in local authority housing more as accidents had the potential to be more serious in local authority housing and environments than private housing schemes.

This evidence suggests that local authorities and health services need to collaborate further to ensure environments are more conducive to safety. Health professionals working with mothers at home and in communities need to recognise the impact the local environment may have on influencing the mothers' perceptions of injury. The need to tackle social and environmental problems to address injury concerns is reinforced by the findings of this study. It may be problematic for injury prevention workers who adopt a primarily educational approach to respond to the injury problem. Health professionals need to work with parents to tackle local safety issues at policy level in addition to their educational role.

It is possible that mothers who perceived the injuries as more severe would worry and be more anxious about these injuries, but not necessarily be motivated to adopt protective behaviours instead their self esteem and coping strategies may be inhibited. Roberts et al (1995) suggested that identifying hazards in the home may induce anxiety and worry about injuries, but not necessarily motivate mothers to adopt safety strategies as the anxiety can be debilitating. Health professionals working with mothers to improve safety need to understand that risk perception can both motivate and inhibit the mother in protective behaviour. To encourage motivation, health professionals can encourage self efficacy in the mothers through empowering the mother and promoting effective safety strategies relevant to the mothers social and demographic context.

### **6.3.6 Common superficial injuries and uncommon traumatic injuries**

Data reduction using factor analysis was a valuable part of the method for analysing the responses to the scales designed for this study and contained within the questionnaire (Appendix 2). A robust analysis of the data for susceptibility and severity of injury was possible and useful for identifying differences in perception of uncommon and common injuries and traumatic and superficial injuries. The analysis suggests more variation in mothers' perceptions of susceptibility or probability to injury, than of severity of injury. The perceptions of susceptibility might be more influential in developing motivation to adopt safety strategies than severity of injury. The data suggests mothers generally perceived most injuries as severe if they occurred, but there was more variation in likelihood of injury. Further work to examine the more exact nature of probability of injury and how a knowledge of this may influence safety and protective behaviours is required. Perception of risk entails considering the probability of injury risk and it seems from this evidence that most mothers perceived the outcome of many injuries as implicitly serious, but not likely to happen. As injuries were perceived as serious, perhaps emphasising with parents a picture of injury susceptibility is required more than emphasising the severity of injury to encourage motivation.

### **6.3.7 Summary**

The variations in perceptions of likelihood of injury weakly, but significantly correlated with maternal age and number of adults in the home. This would suggest young and lone mothers might benefit most from the educational approach for developing knowledge about the likelihood of injury in relation to the child's developmental stages. The research further emphasises the need to prioritise policies to influence positively the social environments of mothers for promoting their own and their family's health and safety. Policies should advocate safer housing and fenced gardens to influence environments more conducive to safety and which can reduce mothers' anxiety about the seriousness of injuries. The expectation for improvements in safety are unlikely to succeed without addressing the social and environmental disadvantage of some families in conjunction with the educational needs mothers have to better understand the susceptibility of children to injury and the ways to reduce hazards.

The quantitative study identified differences in mothers' perceptions of injury risk. In relation to their environmental and social context. An examination of how different social environments related to how the mothers cared for their children and kept them safe from injury was investigated further by the qualitative method and findings are presented in the subsequent chapters.

## **6.4 First Aid**

Recognising that injuries are a major cause of mortality and morbidity, the mothers' perceptions on approaches to reduce the impact of injury were explored. First aid knowledge and experience was seen as highly important to most mothers, but only one third of mothers had undertaken first aid training. Mothers in the higher social classes reported more attendance at first aid classes and more knowledge for treating the more traumatic injuries. Mothers who had attended first aid classes reported more ability to carry out specific first aid treatments. The importance of refresher and update classes were borne out by the study. Mothers who had most recently attended

first aid courses reported more confidence in treating injuries. As a longer time elapsed mothers reported less confidence for treating injuries. The importance of first aid was emphasised in the study by Combes (1991) and this study supports the need for first aid to be a more central part of the work of health professionals working with mothers. Health professionals who are not confident or competent in first aid training should organise accessible first aid from an alternative resource within the community for the mothers, perhaps through collaboration with the Red Cross or the St Johns Ambulance. In the current climate of the National Health Service and in response to the White Paper, *Primary Care: Delivering the Future* (Department of Health 1996) self reliance is advocated for treating minor injuries or symptoms. Mothers are to be encouraged to learn to provide first aid for their family and rely less on the health service. It will be important for health professionals working with mothers to encourage first aid training and stress the importance of regular refresher courses to maintain the mothers' own self efficacy and competence in treating minor injuries. Considerable efforts are needed by people to build up the mothers' self esteem, competence and self efficacy for identifying injury risk, developing safety strategies and administering first aid.

## 6.5 Benefits and barriers for injury prevention

This section examines the mothers' perceptions of barriers to injury prevention activities and where they perceived the benefits of injury prevention strategies to have been most evident. Analysis of the Benefits and Barriers to Injury Prevention Scale (BB Scale) developed for this study examined differences in the mothers perceptions in relation to their social and demographic context. The hypothesis which guided analysis is reiterated below and the results presented in chapter four are then discussed.

### **Hypothesis 3**

*Mothers living in different social contexts will have different perceptions of the benefits and barriers for injury prevention in pre-school children.*

The above hypothesis was accepted in part. The mothers had different perceptions about the barriers to injury prevention in relation to their different social contexts and the hypothesis was accepted. Mothers in the higher social classes perceived educational barriers as major problems, whilst mothers in the lower social classes and more disadvantaged circumstances perceived environmental barriers as greater obstacles. However, the mothers' perceptions of the benefits for injury prevention were consistent when their social contexts were considered in the analysis so this part of the hypothesis was rejected.

#### **6.5.1 Barriers: The local environment and parents' knowledge**

The mothers generally perceived the outside environment as more of a barrier to safety than aspects of the home environment. The mothers did not perceive the child's own home as a major problem for child safety, but identified with several barriers to safety in the local environment. These findings suggest most mothers felt more confident and had higher levels of self efficacy for maintaining the home as a safe environment, compared with the local environment. Mothers possibly felt that they were more in control of the circumstances within the family home, whereas outside the home however, mothers probably felt less able to influence their child's safety. It seems mothers generally felt less confident and perceived lower self efficacy for maintaining safety outside the home in comparison to within the home, yet accident data indicates the home and the immediate area outside the home are where most accidents occur (Department of Trade and Industry 1993). These findings suggest the mothers' locus of control was possibly more internal (Wallaston et al 1976, 1984) when caring for children within the home, but external when caring for them in the local environment.



The diversity of opinion about the barriers to injury was identified as being related to several of the mothers' social and demographic characteristics. Mothers in the higher social classes identified the parents' lack of knowledge as a barrier to safety more so than mothers in the lower social classes and the opposite was evident for environmental barriers to safety. The more advantaged mothers considered the individual mother or parent as the barrier to safety whereas the disadvantaged mothers perceived the physical environment as more problematic.

The evidence suggests the maternal social contexts of advantage and disadvantage related to how the mothers perceived the barriers to safety. It seems mothers in relatively disadvantaged contexts for example, local authority housing, poor garden facilities, crowded homes, lower social class, young and caring alone, perceived the physical environment as a barrier to safety. These mothers possibly felt less able to influence their child's safety and perceived other people, such as designers and people responsible for developing and maintaining housing schemes and play parks as more influential in reducing or promoting safety. The quality of environments they provided within the local community were probably perceived as beyond the mothers' control and these mothers possibly had a more external locus of control and lower self efficacy.

The relatively more advantaged mothers living in environments more conducive to health and safety, for example living in private housing, with good garden facilities, higher social class, older maternal age and supported by a partner, focused their perceptions of the barriers to injury prevention on the 'ignorant and ill-informed'. This view perhaps reflected the approach of some health professionals over the past decade. Health promotion has often focused on attempts to teach 'unknowledgeable' parents how to care for their children safely with little emphasis on policy to improve the social and environmental conditions in which the disadvantaged lived.

The older mothers reported higher levels of self efficacy (Bandura 1982) than the younger mothers and this suggests that the barriers to injury prevention were possibly

more difficult for younger mothers to address. There will always be a need for parents, particularly first time parents to be educated about hazards, injury risk and injury prevention strategies. However, there is an accumulation of evidence that for disadvantaged families, environmental approaches would be just as, if not more appropriate for improved safety (Avery and Jackson 1993, Stone 1995). Policies and resources are required that place well designed housing, good child care facilities, safe play areas and higher incomes for the poor at the centre of future health and social care developments in addition to educational programmes for parents.

### **6.5.2 Supervision**

The findings of this study suggests that home environments which were not conducive to promoting the child's autonomy through safe play facilities were perceived as a barrier to child safety and probably increased maternal stress through anxiety about injury risk. Supervision was more problematic and a greater barrier to safety for mothers in the lower social classes and when no enclosed gardens were reported. Inadequate play facilities in the home environment related to perceptions of difficulties in supervising the pre-school child. It seems that the mothers with open or shared gardens had most difficulty supervising their child as they were possibly more spatially distant from where the child could play outside. For example, supervising a child from a second floor flat whilst the child played outside in a shared garden some distance from where the mother carried out her domestic routine would be more problematic than for a mother supervising a child from a house with an enclosed garden. These findings are congruent with earlier studies which reported difficulties for mothers when caring for children (Combes 1991). Garling and Garling (1993) reported the different levels of supervision used by mothers and that mothers who were able to supervise their children more closely, with more visual attention perceived less injury risk. When mothers were not in the same room as the child they were more concerned or worried about injury risk. Interestingly, Glik et al (1993) identified that mothers who reported closer supervision practices also had home environments with fewer observed hazards.

The findings suggest that the physical home environment and immediate play facilities would have related to different levels of supervision by mothers. Homes which had enclosed gardens, seemed to foster the mothers' abilities to supervise children. The homes with the inadequately fenced play facilities and greatest dangers were the least conducive to close supervision, especially whilst the child was playing and developing autonomy immediately outside the home. Improvements in housing and gardens for mothers with young families are required to enable them to feel more effective in protective behaviours and encourage close supervision of the pre-school child.

### **6.5.3 Benefits**

The issues around legislation and regulation, for example the installation of smoke alarms were consistently perceived as beneficial by mothers in different contexts. These findings suggest that there is more consensus amongst mothers of the benefits of legislation for injury prevention than educational and environmental strategies. It seems that certain strategies which are consistently perceived as beneficial transcend the social markers of class and age to be perceived as a benefit to injury prevention by all mothers.

When mothers were asked through open ended questions for their views on the barriers and benefits, they focused much of their responses on the educational approach to safety, rarely suggesting legislative or political action as beneficial for safety. The environmental approach was apparent in their responses, but evidence of the enforcement approach was clearly lacking and the educational approach dominated the responses. This would suggest that many mothers considered their own family safety in the context of educational approaches and possibly felt limited in their own ability to influence legislative approaches. The mothers were probably less familiar with political action and legislation to influence safety. This finding suggests community development programmes established by mothers would possibly focus on environmental and educational approaches unless facilitated by professionals to consider the implications of political action and legislation. Increasing political

awareness and advocating on behalf of mothers for policies to improve safety regulations and legislation should be an important component of injury prevention strategies.

#### **6.5.4 Summary**

The perceived barriers to injury prevention varied in relation to different aspects of the mothers' social context, whilst the benefits to injury prevention were held in high regard amongst mothers living in different social contexts. For mothers living in relatively disadvantaged contexts, the barriers to injury prevention related mainly to inadequacies within the local environment. Mothers in relatively more advantaged contexts perceived poor parental knowledge as a main barrier to safety. Supervision was difficult for some mothers, particularly those with limited garden facilities and in the lower social classes, whilst older mothers perceived higher levels of self efficacy and felt more able to influence their pre-school child's safety than the younger mothers. The evidence suggests future injury prevention strategies should focus on attempting to influence policy to improve the circumstances of the relatively disadvantaged families and reduce environmental barriers to safety in addition to developing educational safety programmes for younger mothers. Legislation and regulation to protect children should be encouraged in appropriate circumstances as it was seen as highly beneficial by the mothers in this study.

### **6.6 The usefulness of safety equipment**

This section discusses the mothers' views on safety equipment. The relationship between social and environmental context for the perceived benefits of safety equipment are examined and the barriers to the use of safety equipment identified.

## **Hypothesis 4**

*Mothers living in relatively more disadvantaged social contexts will perceive greater benefits from safety equipment for injury prevention in pre-school children than mothers in relatively more advantageous circumstances.*

The above hypothesis was accepted. Mothers generally perceived safety equipment as beneficial for preventing accidents and keeping children safe, although some equipment was considered less useful or beneficial than others. The mothers in local authority housing and when head of household part-time employment was most evident perceived safety equipment for the home as most beneficial. In section 4.0, part-time employment of the head of household and its association with lone mothers was highlighted. The mothers living in more deprived housing conditions and caring for their children in addition to working part-time perceived the safety equipment as most useful and potentially able to relieve some of the environmental threats to their child's safety.

### **6.6.1 Benefits of safety equipment for the relatively more disadvantaged families**

The perceived benefits of the equipment may have reflected the mothers' perceptions of their difficulties in supervising pre-school children within the home environment. The findings suggest that mothers found safety equipment useful for supporting them in caring for the child safely especially when they worked and juggled childcare or lived in local authority housing without an enclosed garden for the child to play in. These mothers possibly perceived the safety equipment as effective in compensating for physical design problems within the home. Mothers in private housing may have felt their home circumstances were less hazardous and that safety equipment was not so important for them as they were possibly able to supervise their children more closely.

Mothers living in local authority housing also reported more perceived benefit and intention to use a local equipment loan scheme. Safety equipment was clearly valued by some of the relatively disadvantaged families and safety equipment loan schemes should be developed with mothers living in poorer housing conditions in mind. The location of such schemes should be in close proximity to local authority housing schemes so that they are accessible to the families in most need, who perceived the most benefit from the equipment and expressed most intention to use such a scheme.

### **6.6.2 Car safety equipment**

As the number of children in the family increased, car safety equipment was perceived as less useful and of least benefit. This may be because larger families would probably not be able to accommodate all the children in the appropriate car seat restraint due to the limited space of most standard sized family cars. Inadequate seat restraint use has been observed when there was an increase in family size (Campbell and Richardson 1992). The efficacy of these strategies has been well reported in the United Kingdom (Christian and Bullimore 1989). Legislation has been shown to encourage and maintain the high use of restraints in Britain, however mothers are still confronted with the practical issue of accommodating large numbers of children in small spaces for some car journeys (Campbell et al 1993). The continuing reinforcement by health professionals and the media to use appropriate car seat restraints is necessary to protect the future generations of passengers and drivers. A continued effort to promote seat restraints is needed so that the United Kingdom may avoid the problems experienced in other countries where seat restraints are not well used and morbidity and mortality rates are considerably higher compared with the United Kingdom.

### **6.6.3 Fire fighting safety equipment**

Mothers in private housing perceived safety equipment for fire fighting as more useful and of greater benefit than mothers in local authority housing. This perception may have reflected that this equipment was not a priority for the relatively disadvantaged mothers due to its expense and therefore not a realistic consideration in view of their

financial circumstances. The perceived lack of benefit may have related to a lack of confidence in using the equipment safely and effectively if a fire occurred. Fire safety advice stresses the importance of raising the alarm and leaving the fire scene (Squires and Busutill 1996). Tackling a fire is discouraged unless you are confident about your own safety. The mothers possibly felt they were unlikely to be confident when tackling a fire and would therefore have little use for the equipment. Families in relatively more disadvantaged circumstances were at most risk of fire hazards (Department of Trade and Industry 1993), but in this study these mothers perceived least benefit for fire fighting equipment. Squires and Busutill (1996) reported the high rate of mortality for pre-school children resulting from house fires and the need for close parental supervision of children in this age group to prevent fires. The evidence suggests smoke detection and alarms should be encouraged in addition to the development of family escape routes in the event of a fire since the families at most risk of house fires seemed to perceive least benefit from fire fighting safety equipment. If local authorities provide fire fighting safety equipment within their housing facilities, they should ensure mothers receive practical instruction as to how to use it safely to increase the mothers confidence to use it appropriately.

#### **6.6.4 Cost as a barrier to safety equipment use**

The cost of safety equipment was a barrier to its use for some mothers in this study. The prioritising of safety equipment was evident based on the mother's perception of her physical and social context for nurturing the child. The benefits and barriers to safety equipment were considered by the mothers and difficult decisions had to be made about the appropriateness of equipment in relation to their own social and environmental context. The findings suggest the necessity for architects and designers to design safer houses and products to reduce the need for individuals to purchase safety equipment. This study affirms the findings of other studies that the cost of safety equipment was a barrier to its use for some mothers (Kendrick 1994, Towner 1993). This study demonstrates that the majority of mothers who perceived most need and intention to use safety equipment, with the exception of fire fighting safety equipment were often amongst the more disadvantaged families. Therefore the

cost effectiveness of safety equipment should be a central consideration in its production in addition to designs which ensure equipment is easy to use.

Mothers in this study were concerned about the effectiveness of some safety equipment and the appropriateness of its design and were discouraged from using safety equipment. When safety equipment is designed, research in to the efficacy of the equipment is required. Much of the equipment available to mothers has not been researched for effectiveness in providing the safety strategy that is suggested by its design. Some equipment that improves peoples' safety has been well researched, for example smoke detectors and child resistant containers (Nuffield Institute for Health and NHS Centre for Reviews 1996). Raising public awareness of these effective pieces of equipment is important, but additionally the equipment needs to be accessible to the mothers and easy to install and maintain.

#### **6.6.5 Conclusion: From safety equipment to a culture of safety**

The emphasis for many researchers and developers of injury prevention strategies of the past decade has been on specific safety strategies to reduce a specific hazard and injury, for example a window lock to reduce falls from open windows or smoke alarms to reduce smoke inhalation and burns from fires (Thomas et al 1984 , Katcher et al 1989, Waller et al 1993). Several research studies observed and measured knowledge and behaviour regarding specific items of safety equipment used to remedy specific hazards (Colver et al 1982, McLoughlin et al 1985). What was not evident from these earlier research studies was whether there was a general improvement in safety with regard to other similar hazards or whether a culture of safety developed from such strategies. There is increasing evidence in the literature that this very specific approach focused peoples' attention on one or two safety strategies, but that the overall culture for safety and injury prevention was less well developed (Glik et al 1993, Wortel and De Geus 1993). Specific accident circumstances can be reduced by the use of safety equipment, but new hazards will evolve along with technological and manufacturing advancements. Specific, effective safety strategies (often focused around safety equipment) are to be encouraged where



they are known to work, but the findings from this research suggest efforts to improve the environmental and social culture of safety require more emphasis in future policy, research and injury prevention programmes. There needs to be recognition that safety equipment itself may not reduce accident rates for all injuries as some are not amenable to this safety approach. Developing a culture of safety to reduce risk and which encourages risk appraisal when hazards cannot be eradicated is a necessity. Research into the process of how to best develop a culture of safety is now necessary to contribute to the development of knowledge for protecting pre-school children as safety equipment is certainly not available or practical for every hazard encountered by young children. The findings suggest an urgent need to develop a political infrastructure which includes environmental and social policies to encourage a culture of safety. Careful consideration needs to be given to the level at which we as a society we pay for safety centrally or individually.

## 6.7 The mothers' development of knowledge for preventing childhood injury

This section examines the mothers' responses to the quantitative survey which inform on their development of knowledge for protecting pre-school children from injury. The hypothesis relating to this aspect of the research is given below.

### **Hypothesis 5**

*Mothers living in relatively more disadvantaged social contexts will attribute more importance to professionals for giving information about child safety in pre-school children than mothers in more advantageous social contexts.*

Most mothers in this study recalled how they developed their knowledge about routine safety practices, some specifying their own parents and childcare books as

sources of information. The questionnaire results indicate that the mothers perceived experiential learning as an important means of developing knowledge to prevent accidents, particularly through the experience of caring for their own children. Health professionals were recognised by only a minority of mothers for their role in developing the mothers' knowledge of safety practices. Young mothers, and mothers living in local authority housing, reported the health visitor as more important for discussing safety and providing safety leaflets. This relationship was found to be statistically significant and on this evidence we may accept the hypothesis that mothers in more disadvantaged circumstances do attribute more importance to professionals as sources of child safety advice.

### **6.7.1 Experiential knowledge**

Experiential learning implies a certain element of 'learning on the job' rather than pre-meditated or planned knowledge acquisition. The evidence presented in chapter four suggests that the mothers may have developed knowledge from everyday experiences relevant to their context and culture. The nature of the knowledge, both depth and type might be expected to differ between individuals due to the diversity of circumstances in which mothers lived and the tacit experiences from which they learned about protecting children.

The recognition that a mother's own parents, particularly her own mother, are important for developing knowledge reveals an important mechanism by which knowledge is conveyed from one generation to the next for protecting children from injury. Learning from the mother's own mother and other family members is a major way for appropriate safety strategies to develop. Common sense knowledge was often derived from family sources and one implication of this finding is the need for accurate information to be passed from one generation to the next and conversely, knowledge which is inaccurate for the context of the mother and child can be detrimental to reducing childhood injury. The identification of the importance of lay sources of information for the development of safety strategies raises questions about the accuracy of such knowledge, but clearly this form of knowledge development was

acceptable and accessible to mothers of young children. The strengths and weaknesses of experiential learning and lay sources of knowledge requires further examination through qualitative research. Identifying the knowledge base and the sources of information that mothers draw upon for preventing childhood injury was recommended by Laidman (1987) as an important topic for future research. The findings from this study suggest that there is a place for health visitors to build upon the strengths and help to eradicate the weaknesses in lay sources of knowledge.

### **6.7.2 Child safety as common sense**

The majority of mothers considered common sense knowledge as central to their development of child safety practices. This common sense or tacit knowledge reflected the taken-for-granted approach that mothers had for caring for their children. This finding illustrates why some aspects of knowledge development in every day life remain unexplained. Mothers reported developing their knowledge through prior learning in ways that often reflected the cultural norms of their childhood experience and caring for their own family. Developing knowledge about tacit or common sense knowledge is recognised as being complex (Denzin and Lincoln 1998). Common sense is often suggested by people when they are describing something that is seldom discussed or analysed in detail in the person's everyday life. For example, to reflect upon how they developed knowledge to protect their children would have been a new experience for most mothers. Identifying common sense knowledge as the source of information is, in part, evidence of the lack of analysis and detailed recall of the learning process. However, an expression of knowledge as common sense also reflects the centrality of that knowledge to everyday life (Berger and Luckman 1966).

This 'common sense' approach of the mothers to the prevention of accidents can be considered both a benefit and a hindrance for attempts to reduce childhood injury. Common sense is a benefit when people perceive implementing their knowledge about how to prevent accidents as part of their routine of everyday life. Possessing this kind of knowledge is considered socially acceptable and often socially desirable.

However, Lowe (1989) explained that the common sense nature of safety makes it 'unremarkable' and this may make mothers less inclined to act upon safety information. A related problem arises when people lack the knowledge to prevent accidents yet know that many of their peers consider this to be common sense. People lacking this knowledge can then feel guilty and defensive at not showing enough common sense. If a person recognises a gap in this common sense knowledge, he or she may feel they are lacking a basic requirement of society and therefore have feelings of inadequacy. Safety knowledge is essentially knowledge that all people in a similar culture should have in their everyday life. The question for researchers seeking to investigate ways to reduce injury is what would define a culture. It is evident that mothers in this study within a geographically defined area were culturally diverse by way of their social and economic contexts. It is unrealistic to assume that common sense knowledge for disadvantaged mothers is the same as common sense knowledge for advantaged mothers.

If knowledge about accidents was not to be perceived as common sense, but more a body of knowledge that had to be learned, it may become a less sensitive topic for parents to discuss with health professionals and provoke less feelings of guilt. On the other hand, if preventing accidents is not perceived as common sense knowledge it may lose social desirability; people may feel this is abstract knowledge and less central to their daily routines and something more complicated that needs to be learnt.

The results imply that whilst accident prevention was viewed as common sense it was socially desirable and people therefore incorporated their understanding of safety into their everyday routines. It is important for health professionals to appreciate the importance of common sense knowledge and recognise that, although accident prevention was considered to be 'just common sense' by many people, what they meant was it was taken for granted as being part of the reality of their life. This was not intended to undermine the value of the knowledge, but the exact opposite. Common sense which mothers' perceived as implicit knowledge was fundamental to the value and centrality of protecting children.

### **6.7.3 Covert approaches to safety by health visitors for promoting common sense knowledge?**

The idea that knowledge of how to prevent accidents was just 'common sense' was a recurrent theme from the exploratory and pilot work and throughout the main research study. Based on this evidence we can develop this idea further by asserting a feature of such knowledge to be developed by people unable to recall when questioned the specific source from which they gained this knowledge. From a health promotion view point this can be taken to mean that the information was delivered to the client (from whatever source) in an acceptable and relevant way, such that it is now part of their everyday life since the knowledge has been used to inform the adoption of safety practices.

Only a minority of mothers in this study reported health professionals as providing safety information, yet many health visitors claim this to be an important aspect of their role (Carter et al 1992, Gray 1992, Adams 1993, Marsh et al 1995). It is possible that the health professionals used subtle methods to communicate safety advice to avoid offending the mothers or to avoid appearing critical or challenging about a sensitive issue. This type of covert approach may have contributed to mothers not realising when they were receiving safety information as opposed to other, more traditional health care advice. For example, some mothers may view discussions around introducing solids as dietary advice, not separating advice about the management of choking from this discussion as specifically an issue of safety. Laidman (1987) described the health visitor role in respect of accident prevention work as covert. Foster and Mayall (1990) identified this covert approach to advice giving as a relatively common approach in health visiting. Arguably the covert approach could contribute to mothers not recalling the safety work of the health visitor.

Ensuring an acceptable delivery of information to clients is an essential part of the health visitor role (Robinson, 1982, Luker and Orr, 1985, Robertson, 1988) and if

clients recall the information received from a health visitor as just common sense then arguably it has been delivered appropriately and the health visitor has performed the educational role well. Whilst the outcome is therefore acceptable, whether the covert approach to education is doing justice to the mothers or to the health visiting profession is debatable. In an era when the client's evaluation of the perceived role of health professionals is given more credence, covert approaches to the delivery of safety advice may leave clients uncertain about the health visitor contribution. Over the long term this could be problematic if health visiting is perceived as insignificant for reducing injury.

When researchers attempt to identify peoples' specific sources of information and ways of knowing to improve the educational component of accident prevention programmes, it can seem problematic when people may reply 'it's **just** common sense' (Moss and Tobin 1988). This response needs to be understood as knowledge derived from different sources of information, which can be difficult for people to recall or articulate and are consequently seen as implicit to everyday life. The person may have difficulty specifying the origins of knowledge perceived as common sense and therefore difficulty in identifying sources of accident prevention knowledge. The concept of common sense knowledge identified here can therefore inform our understanding of how mothers construct their knowledge of child safety.

#### **6.7.4 Lay sources of information for developing safety practices**

The evidence suggests the diversity of social contexts and situations of disadvantage and advantage may influence the development of knowledge obtained through lay sources of information. The results of this study suggest that child safety practices are based primarily on lay sources of information. Accident prevention programmes need to recognise and build upon the benefits of child safety knowledge being widely seen as common sense knowledge, making effective safety strategies part of everyday life. A difficulty for those planning educational programmes is knowing how best to inform people of the recommended safety practices that they need to incorporate into their common sense knowledge. Given that this study has identified familial and

other lay sources of information as being well received, developing accurate and relevant lay sources may well be the most influential approach for future child safety strategies which require behavioural approaches to safety. This finding is supported by Peterson et al (1993) who emphasised the value of educational approaches for behaviour modification, noting that legislative and environmental approaches are not practical for every situation in life. A consequent implication would be that future injury prevention work should seek to utilise better informed lay sources of information for the development of safety strategies. This might be done for example, through community workers, family centres, nursery groups and already established community groups which are acceptable to mothers for sharing information.

### **6.7.5 The experience of caring for the child**

The mothers placed a great deal of worth on the experience of caring for their own children and the development of their safety knowledge from their own mothers. The lay sources of information from family and friends were important for shaping the mothers' safety skills and strategies. However, since the majority of learning came from the experience of caring for their own children, there may be a lack of anticipation or forward planning about many aspects of child safety and preventing accidents. It would seem most women give little consideration to child safety within society until they experience the need to care for their own children. The mothers had rarely sought knowledge in an active manner to prepare them for reducing hazards or preventing injury prior to caring for their own children. A culture of safety seemed to be lacking and it was the context of the immediate demands of caring which made the need for safety more important.

Experiential knowledge was highly valued by mothers. This was possibly due to the relevance of the learning situation to their personal context and not some form of abstract knowledge development. However, the results imply a lack of forward thinking for preventing childhood injury and suggest that many mothers were learning in a responsive manner as their child was exposed to hazards or injury. This lack of

anticipation by mothers may help to explain the high accident rates in young children (Scottish Accident Data Sources 1993, Scottish Accident Statistics 1994).

As maternal age and experience in caring for children increased the mothers perceived less need for more safety information. The value of experiential knowledge for mothers was evident in this study. Work by Reutter and Ford (1997) described how the experiential knowledge of clients is valued by public health nurses as they build on this form of knowledge in their endeavours to promote health. There is, however a deficiency in this type of knowledge development for protecting children, that is, the probable exposure of the child to risk and injury as the mothers develop their own experiential knowledge base. The nature of experiential knowledge makes it highly relevant to the mother's and child's context, but raises concerns about the potential lack of anticipation of hazards and injury until the child is in some degree of danger.

A distinction posed regarding differences between adult and child cognitive development is the ability of the adult to anticipate injury and provide the appropriate safety strategy by seeing situations from more than one perspective (Armitage 1998). This distinction, probably true for many situations in life, does not apply to all adults when preventing injuries to pre-school children. The accident rates reflect a picture of many injuries possibly occurring due to a lack of anticipation by parents or their inability to see all potential dangers and provide appropriate safety strategies. This lack of anticipation may be problematic for professionals working to reduce childhood injury with particularly young, adolescent mothers to assist their cognitive development to anticipate injury risk and identify appropriate safety strategies.

#### **6.7.6 Passive and active learning strategies**

Passive methods of obtaining information, for example from the television and safety leaflets, seemed popular with the mothers in this study. Many mothers reported that the television was a useful way for obtaining more information about safety, although relatively few mothers reported watching the televised *Play it Safe* programmes prior to the survey or the television as a source of information in their knowledge



development. Eichelberger et al (1990) and Liller et al (1991) also found similar sources of information to be popular with parents. There is, however, an increasing body of evidence regarding effective ways to develop knowledge and specifically ways in which women's knowledge development differs to men. Belenky et al (1986) and Tannen (1990) stress the importance of interactive dialogue and good communication for the more successful development of knowledge in women. The need to involve mothers actively when they are acquiring knowledge about safety was suggested by Welch (1991). Foster and Mayall (1990) also identified the value of dialogue in health visitor and mothers' interactions. One implication was that, rather than just handing safety leaflets to mothers, health professionals should engage the mothers in a discussion about the content giving consideration to the mothers' knowledge base, social context and wishes. A recent study by Marden and Nicholas (1997) identified oral sources of information regarding child health care and development as important for the mothers' development of knowledge. Marden and Nicholas (1997) also identified the health visitor as the health professional most frequently mentioned in respect of these sources of information. Rolls (1992) and Davies (1988) also highlighted the importance of language in health visitor contacts with clients for conveying information in a friendly manner. This research supports the earlier studies findings that health visitors are an important source of information, but congruency with the work of Jordan et al (1993) is also evident as family members, particularly the mother's own mother, were perceived as most important when reflecting upon sources of information about preventing accidents and safety.

The attraction of passive mechanisms to learning possibly related to less intrusion on the mothers' routines and the convenience of accessing information in the mothers' own home and when they were ready for it. The more active approaches to learning which included discussions with health professionals may have required more planning and inconvenienced mothers' routines more than the passive methods. A further consideration links to the mothers' views that much of the safety information should be common sense knowledge. Mothers might have felt reluctant to discuss safety issues they believed they should have known about with a health professional,

but may watch a non-judgmental television programme to obtain the knowledge without any loss of face. Mothers were perhaps also aware of the pressures on the health professionals' time and may have considered passive sources of information as less demanding of health professionals. A criticism by some mothers was that the few health visitors with an accident prevention role had developed it mainly through 'just handing out leaflets' but with inadequate discussion. In the future it may be a better approach for the health visitors to discuss the content of the leaflet with the mother rather than just leaving it with her to read alone. The evidence from this study suggests that the health visitor should identify and discuss with the mother specific hazards identified in the home and ways to improve safety with respect to the hazards recognised. Ensuring that the discussion about safety strategies is relevant to the mother's social context is important. The findings suggest the nature of the discussion and the communication skills of the health visitor are as important to mothers as the safety message being conveyed if effective health education is to take place and facilitate action by the mothers. The quality of the interaction between the health professional and mother may well have an impact on the value placed on the safety information and the outcome of behaviour change. Whilst the television may be a popular source of information for the mothers, a question remains about the quality of the learning experience and about its capacity to influence behaviour change, to improve safety and reduce childhood injury.

#### **6.7.7 Professional and lay support for safety information**

From the results there is a clear indication that young mothers, particularly those with poor garden facilities, valued the contribution of health visitors to a greater extent than older mothers with good home environments. The mothers in lower social classes placed more importance on professional and organisational support whereas mothers in higher social classes, often supported by a partner and living in private housing placed more importance on lay support. It seems that the more disadvantaged mothers placed more value on the health professionals and particularly the health visiting service than the mothers in more advantageous circumstances. These findings are valuable for clarifying how health visiting should prioritise services with

mothers and are possibly a reflection of how services were being delivered in response to need.

### **6.7.8 Professional and organisational support for the relatively more disadvantaged**

Mothers in this study who lived in relatively more disadvantaged circumstances seem to have valued the health professionals and especially the health visitors for their professional knowledge. It is plausible that the authority of professional knowledge was important to these mothers rather than depending on informal, lay information which may have been inaccurate. The more disadvantaged mothers may have perceived the health visitors as having knowledge beyond what they would expect within their peer group and kinship networks. It is also likely that the supportive nature of health visiting was more important to the disadvantaged mothers and the safety information was more acceptable from a facilitative health professional rather than lay support which may have been limited or erratic. An important distinction between social networks and social support has been identified as the provision of support, as opposed to availability of support (Nolan et al 1996). The findings suggest the provision of support was greater from professional and organisational networks than lay support networks for the disadvantaged mothers in this study.

### **6.7.9 Lay support for the relatively more advantaged mothers**

The kinship and lay support networks of the mothers with partners may have been more developed than those for the young, single unsupported mothers, hence the disparity in importance between professional and lay support. Advantaged mothers were probably able to draw on the lay information of the partner, family and friends to a greater extent than the young, single unsupported mother (Cutrona 1996). The people around the mothers in their social context were likely to influence their childcare (Everingham 1994) and safety strategies. The increased emphasis by mothers in the lower social classes on the contribution of health visitors and health may reflect deficient lay support networks and also a recognition of the enhanced

social skills and knowledge base of health professionals for discussing injury. The health visitors may have portrayed characteristics and styles for child care and protection which mothers, especially the young, single unsupported mothers, tried to develop or model themselves on.

Ford-Gilboe (1997) identified the importance of family cohesion for health work to be effective and that two parent families have more community support than single unsupported parents. The work also high-lighted the potential for single mothers to be involved in health work and the importance of convincing them of their capabilities so that they feel empowered to make positive change in their health. Olds (1998) also discussed cases of public health nurses varying their contact with first time mothers based on the health professionals' perception of client need. The results of this study suggest health visitors were identifying the need to empower the young, lone mothers as they visited them more frequently and that they may have compensated for deficiencies in lay social support.

As mothers indicated, they themselves were not forthcoming in requesting information about safety and were reliant on health visitors identifying the need to discuss safety. Some deficiencies in this service were identified in the study but the general finding was that the most disadvantaged members of the population did value the social support and information given by the health visitor.

The supported mothers with their more developed social networks seemed to place less value on the contribution of health professionals. It may well be that within the higher social classes there was also a feeling of the health visitor having little more knowledge regarding safety issues than they themselves had through their social networks. Perhaps there was a feeling that sometimes the recipients of health care information were at least as or more knowledgeable as the educators (Dawson 1994, Mayall and Foster 1990). Laidman (1987) identified some parents as perceiving themselves to be just as knowledgeable as the health visitors regarding child safety issues. This was attributed to health visitors being quite unprepared for their educational role in injury prevention in the 1980's. The present emphasis for health

visitors to focus on the relatively more disadvantaged families may have been reflected in how the health visiting service was being directed and offered to mothers in this study. The lack of perceived importance by mothers in the higher classes might well have been because they were not identified as a priority for the service and had less contact with health visitors in contrast to the more disadvantaged mothers.

This raises the question of whether people who have not been major recipients of a service are in the best position to evaluate it? A service which is evolving and rationalising may need to consider if its intention is to prioritise in favour of the disadvantaged, how it will be valued or considered by the relatively more advantaged. Mothers who have not had much health visiting contact due to their relative advantage may feel the service is not beneficial to them personally and may be unable to look at the benefits of the service for the more disadvantaged.

Arguably this is an important point for the evaluation and the management of health visiting. To date the service has been directed and managed by people in the higher social classes and as these results indicate, the higher social classes perceived least value from the health visiting support. The opinions of the people directing the service may therefore be quite different from those of the more disadvantaged mothers who were the main recipients of the service. Attention should be drawn to how the service is perceived and valued, especially by its main users when evaluation and future planning take place. It is possible that the national changes in health visitor recruitment and registration of the past decade reflected a service which was being directed and managed based on the opinions of the higher classes.

To support the claim one needs to analyse the recent report by J M Consulting (1998) into the registration of health visiting as this reflected the present approach to influencing the direction of health visiting. The importance of the views of the most disadvantaged members of society seemed under represented in the formulation of the report. In reality there has been little work on client perceptions of the health visiting service regarding the reduction of childhood injury and many decisions regarding the

service seem to be based on the opinions of health professionals and managers who do not necessarily hear or receive the opinions of the least articulate and usually the most vulnerable and needy. The articulate, vocal and generally more advantaged are most likely to be heard. A study such as this one, although it considers only part of the health visitor role, does provide some evidence of the need for the health visiting service by the more disadvantaged and most needy in the population.

Recently, since the publication of the green paper *Working Together for a Healthier Scotland* (The Scottish Office 1998), the *Independent Inquiry into Inequalities in Health* (Acheson 1998) and the white paper *Towards a Healthier Scotland* (The Scottish Office 1999) there has been more value placed on the needs and perceptions of the more disadvantaged members of society. The problems of equity and equality in prioritising health services in primary care were highlighted by Hopton and Dlugolecka (1995) when they identified in their research the disparity of health care need between healthy and unhealthy people. Hopton and Dlugolecka (1995) demonstrated the priority of services differed by health status and need. Their study emphasised that the needs of minority groups can be neglected if everyone has an equal say about service provision and that equity for the most needy can be compromised. In respect of that view, greater consideration needs to be given to the opinions of the people who are the intended main recipients of health visiting service. In view of the results from this study, the opinions of the disadvantaged mothers, who had different needs and priorities for child safety support, need greater consideration than perhaps they have been accorded with in the past.

### **6.7.10 Summary**

The results emphasise how the mothers' social situations related to their perceptions of the value of social support from the professional or organisational networks and lay support networks. The disadvantaged mothers in this study valued the support and safety information from the professionals as it responded most to their particular needs. The more advantaged mothers were not the main recipients of the health visiting service and perceived professional support as less important. These findings

are congruent with the view that the work of health visitors firmly belongs with the most disadvantaged populations as they not only have the highest morbidity and mortality rates, but perceived the service as most important and beneficial. The intention of directing services to the most disadvantaged is not to pauperise them, but to empower (Erickson 1996). Whilst the findings of this research reinforce this approach, injuries were reported to occur to children in all social classes. The problem remains that injuries to children do also occur in the higher social classes and the work of the health visitor will remain important for some mothers in the higher social classes, particularly first time mothers. Evidence from this and other sections of the survey showed that the work of the health visitor is perceived as important for supporting mothers and promoting safety. The relationship between social circumstances and the value of different types of social support and support networks was explored in more depth in the qualitative study. The findings of the qualitative study elaborated on the nature of social support for young, lone mothers and the findings are presented in chapters seven and eight.

## 6.8 The health visiting service for preventing childhood injury

This final section identifies the contribution of health visitors to preventing childhood injury from the mothers' perspectives. The importance of the social and environmental context in relation to the perceived value of the health visiting service is discussed.

### **Hypothesis 6**

*Mothers living in more relatively disadvantaged social contexts will have more contact with the health visiting service for preventing childhood injury than mothers living in more advantageous circumstances.*

### **6.8.1 The health visiting service responding to need**

The results support the above hypothesis as mothers in lower social classes, local authority housing and of young maternal age identified most with the health visitor role in safety. The mothers living in more disadvantage appeared to receive increased health visiting support compared to mothers in more advantageous circumstances. Young mothers and those living in local authority housing had most frequent and more recent contact with the health visitor. This would suggest health visitors were either contacting mothers based on their assessment of the mothers' need for support and advice or they may have visited in response to requests by the more disadvantaged mothers for help to cope with family and child health issues. It is possible that health visitor support was based around some differentiation between the mothers' need for the service by considering the adversity of the mothers' social context. The mothers' housing circumstances and characteristics of the children, including their age and number of children, seemed to relate to the pattern of health visiting contact with mothers. The health visitors possibly considered mothers who were older and had two or three children or older children to be more experienced in childcare and safety, therefore requiring less health visitor contact. The basis of need to visit mothers in local authority housing may have been associated with other factors of poverty and deprivation in addition to the generally poorer housing conditions and the negative influences these can have on health. By this interpretation health visitor work was focused around families in more disadvantaged circumstances and where health was likely to be poorest.

The lone mothers in this study did not receive significantly more contact with health visitors than supported mothers. Perhaps health visitors did not identify a need for variations in visiting and support in relation to the availability of a supportive partner, although they tended to visit younger mothers more often and some of these were unsupported. Perhaps the mothers' younger age identified them as less experienced in childcare and more in need of support from the health visitor to develop childcare skills. Lone mothers, however, did not appear to be identified as needing increased contact to help them overcome their childcare difficulties when caring alone with



limited social support. It appears that lone mothers were not a priority for home visits or discussions about preventing childhood injury, yet lone mothers were statistically more prevalent in the post accident sample of this study and have been associated with increased injury in children in a study by Rivara and Mueller (1987). The visits to mothers in this study may have placed more emphasis on developing experience in childcare issues in response to young maternal age, but not necessarily addressed issues pertaining to lone parenting. The need to offer practical help and emotional support for mothers caring alone may have been under-estimated.

The needs of being young and caring alone can be quite different to those of being young and supported by a partner. The opportunities that high profile home visiting offers for enhanced self confidence and improved morale for unsupported mothers may well have been ignored by some health visitors. Cole et al (1998) identified mothers living with partners as having the best care giving environments, but lone mothers made the greatest improvements in the quality of care giving and safety when supported by nurse home visitors. In accordance with these findings, Olds et al (1998) also identified benefits of improved childcare, safety and self confidence derived from home visits.

It would seem plausible that the health visitors developed a perception of the mothers' need for the health visiting service and varied the delivery of the service in relation to their perceived needs. It is also feasible that when health visitors felt the service was more positively valued, they contacted mothers more enthusiastically. The mothers who were most in need of support would arguably have valued the work of the health visitor most and this would be reciprocated by the health visitor with increased visits to encourage the mothers in their health promoting activities. Olds and Korfmacher (1998) have also suggested variations in home visiting contact to be a reflection of perceived maternal need for support by nurses and argued that as mothers developed an increased 'sense of control' fewer visits occurred, but more frequent telephone contact was established. The health visitors who visited the mothers in this study possibly visited the older, more experienced mothers less as they were thought to be

more confident and capable. Variations in health visitor contact and client contact may have been related to the health visitors' perceptions of maternal need, but perhaps the health visitors underestimated the need for lone unsupported mothers to receive increased social and childcare support, particularly with respect to preventing childhood injury.

### **6.8.2 Safety as a subject for client-health visitor contacts**

Predictably, the mothers who reported most contact and recent visits also spoke more with the health visitor about ways to help prevent accidents however, only one third of the mothers reported discussing safety with health visitors. The opportunity of high frequency contact enabled the mothers and health visitors to discuss the complex issue of safety in addition to the more traditional and common topics. Safety, however, was not perceived by the majority of mothers as a priority of the health visiting service and subsequently not a subject for discussion with the health visitor. Several studies have identified a low priority by health visitors for accident prevention work compared to other aspects of their role (Laidman 1987, Carter et al 1992, Ehiri and Watt 1995, Marsh et al 1995). The low priority given to safety work may lead mothers to deduce that health visitors have little role in injury prevention. The common topics identified in the literature for discussion at health visitor and client contacts included helping mothers to cope through support and addressing the material needs of the child, such as nutrition, developmental assessments and illness advice (Machen 1996, Marden and Nicholas 1997, Niska et al 1997).

It is likely that the health visitors discussed safety more with the disadvantaged mothers based on their assessment of the mothers' need for information or their observation of more hazardous home and environmental circumstances. The nature of the mothers' social and home circumstances may have been a trigger for discussing safety and a basis for increased visiting. The mothers living in disadvantaged circumstances also reported having asked for more safety information. This indicates that they themselves had identified a need to discuss safety and sought help from the

health visitor. The post accident sample, which comprised of significantly more lone mothers, also requested significantly more safety information from health visitors than the random sample. The post accident mothers may have been sensitised to the need for improved safety and requested information as their child had experienced an injury requiring medical attention.

The health visitor has been identified by mothers as a major source of information on child health care and a provider of maternal support in this and other studies (Mayall and Foster 1989, Mayall 1990a, Machen 1996). It would, however, seem that safety was perceived as more of a priority for health visiting work with disadvantaged families when compared to advantaged. Given this finding, it is not surprising that the mothers in the higher social classes perceived less health visitor role in safety than the mothers in the lower social classes.

It is plausible that increased health visitor contact afforded the opportunity for safety to be more prominent in the discussions with mothers. Other family health and childcare issues which were considered more of a priority would possibly have been considered at earlier visits and perhaps have enhanced the credibility of the health visitor for discussing sensitive topics such as safety. Raising the mothers' awareness of injury risk and safety strategies does not necessarily lead to behaviour change, but the moral imperative of the health visitor to promote the health of children would be better fulfilled than if safety remained ignored. The results indicate that child safety was a major concern for some mothers, yet relatively few health professionals were responding to the mothers need for support and guidance to protect their children from injury.

Few mothers perceived a need for more health visitor contact to prevent their children from experiencing injury. This possibly reflects a view that the majority of mothers had not perceived the health visitor as providing much practical help for safety in the past and hence they would be unlikely to be of much practical help in preventing injury in the future. The deficiency of health visitors in offering practical advice and

support was described by Ehiri and Watt (1995). Yet, findings from this study indicate that when the accident prevention role of the health visitor was apparent to the mothers, they were significantly more inclined to want more contact with the health visitor. This would suggest the service was perceived as valuable by the mothers who had been recipients of the safety work from health visitors in the past, as they envisaged more contact to be beneficial for preventing harm to their children.

The lack of perceived need for more contact may demonstrate the reluctance of some mothers to ask for or to accept help as they possibly felt they should just cope with childcare and keeping children safe as an expected part of their job. The mothers may also have felt the health visitors were too busy with other more pressing issues, as safety was generally not recognised as a priority for the work of the health visitor. Specifying and making explicit injury prevention as part of the health visitor role with families will possibly help mothers to better understand, appreciate and accept the health visitor contribution. The value of the health visitor role in injury prevention seems to become apparent to mothers once it is perceived as an integral part of the service and related to the mothers' context. However, the lack of perceived health visitor role in safety by the majority of mothers limits the value placed on the contribution of health visitors for promoting pre-school child safety.

Unexpectedly, it was the older mothers and mothers with more children who perceived the health visiting service as having a more practical and personally useful contribution to safety. This is surprising since most health visitor work seemed to be directed at the younger mothers with fewer children. The findings suggest that the mothers' exposure to the health visiting service over time revealed the more practical and useful nature of health visitors. The intensity of visiting may have been with younger mothers, but it was perhaps the opportunity to reflect on the experience of health visitor contacts and their contribution that unveiled the practical and beneficial aspects of health visiting. As mothers became older and more experienced they may have felt less personal contact with the service was required, but valued the contribution of health visiting for the support it had given them as they developed

their childcare skills. Perhaps the younger mothers were still contending with the challenges of childcare and seeking rapid solutions from health visitors to some problems which could only improve gradually, over time. It seems that for the health visiting service to be valued as practical and useful the mothers need to have had the opportunity to reflect on past experiences and not just the current service. Belenky et al (1986), in a study of women's knowledge development, identified five different types of knowledge. Their work suggested that more reflective knowledge was related to autonomy and not necessarily tied to any specific age, but that often the older, more mature women tended to move into more reflective and articulate knowing in their forties and fifties.

### **6.8.3 Relating safety to the mothers home context**

Safety discussions, when they took place, were almost as common in the clinic setting as in the mother's home environment where she cared for the child. Mothers, however, showed a marked preference to discuss safety at home. Carter et al (1992) also identified the clinic as a common place for injury prevention work. Perhaps health visitors thought the mothers would feel less threatened if safety discussions took place in clinics. Health visitors may have been concerned about jeopardising their relationship with the mother if she felt that her safety skills were being scrutinised or criticised. Laidman (1987) identified the difficulty for some health visitors of raising safety as a topic for discussion as it may have made relationships difficult.

It is also possible that the health visitors failed to recognise the importance of relating safety discussions to the mothers' own specific social context, but spoke more broadly about safety issues when they spoke about safety in the clinic settings. It seems the mothers would have valued more specific hazard identification in the home environment and safety advice that was more applicable to their own home and social circumstances. Perhaps the mothers' views of health visitors as lacking in practical advice and personal usefulness when it came to safety would be less common if the safety work was contextualised around the mother's home environment. Others have

shown injury prevention information can be related to hazards within the mothers' own home and emphasise the mothers' personal capabilities for developing safety strategies (Colver et al 1982, Olds et al 1994). Through identifying hazards together, the mother and health visitor could approach injury prevention as a joint initiative and devise safety strategies more congruent with the mothers' capacity for safety. Diverse social circumstances are likely to lead to various safety problems and require different resources, mentally, physically and socially to combat the problems.

The discussion of safety in the clinic setting may well have reflected a more opportunistic approach to injury prevention rather than the strategic approach required to address a major health problem, in a priority area of health promotion. The clinic setting would not afford the opportunity to perform hazard identification specific to the mothers' personal context. Arguably many health visitors recollect the social circumstances of their clients, but not all the specific physical features within the home which might present hazards. Discussions about safety which take place in the mothers' own home may have more potential for drawing the mothers' attention to realistic safety actions in response to the identified hazards, than vague suggestions in clinics with little or no relevance to the mothers' home circumstances. Discussions about safety in clinics may have reflected an opportunity to discuss safety when health visitor resources were limited or mothers were busy and had little time for home visits. The number of health visitors available for home visiting may have been limited in some areas and the time for contacts constrained.

#### **6.8.4 Increasing the priority of accident prevention in health visiting?**

Despite many mothers not recognising accident prevention as part of the health visitor role with them, the majority believed it should be. About three quarters of the mothers also felt it was the health visitors' responsibility to raise the topic of child safety with them and be direct in their approach when discussing safety. It would seem that the majority of mothers were reliant on the health visitor guiding the purpose of contacts and expected the health visitor to assess when safety discussions were appropriate. The results suggest many mothers were mainly passive at contacts and awaited the

health visitors' assessment of their home situation to identify if there was a need to discuss accident prevention with them. Child safety was clearly important to the mothers, yet they remained reluctant to raise the subject with health visitors. Perhaps they were concerned that they would be viewed as unsafe by the health visitor if they did not already know the potential hazards and solutions to the problems or they did not wish to be considered lacking in knowledge about safety. On the other hand the mothers may have felt they were working hard to keep their home safe so there were few dangers and if the health visitors identified problems then it was up to them to discuss potential hazards if they were considered to be a threat to the child's safety.

Evidently, there remains a considerable amount of work to be done to establish a client centred or joint agenda for health visiting which enables mothers to become more influential in the purpose of the contact (Mayall and Foster 1989, Rolls 1992). Most mothers, particularly those who received least visits, appeared to have been more passive and least confident about directing the content of the health visitor work with them. As Rolls (1992) pointed out, health visitors need to develop further their work and relationship with women to empower and enable them rather than rely on the traditional active and passive teaching methods. Future work should further encourage mothers to be more confident in directing the agenda, content and process of the home visits. Role enactment by health visitors not only needs to be friendly and supportive for giving information, but to also encourage mothers to convey their needs and expectations of the health visiting service.

The minority of mothers who did not feel the health visitor should raise the safety issue were possibly more confident about the safety of the child's environment and felt they were responsible and capable of preventing accidents. Evidently, a few mothers might well consider the health visitor as interfering if they were to raise safety issues with the mothers. The health visitors' communication skills need to be well developed to identify which mothers they need to raise safety with whilst avoiding offending the mothers who would rather be left to establish the conversation when they feel the need. Accident prevention is a sensitive topic for mothers and it

might be that health visitors have been reluctant in the past to broach the subject knowing that they may offend some mothers. Preventing accidents was important to the mothers and the majority would like to see a clearer contribution from the health visitor for promoting safety. In future health visitors should be aware of the different preferences, but recognise that for the majority of the mothers, unless the health visitors attempt to develop discussions about safety, the mothers are unlikely to do so. This situation is not seen to be due to ignorance or lack of concern on the mothers part (Robinson 1982 and Rolls 1992), but due to an expectation by the mothers for health visitors to be able to assess need, make judgements and have the skills to communicate the identified hazards and realistic safety strategies in a helpful manner.

### **6.8.5 Covert versus overt approaches to safety discussions**

It is plausible that the covert approach (Foster and Mayall 1990, Machen 1996) recognised earlier in the giving of advice on safety, used by many health visitors in their work with families, possibly conflicted with the mothers' expectations for discussing safety (Laidman 1987). The health visitors possibly tried to ease safety advice into conversations with mothers so as not to cause them to feel threatened or criticised and to increase the acceptance of their suggestions. However, the low percentage of mothers recollecting or recognising the health visitor role in safety, calls in to question the purpose of such discussions which may well have seemed ambiguous to the mothers. The results suggest that mothers were concerned that they would not identify with the advice or information if delivered more covertly. Future safety work with mothers should concentrate on an overt approach so issues relevant to the mothers context are prominent in conversations and ambiguity around the purpose of the health visitor contact and role are reduced. By health visitors being specific and clear about injury hazards and safety strategies, injury prevention might feature more prominently on the agenda of child health issues within families and communities.

It has been argued that if safety becomes a more prominent concern for mothers they will become more anxious and not necessarily motivated to tackle injury problems



(Roberts et al 1995). However, the results from this study suggest mothers are already concerned about the safety and the protection of their children, but that it is relatively ignored by health professionals compared to other child health issues. More focused attention on the injury problem should be contingent also upon providing the mothers with the resources to protect their children, not simply to worry them. For example educating mothers about first aid to treat injuries when they occur and appropriate, effective safety strategies. The mothers clearly felt health visitors were the health professionals best equipped to develop this work with them. The established role of the health visitor as a home visitor who has worked with families of young children for many years has probably contributed to the mothers' expectations. However, their communication skills, knowledge of child development and child health would have also made them appear capable of adopting a role in accident prevention. Whilst health visitors may be limited in their present role to immediately or directly influence environmental and enforcement approaches to safety, they should contribute to facilitating the social and political agenda for action to address these influential antecedents of safety.

#### **6.8.6 The health visitor contribution to pre-school child safety?**

The health visitor has been identified by several health professionals as being an appropriate person to undertake accident prevention work with mothers of pre-school children (Levene 1990, 1992, Lowe 1989). The mothers in this study also perceived the health visitor as an appropriate person for promoting safety. However, the injury prevention work appears to have been limited to a minority of mothers mainly living in disadvantaged circumstances. The health visiting profession needs to be decisive about its contribution to promoting pre-school child safety and clarify for the public and the health service what this contribution is intended to achieve. Some earlier criticisms of the health visitor role for injury prevention have been affirmed by this study. For example, the findings regarding the relatively low priority of safety compared with other health issues and lack of strategic direction for accident prevention activities are congruent with the results of other researchers (Laidman 1987, Carter et al 1992, Marsh et al 1995). However, the evidence that health visitors

were prioritising disadvantaged families for injury prevention discussions and that these contacts would be further encouraged by the mothers, suggests that there is a valuable role in supporting families to develop safer environments.

There has been conflicting evidence about injury prevention activities which have utilised educational approaches to reduce injury rates (Colver et al 1982, Barone et al 1986, Kelly et al 1987, Jordan et al 1993, Towner et al 1993, Roberts et al 1996). It seems that the educational approach when compared with environmental and legislative approaches has least impact on injury rates (Stone 1996). The work of health visitors is primarily educational and therefore is considered by some as having limited influence on injury rates. Against this backdrop of criticism and denigration of educational methods (Rolls 1992), health visitors need to be confident about the contribution they are making to promoting the culture of safety within the family and community context. Promoting the mothers' knowledge and confidence about developing safety behaviours for protecting children within their social context must be perceived as valuable by health visitors. Evidently the mothers in this study valued this approach, but some injury prevention researchers hold such work in low esteem compared to environmental and legislative approaches and it seems health visitors themselves are also uncertain of their contribution to promoting the safety of pre-school children (Ehiri and Watt 1995).

The contribution by health visitors to enable individuals to cope better has been well documented (Mayall 1990c, Machen 1996). The results indicate this supportive aspect of health visiting is also valued in injury prevention work. Whilst the specific approaches to reducing hazards which involve environmental and legislative approaches to safety are highly commendable, they seem slow in emerging for the context of the home. Children often remain dependent on their parents or carers to develop a culture of safety to protect them from the many hazards which engineers and regulators seem to fail to address.

The professionalisation of injury prevention has encouraged depreciative values to be placed on the mothers' socialisation of children to protect them from injury. Many

injury prevention specialists have placed a more appreciative focus on specific pieces of safety equipment or on certain laws to control people to reduce injury. Many every day circumstances in life are not amenable to environmental and legislative approaches and even when they are, some element of a behavioural response is required. For example, legislation may well dictate a 20 or 30 mile per hour speed limit where children play, but it relies on the individual having a sense of responsibility to slow down. There may well be the environmental measure of a Pelican crossing for children to cross the road, but it still requires them to be educated by their family to use it appropriately. Environmental and legislative measures are undoubtedly of value, but not to the exclusion of educational approaches. This study has demonstrated that the socialisation of the mothers by their own parents was important for safety strategies to develop. The socialisation of children by mothers will continue to be important for the safety of children. The contribution the health visitor is able to make to promoting this process should be seen and valued. Recognition of its limitations should be made explicit as they should be for environmental and legislative approaches.

Health visitors are perceived as being in a privileged position as they visit homes and are able to relate health promotion activities to the social context of their clients (Levene 1992). Developing a culture of safety requires health visitors to relate their knowledge of hazards and safety strategies to different circumstances. Their work with families should help them to understand the interaction between people and the environment and ultimately the affect that the home environment can have on the health of the child. Establishing safety as a more central consideration in approaches to child health care is just one step towards a culture of safety.

#### **6.8.7 Targeting injury prevention work**

The majority of mothers believed all parents to be in need of safety advice and predictably, the mothers identified first time parents as most in need of safety information if resources were to be targeted or prioritised. Presumably this relates to them having the most limited experience in caring for young children and therefore in

most need of guidance. As predicted, the timing of visits was seen as most important around the time the child first becomes mobile and increasingly autonomous in the home environment. These findings are congruent with other studies (Laidman 1987, Combes 1991). It is feasible for health visitors to utilise this accumulation of evidence for planning the strategic content and priorities of safety programmes in relation to the child's development and mother's experience (Ginsburg 1992). The health visitor's knowledge of child development and related injury hazards should shape the priorities for working with mothers to reduce pre-school child injury.

#### **6.8.8 First aid training**

The study identified the mothers' need for improved first aid knowledge to treat injuries as well as a need to develop knowledge about effective safety strategies. The mothers in the lower social classes perceived more need for the health visitor to discuss first aid with them than mothers in the higher social classes. Combes (1991) also identified first aid as important for mothers of young children. Clearly, first aid should feature prominently in future programmes to promote safety and reduce injury. Admittedly first aid is not necessarily able to prevent injuries, but it can substantially reduce the impact of injuries on morbidity. The findings suggest a fatalistic view, or perhaps given the injury data and the mothers' self reporting of injury events, a realistic view that some injuries will happen and the mothers wish to be prepared to confront the injury experience resourcefully and cope by giving the necessary first aid.

It may be that first aid was not well addressed by health visitors who visited the mothers in this study, as they did not identify the importance of first aid for mothers of young children. On the other hand health visitors may have been reluctant to be involved in first aid work as they lacked the necessary skills to educate mothers about first aid for different injuries. If health visitors lack the necessary skills for first aid they must look to other members of the community and involve them in the strategic planning of first aid work with mothers of young children. It should be considered unethical to ignore the needs of mothers for first aid advice, given that this has been shown to be effective in reducing morbidity in young children. The emphasis in the

White Paper, *Primary Care: Delivering the Future* (Department of Health 1996) is on families being able to treat minor injuries themselves. Developing knowledge of first aid is an important means for achieving this ambition.

Receiving advice about safety equipment was considered a relatively low priority for many mothers, but mothers living in more disadvantaged circumstances saw safety equipment loan schemes as potentially beneficial. This finding contrasts with that of Combes (1991) who found information about safety equipment to be a high priority. The mothers in this study generally seemed to expect that their own behavioural actions would compensate for hazards. They felt their behaviour would influence the safety of their children more than the use of safety equipment. However, the increased publicity and availability of safety equipment in the past few years may account for some of the difference in perspectives. Health professionals should encourage the development of safety equipment loan schemes in areas of deprivation as disadvantaged mothers perceived the greatest potential benefit from safety equipment and loan schemes.

The more disadvantaged families in this study would appear to have been a priority for health visitor work and should remain so in the future. There is scope for the health visiting service to benefit clients in more advantageous circumstances, but when the rationing of services is necessary, establishing priorities will be essential. The priorities should relate not only to the agenda of the service providers, but to the clients they are expected to serve. It would seem most need for the health visiting service is with disadvantaged mothers and they should be considered the priority for future health visiting.

#### **6.8.9 The health visitor role following injury**

Despite over half the total sample having a pre-school child who had received medical attention following an injury, only a relatively small proportion reported receiving a post accident visit from a health visitor. The minority of mothers who received post

accident visits generally found them beneficial with the majority reporting them to have been helpful. The mothers perceived the health visitor role at post accident support visits as essentially two-fold. They expected the health visitor to address the practical issues of preventing injuries through safety advice regarding hazards and also provide emotional support to the family, particularly the mother through reassurance.

A third of the mothers who received a post accident visit did not feel the visits were helpful and this gives cause for some concern. Combes (1991) also reported criticism of post accident visits and this was associated with a lack of a positive relationship with the person undertaking the visit. Post accident visits when they were perceived negatively were arguably not promoting the health of the family. The visits should probably only be undertaken if health visitors believe they can contribute to the child's physical safety and enhance the mother's emotional well being. The post accident visits should be intended as supportive and not critical of the family.

Perhaps the health visitors were being selective in whom they visited. It is probable that the identification of whom to visit was based on the health visitor's perception of need for a post accident visit (Reynolds 1996). If health visitors had not been notified of the accident this would also give rise to some mothers not receiving visits (Carter et al 1992). The visits were generally perceived positively and this aspect of the role should be encouraged with health visitors focusing their attention to fulfilling the mothers expectations for reassurance, emotional support and the identification of further hazards and how to effectively reduce them. However, there were clearly negative aspects to some post accident visits and health visitors need to examine their communication skills and the purpose of home visits after injuries to improve their acceptance with families. Health visitors should be contributing to the health of the clients whom they are intended to serve and if post accident visits become detrimental to the mothers' mental health any benefits may be negated.

It would appear that prioritisation of post accident visits took place with mothers in the sample, but the basis for the prioritisation was unclear. Further work on the value of post accident visits should make explicit the process by which health visitors select families to visit and the process of the home visit. It would appear from these results that health visitors should be encouraged to undertake more home visiting after accidents requiring medical attention as they were perceived as beneficial by the majority of mothers in this study who received them. However, health visitors undertaking such work should ensure they are skilful in the art of communication and be prepared to identify dangers in the home and ways to solve such problems so as to support the family, not reproach it (Davies 1988). Health visitor role enactment whilst important at all contacts with clients, will possibly be more critical at sensitive visits such as post accident visits.

#### **6.8.10 Health visitors and safety support networks**

The health visitor role in safety was generally perceived positively, with the majority of mothers valuing the organisation of the service including the accessibility of the health visitor. The mothers valued the professional skills of the health visitors and perceived them as knowledgeable and useful regarding safety issues and preventing accidents. The health visitors were perceived as credible and well informed health professionals. The relationship was seen as important by the majority of mothers, but significantly more so by the post accident sample. Perhaps due to their contact with health professionals following their child's injury, the mothers valued the health visitor skills of communication more. The mothers may have had either positive or negative experiences with the health visitor for them to feel that the relationship was important. The health visitor may have been supportive and the mother valued this aspect of the relationship, on the other hand the health visitor may have been unhelpful leading the mother to identify that if the relationship had been better, she would have felt better supported. However, the mothers personally perceived least value for the health visitor role in specifically helping them with child safety. Apparently health visiting has much to do if it is to become valued by mothers for contributing to the reduction in childhood injury.

It seems that the majority of mothers had consistently positive views of health visitors. However, for a minority of mothers, once the health visitors were perceived more negatively this was reflected in their views for most aspects of the service. The health visitor safety scale identified some of the facets of health visiting which indicated the quality and value of the support network for safety from the mothers' perspectives. Health visiting now needs to clarify if it has a practical role in reducing childhood injury or statements about its capacity to move into this role, for example, Laidman (1987) and Levene (1992) may be merely rhetoric. Evidently there was a sub-set of the mothers in the most disadvantaged circumstances with whom health visitors promoted safety, but the more mature and experienced mothers perceived the role as most practical and useful. Whilst the majority of mothers valued the service for its organisational and professional values in promoting child health, the health visitor role in safety was not well recognised.

#### **6.8.11 Summary**

This section examined aspects of health visitor contacts with mothers on the subject of preventing childhood injury. Contact with health visitors was perceived as beneficial by most of the mothers in this study. The findings emphasise that health visitors provide social support and safety support networks, particularly to the most disadvantaged mothers. However, not all contacts were perceived positively. For example, some post accident visits were considered unhelpful. It was found that at present, health visitors may be using childcare needs as their priority for targeting clients for home visiting. Disadvantaged mothers for example, those living in local authority housing, of young maternal age and lower social class, were targeted for contacts, but lone mothers were not specifically selected for advice on safety.

Health visitor role enactment may have influenced mothers' perception of the service. The study findings suggest that health visitors were perceived by mothers as appropriate people for undertaking safety work with them, due to their professional



qualities including their educational role; knowledge; communication skills and their organisational qualities which included their accessibility and availability.

The mothers considered the health visitors to be in a unique position, able to help them to identify hazards in the home and to provide first aid advice. However, their safety role was perceived as under developed by the majority of mothers. For mothers to identify health visitors as safety agents, it seems that health visitors must be more overt in their approaches to injury prevention. These findings show that there is opportunity and scope for health visitors to enhance their role in injury prevention, but the initiative for this must come from the health visitor's moral imperative. At a time when health visiting is re-evaluating its potential contribution and the efficacy of educational approaches to health promotion are under scrutiny, there is evidence here that enhancing the child safety role in health visiting could be achieved by building on the existing strengths of the service and would be valued by those members of the community most in need.

The responses to the quantitative study raised pertinent questions about the process and dynamics of the health visitors' contacts with mothers for reducing childhood injury. To clarify further the health visiting contribution to child safety there was a need for qualitative work to understand in greater depth the value of the process of health visiting and the relationship this process has on the mothers' perceptions of the service. This is addressed in the following chapters which report and discuss the findings of the qualitative study.

## 6.8.12 Conclusions

- The evidence suggests political action is required to address the imbalance in socio-economic conditions as an ultimate pre-requisite to reducing childhood injury.
- There is a need to emphasise the promotion of safety in relation to the context of the family and for health visitors to be aware of the potential for injuries associated with social and economic disadvantage.
- The perceived barriers to injury prevention varied in relation to different aspects of the mothers' social context.
- The benefits to injury prevention were held in high regard amongst mothers living in different social contexts.
- For mothers living in relatively disadvantaged contexts, the barriers to injury prevention related mainly to inadequacies within the local environment.
- Mothers in relatively more advantaged contexts perceived poor parental knowledge as a main barrier to safety.
- Supervision was difficult for some mothers, particularly those with limited garden facilities and in the lower social classes.
- Older mothers perceived higher levels of self efficacy and felt more able to influence their pre-school child's safety than younger mothers.
- The evidence from this study suggests that most mothers perceived the outcome of many injuries as implicitly serious, but not likely to happen.
- As injuries were perceived as serious, perhaps emphasising with parents a picture of injury susceptibility is required more than emphasising the severity of injury to encourage motivation.
- Most mothers were more concerned about rare, dramatic, sensational accidents often occurring outside the home environment than common accidents known to occur within the home environment.
- Home environments which were not conducive to promoting the child's autonomy through enabling safe play were perceived as a barrier to child safety and probably increased maternal stress through anxiety about injury risk.

- Mothers' social situations related to their perceptions of the value of social support from professional or organisational networks and lay support networks.
- The disadvantaged mothers in this study valued the support and safety information from the professionals as it responded most to their particular needs.
- The more advantaged mothers were not the main recipients of the health visiting service and perceived lay support as most appropriate.
- The work of health visitors firmly belongs with the most disadvantaged populations as they not only have the highest morbidity and mortality rates, but perceived the service as most important and beneficial.
- Future injury prevention work should focus primarily around home visits in response to the mothers' stated preferences and to allow the health visitor to relate safety to the context of the family.
- An imperative for health visiting should be for the health visitors to bring up the topic of safety in order that mothers do not feel they need to ask for information.
- For mothers to identify health visitors as safety agents, it seems that health visitors must be more overt in their approaches to injury prevention.
- There is opportunity and scope for health visitors to enhance their role in injury prevention
- In the study area, presenting information and devising strategies to reduce poisonings should be a priority with mothers of pre-school children.
- Young and lone mothers may benefit most from the educational approach for developing knowledge about the likelihood of injury in relation to the child's developmental stages.

## Chapter 7

What motivates a mother to adopt certain specific known safety practices and to take action to prevent injuries?

*My only solution for the problem of habitual accidents.....is to stay in bed all day. Even then, there is always the chance that you will fall out.*

*Robert Benchley 1949*

### 7.0 Introduction

In the previous chapter the results of the quantitative survey were discussed. Differences in mothers' perceptions of injury risk, the benefits and barriers to preventing injury and their ways of developing knowledge for safety strategies were identified. Many of these differences were related to the different social circumstances of the mothers, for example their maternal age, social class, marital status and type of housing. Whilst these differences in perceptions were identified using quantitative methods, our understanding of how and why they should be related to different social contexts was limited by such methods. Through a qualitative method it was intended to gain insights into these issues of social context and to develop a deeper understanding of maternal perceptions about protecting pre-school children. The findings from the qualitative study which sought to reveal why these differences existed and how they related to the mothers' social circumstances are described and interpreted in this chapter.

Whilst the original research aims and questions remained relevant for the qualitative study, they were refined to answer specific questions which focused on issues resulting from the quantitative study and are presented here.

## 6.1 The original overall research questions were:

- What motivates mothers to adopt safety practices and to take action to prevent accidents to their pre-school children?
- How does social context relate to mothers' perceptions of injury risk and necessary safety practices?
- What is the value of health visiting for preventing accidents to pre-school children?

### 7.1.1 The refined sub questions for the qualitative research were:

- How do mothers learn to protect their pre-school children?
  - \* How does the experience of caring for children assist mothers in their knowledge development and motivation to develop safety strategies?
- How is the mothers' motivation to protect pre-school children related to their social contexts?
  - \* How does caring for children in different circumstances relate to different perceptions of the ways to protect children?
- How are the mothers' perceptions of susceptibility to injury and severity of injury related to their social contexts?
  - \* Why do young and lone mothers have different perceptions of safety when compared with older and supported mothers caring for children?

Several themes emerged from the analysis of the interview data which revealed the complexity of protecting children in different social circumstances and enabled a greater understanding of the challenges mothers faced when protecting their children from injury. A description and interpretation is presented in this chapter of the development of mothers' knowledge and motivation for protecting pre-school children. The value of health visiting for preventing accidents is not considered in detail here as this data is presented and analysed in Chapter Eight. A summary profile of the forty key informants for the qualitative study is situated in Appendix 5.

### 7.1.2 Defining lone mothers

As a result of the quantitative data analysis, examining the issues relevant to lone mothers became an important focus within this study. Discussing the views of the mothers in relation to their social contexts and assigning them to groups of lone mothers and supported mothers was a sensitive task. I had no intention to contribute to the disparaging analysis of lone mothers (Phoenix 1998), but to identify the depth of hardship for some mothers when caring for young children. Determining whether to consider the mothers as single parents or lone mothers was a complex decision and for reasons similar to those described by Standing (1998) the term lone mother was adopted for the purpose of this study. Not all the lone mothers were single, some were divorced, separated or widowed, but they considered themselves to be essentially alone when caring for their children compared with the mothers who had partners. Despite some mothers being single they were not considered lone mothers for the purpose of this study as they had a supportive partner.

## 7.2 The development of knowledge for safe practices: how mothers learn to protect their pre-school children

*The chapter of knowledge is very short, but the chapter of accidents is very big.*

*Lord Chesterfield 1753*

As a consequence of living in a society which is socially and culturally orientated to the design needs and desires of adults, the mothers related much of their knowledge about hazards and their concern for the safety of their children to the poor design features of the environment in which they lived. The mothers perceived some inadequacies in the engineering design or structure of the home which made it unsafe for children. Many hazards in the environment immediately outside the house were perceived as a threat to children's safety. In response to the many perceived dangers in their children's environments the mothers sought information and developed

knowledge which helped them to care safely for their children. Mothers rationally and responsibly adapted their individual behaviours to compensate for hazards in the environment to protect their children from danger and to maintain their safety. The mothers spoke of a need for them to acquire knowledge and modify their personal behaviour both during their pregnancy and after the birth of their children to keep them safe. The mothers in the study described different ways of learning how to keep their children safe. How knowledge was developed differed for mothers caring in different social contexts, but there were some common themes which emerged from the mothers' descriptions of the ways in which they learned to care for their children.

In accordance with the results of the quantitative study, the mothers in the qualitative study explained their greatest need for safety information to have been during their first pregnancy and up to the time when their first child was about one year old. Many mothers described actively seeking safety information during this period, but as their children grew older the mothers described becoming more passive recipients of safety advice. Many mothers found themselves too busy with the practical aspects of childcare, domestic routines and work that they did not have time or the opportunity to seek information as their children became more mobile.

These two mothers, the first a lone mother of two children and the second a married mother explained how they sought information during their pregnancies, but to a lesser extent as their children developed.

*M6: I think when I was first pregnant I got a lot of books out of the library, you know I was really worried if I was going to do this properly it is a big responsibility.*

*M1: I went around the shops, the likes of Mothercare. Prior to being pregnant, well it was when I was pregnant, I started to look at all the things, obviously, towards like babies and toddlers and whatever, and just from there. Again, since they've grown that bit more, I feel out of touch with what you can get now, but at the time it was just really through going to the shops, reading the magazines, that was really it.*

The mothers above described actively seeking information in pregnancy, but they felt more 'out of touch' since they sought less information as their children became older.

In both the quantitative and qualitative studies common sense knowledge, social networks, childcare books and the media were considered valuable sources of knowledge for mothers when they were learning about accident hazards and safety strategies. All the mothers expressed a desire to continue to develop their knowledge about accident hazards and safety strategies, but were less inclined to seek information as their children developed or as the mothers became busy and more experienced in childcare skills. Most mothers believed that they developed knowledge and skills to care for children safely through the social process of observing and interacting with their children as they developed. As a result of this seeking information from for example, books became less important as children became older and more mobile. As this mother explained there were limits to the utility of information gained from books when mothers were having to cope with individual, different children.

*M17: 'I think the best thing anybody told me when I was a new mum was, the thing about all the baby books and everything you read and all information you get is that the babies haven't read them, that's the main problem!'*

This mother explained how she encountered problems which were often not addressed in books in a practical manner which made them less appropriate or useful to her.

The mothers placed more value on their own experiences, observations and information obtained through their peer group interaction for developing knowledge about pre-school child safety. Such sources of information were perceived as relevant to the mothers' own social contexts. The qualitative study illustrated more clearly the social construction of knowledge for protecting children as the mothers' accounts revealed the value of learning from their social interaction with their children and their social networks.



### 7.2.1 Kinship networks and the development of knowledge

Most mothers described the importance of their family and their peer group for helping them formulate an understanding of injury risk and safety strategies. The kinship networks enabled mothers to learn from their own parents and particularly from their maternal role models. After leaving their parents' home, many mothers continued to receive information and advice from their parents of ways to care for and protect their own children. These findings support those of Ross (1998) who described how care and commitment within an intimate family continues beyond reaching common goals such as rearing children to adulthood and that through dialogue and compromise intimate families procure for the primary good of the child within the family. The findings from this study suggest that many parents cared for their children throughout their lives and directly or indirectly helped to care for and protect their grandchildren.

This married mother explained how she developed knowledge from both her own family and her parents in-law.

*EHS: Where did you get all the information from to know what to do?*

*M18: I would say it is general safety things that have been brought about by my parents, obviously it is coming from two centres, because my husband, he had picked up bits from his family you just learn as you go.*

This young, lone mother below believed that she had built up most of her knowledge from lay sources of information within her kinship network.

*M20: Just what I grew up with because my sister has got two (children), my pals have all got grown up wee ones, just basically what I have picked up when I have been baby sitting and growing up myself really.*

Developing knowledge for protecting children through kinship and social networks was considered normal and the information was generally perceived to be acceptable and accessible to the mothers. However, some mothers believed that the information

they received from their own family might not have been accurate. Several of the mothers, specifically the young, lone mothers expressed a preference for childcare and safety advice from health professionals, particularly health visitors. These mothers perceived the health visitors to have more authoritative knowledge and as a consequence of their professional status they considered them to be more able to identify hazards within the home and able to suggest appropriate safety strategies to reduce the risk of injury to pre-school children.

These two young, single, lone mothers illustrated how health visitors were perceived as more authoritative on childcare issues than some family members.

*M2: I think it would be better if you could ask them (health visitors) things, say am I doing this right? Instead of going to your mothers or something you know.*

*M20: A lot of people maybe don't realise the dangers of things in the kitchen like open gates going out to the road and things like that. So I think the health visitor should have an aspect of safety.*

The mothers above illustrated how health visitors were often considered more knowledgeable than lay contacts about issues pertaining to childcare. Most mothers believed that often there was a right or proper way to care for children and that health professionals would be able to clarify the moral way to care.

The lone mothers often described limited kinship networks and family conflicts and these mothers tended to value emotional support, childcare and safety advice from health visitors more than supported mothers. These findings were congruent with the results of the quantitative study in which lone mothers identified professional and organisational networks as valuable, whilst the supported mothers valued their lay support networks. The value of health visiting for lone mothers is discussed in more detail in Chapter Eight, but the findings suggest that although kinship networks were important to most mothers, they were valued more by the more socially connected mothers and they tended to be older, supported mothers. The least socially connected

and more isolated mothers with few friends or antagonistic relationships with their own parents tended to consider kinship networks as a limited source of knowledge on promoting child safety and valued the contribution of the health visiting service.

### **7.2.2 Mothers' perceptions of intuitive and conscious learning**

Many mothers who perceived that they developed their knowledge from kinship networks also tended to describe their ways of knowing about safety practices as 'subconscious', 'intuitive' 'automatic' and 'instinctive'. Many of these mothers believed most safety strategies developed from common sense knowledge and they often considered child safety to be intrinsic within their childcare routines. This was a consequence of the perceived practical nature, social acceptability and desirability of many child safety practices.

As this lone mother of two children explained:

*M6: So, I think that it (child safety) is common sense, but whether that has been bred in me I don't know I am just going by how my mother taught me,... I remember my mum always telling me, ' if you see her running with a knife or up at the window, don't shout, because you will give them a fright and the first thing you know they will be out' (of the window).*

This supported mother elaborated on where some of this common sense came from:

*M31: A lot of it is common sense. I think a lot of things if you see, in educational videos where they throw a cup of hot tea over a baby and they say this is what it is like and they show an adult and say this is what proportionally this is the size of a cup of tea and you think, right I will keep that out of the way.*

As these mothers illustrated, they were able to account for some of their common sense knowledge from diverse sources of information for example, videos or dialogue with their family. The mothers described how they had rationalised their protective strategies in respect of this acceptable, everyday knowledge.

Perceiving safety practices as common sense reflected how the mothers accepted the safety practice as relevant to their personal situation or social context. Despite many diverse ways of developing common sense knowledge the mothers essentially accepted it and perceived it as a valuable way of knowing how to protect their children. Linked to this view of common sense knowledge was the mothers' perceptions of many child safety strategies being 'obvious'. This expression represented how mothers expected certain safety strategies once they were known to them to be familiar to most people within their social groups. Hitzler and Keller (1989) argued that this is a pragmatic attitude for managing everyday life when people perceive that they have things in common with others. Through this understanding of practical everyday life, the mothers made decisions based on what they thought was the right way to do things. Common sense knowledge has been associated with 'a relatively thoughtless and uncritical manner with socially inherited interpretations, explanations and practices' (Hitzler and Keller 1989:98). The mothers used this way of knowing for managing the practicalities of child safety and to legitimise their actions when protecting their pre-school children.

Colliere (1996:105) on the other hand argued that there has been 'dispossession of motherhood knowledge' 'which is learnt from experience and from other women through observation and cultural awareness'. Similarly Smart (1998:45) argued that 'folk knowledges and customs in child rearing' have come under sustained pressure as a result of health and social care policy. It became evident from the mothers' accounts that through the mothers' socialisation these obvious, common sense safety practices become embedded in childcare routines and accepted by them as the right way for doing things to protect children. However, some mothers looked to health professionals for affirmation or clarification of their protective strategies. Whilst there is dispossession or criticism of common sense knowledge in the literature it remains central to the development of mothers' protective safety strategies.

These two accounts illustrate many obvious and common sense safety strategies the mothers referred to in this study:

*M23: I don't iron when they are about (the children), obviously, to keep them safe from the iron. When I am cooking I tend to send them out of the room although they do come into the kitchen sometimes because of that I always make sure the pan handles are turned in the way, rather than out the way.*

*M19: Well, I mean you wouldn't get into a really hot bath yourself, you know, it is something that is just common sense and I don't know how people can't fathom that out for themselves. I mean, you know yourself you don't get into a scalding hot bath and I mean they did tell you in hospital the midwives when they taught you how to bath your baby, they obviously said 'you put your cold water in first and then you top it up'.*

This mother below had not given much consideration to the potential risk of bath scalds to children until the dangers were pointed out to her after the birth of her son. The mother's routine way of doing everyday tasks changed as she was informed by a health visitor of a 'safer way' to run a bath for a child using the cold water first, followed by the hot. This was the opposite to what this mother had previously done.

*M27: So obviously there are things that you do kind of routinely like putting the hot water in the bath first, things like that I had never thought of. Being adult you just run a bath and then you think 'oh that is too hot' and then you run them with the mixer on or things like that. You don't know to do the cold first.*

The accounts above illustrated that relatively straight forward practices, such as running a bath had implications for the safety of pre-school children as mothers considered whether they ran hot or cold water first. Few mothers consciously considered these issues until they became parents, but remarked on the sensibility of such knowledge and how they became common practices once they knew about them. What may seem obvious and common sense now, may not always have been so.

These accounts illustrated how mothers perceived much of child safety to be obvious and a matter of common sense as they wished to be seen as knowledgeable mothers

and able to conform with expected social norms for promoting the safety of their child. Arguably the mothers were critical of common sense knowledge and rationalised about its applicability to their situation, but this level of analysis could be perceived as relatively limited when compared with more refined methods of learning and knowledge development such as those described by Belenky et al (1986). These qualitative findings confirmed the importance of common sense knowledge identified in the quantitative study results. Additionally, the mothers' accounts in the qualitative study revealed the social and moral construction of motherhood for protecting pre-school children. The importance of peers, social networks and professional or organisational networks for constructing safety knowledge and practices were further clarified through the mothers' accounts of how they developed knowledge and were motivated to protect their pre-school children.

### **7.2.3 The social construction of maternal child safety practices**

*Take motherhood: nobody ever thought of putting it on a moral pedestal until some brash feminist pointed out, about a century ago, that the pay is lousy and the career ladder non-existent.*

*Barbara Ehrenreich 1941*

Living in a society which has politically, socially, morally and economically drawn attention to parenting and family responsibilities, the mothers' accounts disclosed how many of these issues had influenced the construction of their safety practices. The mothers explained how social interaction with their peer group enabled them to develop perceptions of themselves as protectors of their children within their culture. The mothers compared themselves with 'other mothers' for the purpose of establishing their own moral identities of themselves as 'good mothers' and protective of their young. Protecting children to keep them safe was essentially a part of the socially constructed culture of motherhood which influenced maternal judgements of themselves and others and allowed health professionals and other people in authority to judge the mothers' caring and protective skills. The mothers'

attitudes to safety were influenced by people in the local community and safety practices were often contingent on the mothers' social networks, economic circumstances of the family or local authority and the political agenda.

A deeper understanding of the social construction of protecting children from injury and the specific difficulties when caring for children in the 1990's was made possible through the qualitative approach. The mothers in this study portrayed an expectation to have their parenting and particularly their safety skills scrutinised by different members of society. They particularly expected 'other mothers' and health professionals to examine their competence as carers and make moral judgements about their protective, safety strategies. Through rationalising and comparing their own child care skills with those of their peers and the expectations of health professionals, the mothers were able to learn about hazards and safety strategies and establish an appreciation of the moral way to protect and care for pre-school children.

Several mothers explained that child safety was not their only concern as they coped with their complex domestic routines. They clarified how coping with the development of basic childcare skills often absorbed much of their attention particularly with their first child.

This mother below explained why some people rarely think about safety as an issue until the child becomes more mobile or an accident nearly happens.

*M15: Because obviously when it is your first child you just, you are just that full of happiness you don't think of their safety until they start getting mobile and then you are rushing about getting gates and socket covers and all the rest of it.... I think it would be quite useful, just to get like an inner sight especially with your first, because I don't think you think ahead....Like with Kyle I left him sitting in the living room and went into the kitchen and suddenly he was at the back of me, and that was him crawled. You know and I think 'what if he had went the other way?' So I think people should be kind of like warned that, to make their house safe before they start to get mobile.*

This mother illustrated the lack of anticipation about the development children in connection with hazards and safety.

Many mothers discussed the morality of motherhood in relation to protecting children from injury and as many of them explained their childcare strategies often did not initially embrace the detailed aspects of child safety.

*M23: I try to be a good parent and I did before and since the accident but I think that certainly focused my mind. It could have been a fatal injury that he got. It was quite a bad injury and we were very lucky that there were not long term problems because of it..... I am confident that I try and be a good parent as does their father.*

An accident was often a prompt for mothers to consider protective strategies for the pre-school child, but mothers were anxious to point out that injuries were not a reflection of their ability to care for the child.

The mothers' accounts reflected their views of a gradual development of their own competence with childcare skills and how their views of parenting and specifically providing safety for their children adapted over time. Due to their own experience of caring for their children on a daily basis they became gradually more competent or accepting of the challenges of childcare. Some mothers described their anxiety as they struggled with caring for their children and the realisation that motherhood was not a 'natural' process, but more a social process for many women. The stress of attempting to conform with socially constructed, idealised images of mothering and nurturing children was traumatic for some mothers.

This divorced, lone mother's account illustrates how many mothers struggled to adapt to caring for children

*M6: I wish I hadn't shouted as much. I don't know, I wish I had stopped being too much of a mum and in that I had to get everything tidy. This had to be watched, that had to be watched, the minute they were sick, they were stripped off, I just couldn't leave them lying in it if they were okay, that sort of thing, I wish I was more relaxed. Whether that was for myself or other people coming in I don't know. I had a bit of*



*postnatal depression. I was just fanatical about it. If I had just relaxed..... I don't like to admit I had a problem because you know super mum, this thing that they - you are supposed to be wonderful and sort everything, have your husband's tea ready and the baby's not supposed to cry etceteras.*

This mother felt intense pressure to conform with the ideology of motherhood finding it very stressful and she was concerned that health professionals would be comparing her competence as a mother against that of this idealised image of motherhood.

The lone mothers had very different experiences of developing skills in coping and adapting to motherhood compared with supported mothers. Most lone mothers described caring for their children on their own as stressful and difficult. Most of the mothers did not express their hardships in financial terms although this was a problem for most of them. The mothers saw their main difficulties for protecting their children on their own to be related to the lack of 'peace' and not being able to have a rest from looking after the children. The mothers felt that they had 'no one to shout at' for them to share the stresses of childcare with. For some lone mothers the social service agencies offered help to some extent to meet these needs. A few lone mothers spoke of the benefits of the support they received from the social services particularly when they were allocated a social worker or nursery placement. However, the need for tranquillity and an attentive ear far outweighed the availability of the resources received by the lone mothers. The unrelenting demands of childcare were particularly stressful for lone mothers.

This lone mother had just recently started spending time with her previous partner and considered the support now available from him to help her care for the children.

*EHS: Is it more stressful? Looking back now to how you are now and how you were then?.*

*M6: Having two kids on your own, your right it is, very, because there is nobody you can just shout at or fall out with or, if you have somebody in the house, even if you don't get on with them, you can still say, that is it, I have had enough and just put your jacket on and slam the front door. You go round the block. You can't do that when you are on your own. Because*

*it is like shutting them in the bedroom but you can still hear them. They are still fighting, you know. You can't actually say that's it I'm off, they are still there..... Not having any peace and quiet, that was the one thing. I still seek solitude I just can't go anywhere without them being there. I couldn't go out, you couldn't like totally switch off, go to sleep, I just hated constantly being on call and I actually feel it was just having to be there all the time.*

*EHS: How are things now?*

*M6: Still the same, having their dad back again. He is not very supportive in the fact that showering, bathing, feeding or anything like that, but if I want to shove my jacket on and go, I can go whereas I couldn't do that before. And I have somebody to shout at I have somebody to argue with, I can do all that now which I could never do before. It is nice to know there is somebody there even though you don't like them very much, you know.*

It appears that even a poor quality relationship may be preferential to coping with young children single handed. The above mother emphasises the importance of being able to spend some essential time alone to rest herself emotionally when there is a partner.

Analysis of the interviews revealed that the mothers often made moral judgements about themselves as parents when caring for children and the protective strategies they developed. As a result of the mothers making a gradual adjustment to child care and coping with the fundamental physiological needs of children, often safety needs were considered after their physiological needs were addressed. The social construction of motherhood as a natural process for mothers increased anxiety for many mothers as they questioned their own ability to care safely for the child. It was often the experience of an accident to the child that eventually forced mothers to consider safety in more depth.

#### **7.2.4 Being a good parent**

Several mothers spoke of their desire to be considered 'a good parent' and their concerns at being 'a bad parent'. These mothers felt that particularly after the birth of their first child that they were striving to become similar to an idealised image they

held of a 'super', 'instant mum', attempting to conform to societal images usually portrayed by the media. As soon as they became parents, the mothers felt intense pressure to achieve the appropriate childcare skills to be deemed a competent and good parent by health professionals, their peer group and themselves.

As the mothers became more familiar with the reality of childcare and the many demands it made of them, this idealised image of a good parent receded gradually. Their expectations for themselves to be 'a good parent' evolved from believing that they needed be an 'instant mum' who was able to recognise through a supposedly 'natural' process every aspect of their child's needs and how to behave in a caring manner at all times, to developing an understanding that this image was unattainable, unrealistic and idealised. Eventually the mothers adopted a less stringent model for being a good mother and accepted that good parents existed without having to be all knowing and infinitely capable, although these remained desirable qualities.

The mothers believed that being a good parent involved many dimensions including being physically, emotionally and intellectually competent and having a character which was kind, caring and protective. The mothers' accounts illustrated how they gradually admitted as a result of their own childcare experience that just because a mother was not perfect, this did not make her a bad parent. The mothers continued to make moral judgement about themselves and their peers protective strategies when caring for children, yet over time they were more accepting of their different capabilities for providing safety in different situations.

Several mothers spoke of their difficulties in becoming a parent for the first time and how they struggled with meeting the needs of the young infant and the development of their own childcare skills. The stress and anxiety of adapting to motherhood was all encompassing for some mothers, particularly the lone unsupported mothers. As this divorced mother below explained, she spent most of her time as a lone mother and found anticipating the baby's cry and needs difficult. The mother held an idealised image of how she believed an 'instant mum' should behave and found that

the reality of caring for her son did not meet with her own expectations or those she perceived others had of her.

*M6: I was awfully clumsy and things like that, eventually it was about a year and a half later (after the birth) and I went to the doctor because he (the baby) just cried all the time and it turns out that he had clubbed feet. And I think that is part of the course, that is what they do (cry), they want a lot of attention and everything and I just didn't know it. It wasn't until after I got help, nobody explained that to me at the time (that they need a lot of attention), if they had explained it at the time I wouldn't have felt so, like I thought right I am not doing this properly, I can't be a good mum, I must be doing something wrong, I was like punishing myself everyday. Which I think when I see other mums, I think 'don't be so silly', you know because, it is the thinking they fall into, but everybody, you are supposed to be an instant mum, you have this baby today and you are an instant mum tomorrow, everybody makes you feel like that.*

The mother began to think of herself as 'a bad parent', punishing herself with the strength of these feelings and she was concerned that other mothers and the health professionals would form a poor opinion of her. By comparing herself with other mothers she was able to reconsider and appreciate her ability to care.

The mothers were critical of their own ability to care for their children, but those who expressed anxiety at being 'a bad parent' eventually modified this view as they realised the unrelenting demands of child care. This negative view was usually formulated at a time when the mothers were perhaps over optimistic about their capabilities and under estimated the demands of childcare. The mothers became more of the opinion that they were good parents in the face of adversity as they accepted the reality of childcare demands.

The mothers' confidence in their abilities to be a 'good parent' related to how reassured they felt about their capacity to provide appropriate childcare and safety. The supported mothers described having more confidence in their own childcare skills than the lone mothers and although the married and supported mothers lacked

confidence in the early months of caring for their first child, they still gained confidence more rapidly than the lone, single mothers. This suggests that the supported mothers had greater levels of self efficacy for promoting their children's safety than the lone mothers. The supported mothers were more confident in themselves as protectors of their children as they shared the dilemmas of childcare and safety with their partner. Many mothers were reassured by the alliance with their partner in the process of providing safety and their ability to share the responsibilities and decisions they made about childcare and protective strategies. The shared experiences and joint decision making process enabled the mothers with partners to feel more confident that how they cared for their children seemed most appropriate because their partner was also involved with formulating the choices and making decisions. Having a partner also lessened the need for reassurance by health professionals about childcare skills after the first few months of childbirth. A partner had the ability to enhance feelings of self confidence and therefore self efficacy.

The single, lone mothers required more reassurance and emotional support from health professionals to develop their own confidence in their capacity to care for children. Some of the poor confidence levels described by the unsupported mothers originated from the uncomfortable feelings they experienced when they did not know if what they were doing for their child was appropriate for his or her needs. The unsupported mothers had no partner to share these concerns with or gain reassurance from to continue with their approach to caring for the child. Health professionals had a valuable role in improving the self efficacy of mothers, particularly the young, lone mothers. The benefits of parenting skills courses were appreciated by several of the mothers.

*M6: A lot of it is confidence because I was a lot more confident with my second than I was with my first. I think classes like that for other mums, either second mums or new mums would make a big difference to let them know there has been thousands of mums felt like this before them although they don't show it. I think it would make a difference*

As this mother illustrated, developing her own self confidence in recognising and responding to her children's needs allowed her to view herself more positively as a good mother, improving her feelings of self efficacy.

Everingham (1994) in her qualitative study within a playgroup setting examined maternal care giving and also illustrated how mothers felt under intense pressure to recognise and understand their child's needs and respond appropriately. Smart (1998) argued that 'calibrations' of motherhood exist and as a result of the existence of these calibrated rules or dimensions of motherhood there can be nothing instinctive or natural in the manifestation of motherhood.

The premise that child care is a natural process was still held by many mothers in this study who viewed safety as common sense yet, they appreciated that many of their protective behaviours were socially and morally constructed within their social networks as they were expected to conform with specific safety practices. The 'good enough' mother was first coined as a phrase in the literature by Winnicott (1965) and has subsequently been referred to in many other studies of motherhood (Wearing 1984, Everingham 1994, Silva 1996). These studies have reflected an evolution of understanding about the nature of motherhood as a natural or instinctive process for responding to a child's needs, to revealing perceptions of motherhood as an extremely demanding and emotionally draining activity, to a more socially constructed nurturing activity. Analysis of the mothers' accounts supports these different perspectives and illustrates that they exist in tandem for most mothers and not to the exclusion of each other.

### **7.2.5 Judging other mothers**

The mothers in this qualitative study placed a great deal of emphasis on comparing their safety strategies with those of their peers as a way of learning about safety and to establish their own moral identity. This sideways comparison allowed the mothers to judge their own protective skills and also to judge 'other mothers' approaches to safety. The mothers expected that other people for example, health professionals

and other mothers would similarly morally appraise them and they were conscious of the need to emulate 'a good parent' image. The mothers were often critical of their friends' childcare skills and safety strategies and were eager to establish the differences between them.

This mother below explained how she judged the safety skills of the 'other mothers' in her peer group.

*M17: We never had the fire until Christmas there, so heating was never a danger, but you go into some of my friends' houses and they have a coal fire and you think 'you have never had a guard round that, how come the baby has never tripped into it?' Have they been lucky or what?..... I keep feeling I am over-protective because I like to keep them close to me, I like to keep an eye on them even when they are out in the park. You go out and you see some of them (children) running riot you just think something is going to happen, there is an accident waiting to happen here and they (other mothers) don't seem to bother.*

This account illustrates how many mothers tried to rationalise their own behaviour in relation to 'other mothers' approaches to care giving and within similar social contexts. Such an approach to establishing moral identity allowed the mothers an opportunity for them to develop an understanding of their personal strengths in preventing childhood injuries, but this was often only achieved at the expense of diminishing their peers competence.

### **7.2.6 Learning from 'other mothers'**

The judgements made of 'other parents' capacities to care safely by the mothers in this study were extensive as they tried to establish the moral identity of parenting and specifically protective behaviour. Through the sideways comparison with their peers the mothers demonstrated the negative role model approach to learning about safety and establishing a moral identity. The mothers (with one exception) gave the impression that 'other mothers' were less protective and dissimilar to themselves in their safety endeavours.

The mothers' accounts illustrated peer group interaction and comparison as a negative learning experience and as an example of what not to do if they were to care for children safely as opposed to a good example or role model for a positive learning experience. Some mothers expressed the benefits of learning from 'other mothers' accident experiences to identify how they themselves could avoid replicating the behaviour of their peers. This was in contrast to a positive learning experience which would occur if mothers attempted to replicate the appropriate safety practices of a good role model. The mothers rarely made comparisons between themselves and 'other mothers' to demonstrate positive protective practices or good role models for safety.

This sideways comparison with peers and negative role modelling revealed through the qualitative method requires consideration along with the results of the quantitative study where mothers made reference to their peer group as appropriate people from whom they could learn about safety strategies. This qualitative examination of how mothers perceived they would benefit from the accident experience of peers clarifies how primarily the mothers would utilise the negative learning experience from the mothers as opposed to the positive role model experience.

The mothers tended to judge 'other mothers' negatively signifying they were less conscientious, less careful and not as protective as themselves. The mothers considered themselves to be quite different to 'other mothers' as they believed themselves to be 'okay safety wise' and really it was the 'other mothers' who needed more information and advice about preventing accidents.

The majority of mothers considered 'other mothers' to be generally less informed, inattentive, and have less wisdom than themselves about parenting as they criticised their protective strategies. These 'other mothers' were the people who required increased safety education to prevent accidents.



M32: *I would say I have been okay but I would say there is some folk who maybe just don't really think, there are some folk who don't really think. Maybe just, as I say I worry what would happen to her if she touched the fire, it is how hurt she could get but some folk don't think about these kind of things. Some folk say 'touch it once and you won't touch it again' and I think oh my God, I couldn't stand my bairn (child) to get burnt.*

M15: *A lot of them (mothers) let them run out in the road but I don't believe in that, there are too many strange people going about, too many cars and it just takes a minute for them to grab a child, I don't believe in that.....Everybody has got their own ideas. There are people that just open the door and let their children wander. They do it up here in the dark on a winter night. That is up to the individual, whatever they want to do, but I would worry.*

M22: *Just to sort of say there are three and four year olds going on busy roads themselves and there is nobody with them, maybe I was paranoid, I was scared at the road side.....I don't know what it is, it is just that when you see them in the street you just wonder what their parents are thinking. It is maybe the way I was brought up because I wasn't allowed out on my own until I was a certain age.*

These accounts illustrate how mothers often felt they were being paranoid and over protective when they were caring for their children because they felt that compared with their peers they were more stringent about the safety of their children. This mother below compared her friends' approach to safety with her own and considered the protective behaviour of the friend negatively. In contrast to the views of most mothers who judged their friends and 'other mothers' as being less judicious than themselves, this mother was critical of her friend for being too conscientious, too careful and over protective.

M32: *I have never had anything serious with her. I know one of my friends like you go to her house and she has the plugs, the fire guard, stair gate, she has all the wee kind of soft corner things and everything and she is just paranoid.*

Such comparisons emphasised the subjectivity of the moral judgements made by mothers within society. The mothers found rationalising their approaches to safety by comparing and judging themselves with 'other mothers' helpful in establishing their own moral identity for being a good, protective parent and these findings are congruent with the findings of Everingham (1994:8) who suggests that 'the interpretative activity of the mother is based an intersubjective social relation that has the potential to co-ordinate perspectives of the mother'.

Most mothers felt they gave their all to childcare and keeping their children safe. The mothers felt 'other mothers' were often less careful than themselves and this was due to their lack of experience and knowledge about caring for children. Several mothers believed staying at home to care for their children was necessary for promoting the safety of their child. It was important to some mothers to spend time with their children to ensure they were safe and this influenced their decision as to whether or not to work or to leave the children with other people.

*M23: I am the type of person who sort of tries 110% with whatever I do. I don't think everybody is like me.*

*M19: I am at home all time and my whole life revolves round the children. That is my whole way of life. I could do a lot more in the house and I don't. The whole thing is this revolving around the children.*

*M6: I really was pretty serious about it (parenting) and that was the whole point of having kids, you just didn't have them to dump them on somebody else or take them to a nursery or, they were yours, they were your responsibility and if I don't do it, nobody else is going to do it. Not everybody has the same attitude. Except I went over the score. I made myself ill with it.*

This working mother explained how she felt guilty if an accident occurred whilst she was out at work.

*M32: Just sometimes I feel guilty if I have been out and she is at her gran's and she has fell like, she fell down the stairs and I wasn't there and I said 'did you phone the doctor' and she said 'no, she seemed all right' and I thought oh my god she could have cracked her skull or anything.*

The mothers felt that concentrating on their child's welfare required effort to avoid the dangers and prevent accidents. Staying at home and caring for the children was hard work which some mothers felt unable to entrust to other people as they may not have been as protective.

### **7.2.7 Young mothers need more safety advice**

Young mothers were identified by the older mothers in this qualitative study as having less understanding of the needs of children and how to care for them safely. The lone, mature mothers were also of this view as they considered the experience of caring for children increased with maternal age. This mature, single, lone mother expressed how she perceived that there was a need to explore safety issues more with young mothers due to their lack of experience in caring for children.

*M28: Well it probably would be interesting to see if there is more accidents in the homes with the younger mums, you know. Because, I know there is a girl upstairs from me, she is on her own and she is younger but I see her going down there and I am always holding Christopher's hand and her wee boy is always a couple of stairs away, I mean he is quite good, he is quite good, he seems to know not to go on their road, whereas Christopher I don't know, he would go on it, you know. That wee boy seems to get that much more freedom. I wouldn't say it's freedom, I would be interested to see if the younger mums do need more safety advice....I understand. I find it hard alone at my age, I don't know how the younger girls cope, I don't know whether they are more lax so it's easier, if you know what I mean. You hardly see the younger ones at the mothers and toddlers, it's the older mothers.*

This mother also saw the importance of exploring safety issues with young mothers.

*M34: I view myself as quite intelligent and I know things, maybe if there is a young girl who has just got a baby and yes, maybe she hasn't got experience. Peter was my first and only child, but I feel, yes it (safety) is probably something they (health visitors) might be able to get more involved in. But it would need to be on an individual basis but I don't think, I wouldn't*

*resent her (the health visitor) saying 'you need to do this, you need to do that' but I know myself that I am quite capable of making decisions myself unlike some teenager who might need some direction.*

This older mother below explained how she believed young mothers were less likely to have considered the full implications of the demands of childcare and would therefore need increased help with safety.

*M19: I think the degree that you are interested in your children, we are quite elderly parents for our first children. So you have come through a lot of your life and realise yourselves if you really want your children at that time rather than if you have them when you are 19 and maybe not very well prepared for them, but we had done a lot of things in our lives so that, to prepare you for what you are going to have to face, we just wanted them so much that you would do anything for them.*

In contrast to the opinions of the older mothers, the young mothers described more need for help than older mothers from health professionals, but this help related more to emotional support for caring for children alone than safety advice.

Most mothers perceived a need to improve the safety knowledge of mothers, but believed it was 'other mothers', who were quite distinct from the informants, who required safety advice and information. This view of safety poses difficulties for health professionals working with mothers to reduce injury. It would seem many mothers did not feel child safety was a problem for them personally and that it was someone else who was less conscientious than themselves who needed the main impetus of safety education. Although most mothers felt amenable to receiving more safety advice from health visitors, they perceived their main safety needs related to neighbourhood safety rather than home safety. Young mothers and particularly first time mothers were seen to have more need for home safety information than older mothers and those with partners.

### 7.2.7 Summary

The mothers developed knowledge about accident risks and safety strategies through a combination of sources, the media, health professionals, books and most often through kinship and social networks. Mothers were more active in seeking information during their first pregnancy and when caring for their first child than in subsequent pregnancies. The changes and differences in approaches to acquiring safety knowledge illustrated through the mothers' accounts signify the importance of the need for different ways of stimulating interest in safety strategies to protect young children at different times in the mothers' lives. The mothers were most motivated to seek knowledge during pregnancy and the first year of their children's lives, a time when statistically least accidents occur to pre-school children. As children develop accidents become more common, but the findings from this study suggest that mothers were less likely to actively seek safety information to develop appropriate safety strategies for this higher risk age group. Most mothers' described a declining, active development of knowledge to reduce accidents as their child became older and more mobile. The lack of maternal interest in seeking knowledge did not indicate that mothers were not interested in protecting their children from injury, but signified that they were probably less familiar with the types of accidents their children would be likely to encounter as they developed and that they would have less familiarity with safety strategies for older, more mobile children. Social networks were perceived as particularly important to mothers for developing knowledge about safety and despite its limitations this appeared to shape many safety practices developed by mothers.

### 7.3 How mothers perceived accident risk and developed motivation to protect pre-school children

*Such accidents will happen in the best-regulated families.*

*Christopher North 1834*

The mothers in this study were all of the view that their pre-school children's safety was essentially their responsibility. The mothers recognised many environmental hazards which they had to compensate for and overcome in their routine childcare practices. None of the mothers wished to devolve the responsibility for their children's safety to any other person, but believed that their children's' lives would have been much safer if the council had adopted a more child centred approach to the planning and development of playparks, roads, buildings and childcare facilities.

Similar to the results of the quantitative study, mothers responding to the qualitative study perceived their children's safety to be of greater concern outside the home than within it. Many mothers felt they were responsible and able to cope with the known hazards within the home and perceived high levels of self efficacy and an internal locus of control for preventing home accidents. The mothers however, felt less able to control circumstances and accident events outside the home. As a consequence of this they perceived low levels of self confidence which indicated low levels of self efficacy and an external locus of control for preventing accidents outside the home or within local authority maintained accommodation. Different perceptions of accident risk related to the identification of different levels of self efficacy and reflected different loci of control for preventing accidents and motivation to prevent injuries. Most mothers described feelings of anxiety for their children's' safety outside the home. Their accounts illustrated perceptions of high injury risk from what are statistically rare and uncommon injury events for this age group for example, road traffic accidents and abduction. Yet they were relatively unconcerned about statistically common, severe injuries and perceived the main causes of morbidity to be of low risk to the pre-school child for example, poisonings. The mothers were concerned with dramatic, sensational and rare events and perceived these as a high risk or a threat to their children's safety. In contrast, the main causes of morbidity and mortality identified by accident epidemiology were perceived as a low risk or threat to their children's safety. These findings were congruent with the results of the quantitative analysis discussed in the preceding chapters.

As this married mother of two children explained, the outside environment was her main concern for her children's safety.

*M27: The big difference to me now is that earlier I felt that I had to make his world safe within these four walls and now it seems an almost impossible task to make it safe outside the door. But it is now roads and pavements, setting boundaries, it is different and not just cars and safe areas to play. That is my big thing. Not enough safe areas. Not just from the traffic but the odd folks that are about.*

The mothers in local authority housing identified specific hazards within the home which they felt increased their children's risk of injury. This lone mother who lived in a local authority house with her pre-school son explained why the local environment was a major concern for her and how the reluctance of the council to repair the house and fences led to diminished self confidence in her ability to keep her child safe.

*M20: The road is quite bad because they fly along there about 90 miles an hour sometimes. Then there is the burn. That is basically it. There are the foundries, but they are at the other end of (name of street)...., I think my fence at the front, I want it all sorted so he couldn't get through the fences but a lot of people have had it, the mesh but they ( the council) won't do it here and they will not renew the gate or anything, you had a lot of trouble getting in but he just goes through the spaces in between the fence and into the road. I know he stops and looks but the other day a bus got smashed, he could have been standing next to it. So if I had the money I would refence out there..... They (the Council) said if they did out there they would need to do the whole street.....I just think the council should concentrate on the younger kids for the safety aspects for play areas, they should have a fenced in play area so that the older ones can't go in and smash bottles and put glass in the sand pits and things like that and I think it should be supervised and there should be a closed in area that is open just certain times for like under fives.*

As this lone mother of five children explained:

*M3: I know it is hard as a single parent and that. I went through a lot to make sure my bairns (children) were safe. I don't leave nothing lying about, lighters or anything like that, ken (you know), drug wise I think all drugs are dangerous . I have*

*applied to the council but they don't help you, you go to the health visitor 'just watch them', ken, that's the only answer they give you. They no just say-get the council or anything like that to put a plug in. I asked the council to make my bairns safe, put a gate, they say they can't do that I'm not a social case. They don't help you because you don't batter them, you don't neglect them, you feed them, ken you don't get help. Life stinks when your single.*

For this lone mother of five children, caring for her children safely seemed an impossible task. The usual providers of support seemed reluctant to become involved in protecting children from accidental injury and only able to become involved in relation to aspects of intentional injury. This mother believed this to be a serious limitation of the local authority and health board services.

The mothers in more disadvantaged circumstances for example, local authority housing perceived many hazards in and around their home environments. They felt these hazards made their children vulnerable to accidents, but often they felt constrained in promoting their children's safety as they perceived some responsibility for repairing and maintaining the home rested with the council. Some mothers had initiated contact with the council about reducing various structural hazards in the home and local environment. However, some properties were not repaired due to the financial constraints of the council and the mothers. Generally the mothers in local authority housing voiced more concern about hazards within the home than mothers in private housing but both groups of mothers perceived the risk of an accident to their pre-school child outside the home as greater than that within the home.

### **7.3.1 Perceptions of different types of injuries**

The mothers felt anxious about the occurrence of several injuries, but the types of injuries they used most often to qualify their concerns about accidents were burns and scalds. The mothers were worried about the pain involved with these injuries and also the potential long term disfigurement to the child which could affect their social integration into a culture pre-occupied with peoples physical appearances. The injuries which result in disfigurement evoked most anxiety in the mothers as they



were perceived as a visible representation of the mothers childcare and protective skills.

These married mothers expressed concern at the risk of pain and physical disfigurement which could result from a burn and how these concerns motivated them to adopt certain safety strategies.

*EHS: What kind of things are you worried about happening? What makes you think those things are important?*

*M15: I think it is just so easy to get burnt. Especially in the kitchen. I think it is just from the burnt aspect, I have never really been badly burnt, just with the iron, but it is really really sore, you see that much on the television and I would hate for them to go up and touch a pot or if the ring is red and oh 'that is a nice colour' and just touch because a burn can be for the rest of their life, mark them and it can be really painful and I just wouldn't like to see that happen to them.*

*EHS: When you feel you have all these things to do, these safety things?*

*M17: I want them to grow up happy and healthy and safe. I don't want to grow them up with scars because I have been careless with hot water and the likes. I have been in the hospital and I have seen the things that can be caused by accidents.*

The mothers felt morally accountable for their children's safety and believed that many other people, particularly health professionals would judge their ability to care as a result of injuries, but particularly if a burn or scald injury occurred. Many mothers were of the view that the visible scarring of their children was a reflection on their childcare skills and evidence of their inability to protect their children. The mothers feared they would have their competence as parents questioned and be judged as inadequate as a result of them not protecting their children from such injuries.

In contrast, the mothers were less concerned about poisonings or broken bones which are common, severe injuries within the study area and nationally. Many mothers perceived their children to be knowledgeable about poisoning hazard and trusted them to behave safely with potentially harmful substances and believed that broken bones were to be expected as children become more active and independent.

As this lone, single mother of a three year old girl explained:

*M2: I don't have a problem with safety with Ann because I think she is quite bright, she knows what is right, what is wrong, what not to touch and what to touch and things.*

*EHS: What were the things that were of concern to you for you to say 'don't touch and don't do this and that?'*

*M2: Like tablets or something lying, when she was younger I'd say don't touch and she left them Now I can leave tablets, say I put it down and she wouldn't touch, she would maybe say 'what's that?' And I would explain to her what it was and that she wouldn't be touching that and that would be it. She is getting tablets herself sometimes I had them in the fridge because that is where you've got to keep them and she said 'I can't touch them', so she knows. Maybe other kids they don't understand, I don't know.*

The mother trusted her pre-school child to behave safely and was not concerned about a potentially serious poisoning injury.

This supported mother of two children explained how certain serious injuries have to be accepted as part of everyday life:

*M17: Kids have to accept it because he broke his arm. We had a scatter rug and he fell down and broke his arm and I just don't think you can avoid that in the home or anywhere.*

The qualitative study findings revealed how mothers worried about the pain and long term disfigurement resulting from burn and scald injuries and explained why such

injuries were perceived as severe and a major concern. Findings from the qualitative study were congruent with the quantitative study and the mothers' accounts gave a deeper insight as to why they perceived some injuries as more serious than others.

### **7.3.2 Developing motivation through accident experiences**

Often children experienced an injury as a result of an accident and this motivated the mothers to adopt safety strategies they had previously believed to be unnecessary. In some circumstances the mothers had been unaware of the danger until the accident occurred. Some mothers adopted safety strategies to prevent accidents happening to their own children after family members or friends informed the mothers of their accident experiences. Accident experience was an emphatic way for mothers to learn about hazards and to develop a perception of accident risk which consequently motivated them to adopt specific safety strategies.

The findings from this qualitative study suggested that the mothers adopted 'specific safety strategies'. The use of this expression is intended to clarify that the mothers adopted only certain and not all known safety strategies. The mothers' accounts revealed that they did not draw on the experience of an accident to look at all potential hazards in the home or to recognise similar hazards to the one that had resulted in an injury. The mothers did not generalise from one hazard to another, but were situation-specific in their hazard identification and were often only motivated to adopt safety strategies which could prevent the same accident happening again.

The account of this mother of three children, two of which were pre-school, illustrated this point.

*M24: Bridgit got her hands on the stuff in the bathroom one day and decided to wash her hair with it, it was just cream cleaner, but I thought right, I'll put the locks on. I was worried she had maybe drank some of it, but the doctor said there was nothing in it anyway that would have harmed her.*

The mother had been aware of the potential hazard of the chemical cleaner and the appropriate safety action but only when the child had a 'near miss' (Roberts et al

1995) did she decide to start adopting the use of safety catches when storing chemicals.

Below a mother of three, explained how she was supervising her daughter from a different room when the two year old had a near miss accident.

*M19: Things like I was in the kitchen doing the dinner and she was in the breakfast room and I had the windows open. It was last summer so she was only coming on 2 and I had the window on the hook, she opened the window and I heard her crying. I didn't notice the window, she had opened the window and she was hanging out the window by her finger tips and you know I was just in the next room making the dinner.*

The 'near miss' accident experiences enabled the mothers to perceive how their own children were susceptible to accidents which previously they had perceived were unlikely to happen. The experience of the 'near miss' motivated many mothers to prevent a similar accident happening again in the future.

Following an accident or 'near miss' mothers perceived a more 'realistic' risk of injury to their children. The experience of an accident was a dramatic way for mothers to develop a perception of injury risk, but it enabled them to appreciate the likelihood and severity of an injury within their own social context. As the mothers perceived the threat of the accident as being likely to happen again and the potential for the injury as severe they were motivated to adopt specific safety strategies to prevent the same accident reoccurring.

### **7.3.3 Learning from your mistakes**

Several of the mothers spoke about an accident that had happened to them when they were younger and how this had influenced their safety practices with their own pre-school children. The mothers generally perceived the accident experience as a negative experience not to be repeated with their own children. The positive aspect of the accident experience was the way the mothers felt able to use the experience to

prevent the same type of accident happening to their own children. As this mother of two pre-school children explained:

*M14: The one thing I have done and I would recommend is teaching them swimming, Kelly can nearly swim herself now. She is very good under water and I think that is, well I had an accident when I was younger and I think that kind of brought it to me to make sure that you can do it, kind of thing I know like, taking them swimming is obviously because I had an accident when I was younger and I just feel different things that have happened you obviously don't want that to happen again, your mistakes.*

The mother spoke in detail about a near drowning experience in the swimming pool and the importance of preventing the same specific type of accident occurring with her young children. The mother believed that she had been eager to teach her children to swim because of her own accident. This account illustrated the experience of learning from past accident experience and demonstrated that although the mother had developed knowledge and motivation to protect her children through this experience, it was not an experience the mother believed her own children should encounter for developing their own safety strategies. The whole purpose of teaching the children to swim was so they would not experience the same dangers or 'mistakes'.

This mother of two children recalled a harrowing accident experience which had influenced her approach to child safety. As the mother described in her account, she had not specifically considered child safety or accident prevention strategies in her routine child care practices until after her small child suffered a severe head injury when he fell from his father's shoulders. Following the accident the mother prevented the same accident happening again and was also eager to enable other mothers to learn from the family's traumatic experience. The mother was trying to share her experience with other mothers to help prevent them from making the same mistakes.

*M23: My oldest child, Carl, had a bad accident when he was a year and a half and that reinforced how important it is to look for safety issues. He actually fractured his skull in a freak*

*accident so I am quite conscious of safety because of that..... It didn't occur to me that safety was really an issue with that until it happened. And that is quite an interest of mine and I have been known to go up to other parents in the street and point out that carrying the child on the shoulders maybe isn't a very good idea.*

Analysis of the mothers' accounts revealed a lack of generalisation from one specific type of injury or accident experience to other related potential injuries or accident experiences, which could occur in a similar way or result in the same type of injury. For example, the mother who spoke about the near drowning experience in the swimming pool, gave little consideration in her safety routines to drowning hazards from buckets of water in the garden, the bathroom toilet or the bath. Rather the mother focused on the type of accident which she had experienced and understood. The mother whose child had fallen from the father's shoulders thought of further falls from people carrying children and did not emphasise safety actions to prevent other types of falls from stairs, windows or as a result of climbing when playing. This lack of generalisation from one hazard to another is a limitation of accident experience for understanding the wider issues of potential hazards and appropriate safety strategies.

#### **7.3.4 Risk perceptions and motivation resulting from out of the ordinary accidents events**

Several mothers explained how they believed many accidents arose out of freak incidents or from extraordinary events and as a consequence of non traditional child care practices which resulted from deviations in their normal domestic routines. The term 'freak accident' used by one mother to describe the events which led to a serious injury in her eighteen month old child, served to conceptualise the unexpected and unpremeditated events leading up to many accidental injuries.

*M23: When my son had his accident basically he fell from my husband's shoulders, it was a freak accident. He was on his shoulders, my husband bent down to pick a bag up and Carl, he was almost a year and a half at the time and he just put his hand up to reach out to a tree branch, just at the time when Henry, my husband, bent down and he fell and he got his injury.*

The term 'freak' accident was used to explain an accident which neither parent had anticipated. The mother viewed many hazards and safety practices as 'obvious' and when an unexpected risk or hazard situation occurred which had not previously been anticipated it was labelled as a 'freak' incident. The mothers' accounts signified how circumstances surrounding many accidents were considered out of the ordinary or extraordinary events that they believed could not have been anticipated by them. However, after the accidents the mothers rationalised about the possibility of the same accident reoccurring and often developed a perception of high accident risk and this motivated them to subsequently modify their safety behaviours with their young children.

In contrast most mothers in this study spoke of foreseeable accidents occurring as a result of them not adhering to their usual pattern of childcare. Mothers described childcare routines that they had developed and which they believed would ordinarily have provided safety for their pre-school child. In certain circumstances the mothers deviated from these routines often as a consequence of being distracted by the many demands and pressures within their social context. From the mothers' accounts it was apparent that they considered accidents to be a result of what happened when these usual routines were discarded and that the events which surrounded the injury were perceived as extraordinary. The mothers' perceptions of the events as out of the ordinary reflected their desire to illustrate that it was not normal for them to protect or care for their child in the manner that had resulted in the injury.

This married mother of three explained how she deviated from her traditional approach to caring for her children when one of the children had a fall. The mother was aware that the child could potentially fall from the work top and ordinarily would not have sat him there.

*M38: I say I'm not guilty of sitting him (the child) on the work tops, but once I sat him on the work tops and my kitchen drawer was open at the time and he fell in to the kitchen drawer, so he fell out of the kitchen drawer which, I mean he cried because he he tumbled over, all the cutlery just went flying and I*

*thought 'oh my god a fork could have went in his eye, a knife could gone in his face', something like that.*

Many of the mothers demonstrated an understanding that an injury could happen and that they had rationalised and anticipated potential hazards, but that they had not adhered to their usual, routine of protective childcare practices. The mothers below had also previously anticipated the hazards, but as a consequence of extraordinary circumstances an accident had occurred when they had altered their usual routine for childcare.

These mothers explained that they had changed their usual routines and as a consequence the accidents occurred.

*M24: I did the unforgivable a fortnight ago. I left the iron on and it's not like me, she was lying there watching television and I just left it on while I went to the toilet. She got up and touched it and she had never done anything like that. She wasn't badly burnt. We just put a bit of gel on the burn. I just didn't think, it was something I forgot about. Usually if I leave the iron in the kitchen, if I go out I make sure the wires up and all the rest of it but for some reason I didn't.*

*M32: She has had one accident, it has just come to mind, when she was in the bath and normally I go into the bath with her and this day I had her in the bath and I was taking my clothes off and I thought 'I will need to go and get a towel' and I ran up the stairs. She was in the bath and I came down, there was blood everywhere. I thought she had put her finger in the plug hole. She had been shaving with her dad's razor.*

The explanation of an incident as a 'freak accident' or 'not like me' reflected how mothers did not traditionally care for their children in a way that resulted in exposure to accidents. The mothers attempted to exonerate themselves of their accountability for some of the accidents by suggesting that events leading up to the injury were unforeseen, but often the mothers accounts illustrated how the circumstances surrounding the injury were predictable, but that they believed the accidents were unlikely to happen. The findings illustrate conflicting views of the extraordinary events surrounding many accidents. Some accidents were perceived as unforeseeable



and therefore extraordinary, whilst others were perceived as foreseeable, but that the protective strategies were extraordinary.

### 7.3.5 Perceptions of optimism and fatalism

Many of the mothers explained how they could see some of the potential dangers which could have resulted in an injury, but thought that an accident or injury would never happen to their child. Many were aware of the potential accident hazards and the effective safety strategy, but perceived the accident as unlikely to happen to their child and decided not to adopt the safety strategy.

As these mothers below explained, they had been warned of potential hazards and the accidents that could happen, but until an accident occurred they did not think the accident could happen to their own children.

*M1: When your Health Visitor comes, or anyone comes to speak to you, you tend to think 'That will never happen'. You tend not to take a lot of notice, like, even my parents say 'You shouldn't have that there, because this can happen', you know, and you say 'No, it'll be fine' because you always sort of think that it couldn't happen in your home, it wouldn't happen in your garden, etceteras, but it has to. A lot of people seem to listen and to sort of say, 'well, yes, that can happen, and I'll be aware of that'. I've got to take my hat off to people who take it all in and listen and say 'That could happen, I'm going to be really careful with that', because you do tend to think that you take care of your child and you're looking after your child, so a lot of these things won't happen.*

*M11: I just didn't feel, I suppose if one of them had got burnt then I'd say 'well yes' I should have used one (a fire guard). But I didn't feel at the time there was a need. I learned them from quite early on that they didn't go near, every time they went near the fire they got told off and put away from the fire, I just prefer it like that.*

These mothers' accounts illustrate how many mothers are aware of hazards and potential injuries but until an accident happens they don't believe their children to be susceptible to such accidents..

Many mothers were optimistic or unrealistically optimistic (Weinstein 1988) about the likelihood of injuries given the number of accidents that occur in the home. In contrast, several mothers felt accidents happened no matter how careful they were and believed many accidents happened despite their efforts to prevent them. This fatalistic view point reflected the mothers' feelings of a lack of control and their lack of confidence for preventing accidents.

This account illustrated the low levels of self efficacy perceived by some mothers.

*M7: You try and think what could happen. You end up being caught out by things you don't think of, it hadn't crossed your mind that he could do that. If you try to predict what they can do, then they do things we don't expect them to do, it is more of a problem.... All my friends were having babies at the same time, so we were all in the same boat. We didn't know what children were able to do.*

The mothers' inability to anticipate all hazards in relation to their children's development lowered their levels of self efficacy and consequently they felt less motivated to perform some safety strategies. Many mothers believed they could not recognise all the hazards and that accidents would happen and this tended to make them more fatalistic.

*M8: I think my main feeling about safety, having had two children, you have got some idea of what they are going to do, but there is always the time that you aren't expecting everything that you need to do. But whether there is anything you can do to prevent it, I don't know?*

*M4: You hope you have done enough so you don't need it (first aid course) but you can't account for everything. You want to stop it happening, but how do I do it? I spend more time to prevent things happening, but you will probably need a first aid course at some time.*

The mothers' lack of knowledge about the different cognitive and physical capabilities of children, led to them adopting some strategies which did not provide the safety they had anticipated. Some mothers became demoralised as their attempts to protect their children did not result in the safety they had planned.

*M9: We have a lock in the door and he worked out how to open that. I don't think we had it high enough, we didn't think he could open it, but he did.*

The mothers' conflicting perceptions of accidents as both preventable and inevitable illustrated and revealed why some mothers became optimistic whilst others were fatalistic. These different perceptions of accident risk related to the mother's self confidence in her own ability to exert control to maintain the safety of her child. These perceptions reflected the mothers levels of self efficacy. The mothers perceiving least control and little confidence in maintaining safety were more fatalistic. The mothers who felt confident about controlling and influencing their children's safety were more optimistic. Both these opposite and extreme perceptions can be understood to limit maternal motivation to adopt protective behaviours.

### **7.3.6 Weighing up injury risk**

The experience of an accident has been identified as a way for mothers to learn about injury risk and as a way to motivate them to adopt safety strategies to prevent the same accident occurring again in the future. An examination of the mothers' accounts clarified how many mothers used observational experiences derived from the social interaction of caring for their children to influence their safety actions. Several mothers reported how they would 'wait and see' or 'play it by ear' as to what physical activity each individual child engaged in and whether they encountered exposure to hazards whilst playing. Some mothers spoke of this approach to child safety as a matter of 'trial and error' as they waited to identify the hazards resulting from the child's behaviour and interaction with the environment. These 'near miss' accident situations would then often motivate the mothers to adopt safety strategies once they were certain the hazard was going to be a problem to a specific child.

The mothers perceived different risks of injury in relation to the different behavioural patterns of their children within the home environment. As a consequence of this the mothers rationalised and calculated different injury risks for different children within their home and local environment. Children of the same age did not always interact

with the environment in the same way and the mothers tended not to counteract the hazards until they were perceived as a specific injury risk or problem to a specific child. For example, one child would be fascinated with going into cupboards and climbing furniture and be exposed to the dangers associated with these behaviours for example, ingestion of poisons and falls. Whereas a different child would not be interested in this activity, but would be fascinated by water and could switch on the water taps and be at risk of scalding or drowning. Many of the mothers were aware of these hazards, but waited to see which behaviour patterns the child developed before implementing safety strategies. The mothers did not feel it was realistic or feasible to combat every potential hazard and would 'wait and see' which hazards would need to be compensated for by the use of physical safety equipment or by removal of the hazard. In some situations the mothers were unable to identify any other effective safety strategy than to continue with their own supervision of the child to ensure no contact with the hazard was made. The mothers felt they had to get a balance between keeping their children safe whilst living within dangerous environments with inquisitive children.

The mothers below recalled the challenge of identifying potential hazards in relation to their different children's activities. It was evident that the first time many women considered the issue of safety was around the birth of their first child, but each new child brought new concerns.

*EHS: You have quite a lot of knowledge, where do you feel you got it from?*

*M21: Experience...The first one you are tense, with nerves, I didn't have cupboard locks with my first one and it was when number two came along she was so different, more inquisitive I thought I have to do something whereas my first never ever did that. And I should think with number three she is only 2½ she is a holy terror, she takes it from her big sister, if she sees them doing things she does it herself and is not capable.*

*M19: Different children have obviously different capabilities and different things that they can be frightened of...So they are, they are all very different but I think the first one is always*

*more of a shock than any other one, because you just don't know what they can be capable of and how much work it is going to be and how much looking after they take. But they are very different and that is why I think it is important to teach them from as early as you can you know and keep putting the message across to them all the time... Like with Audrey, I already said, she is a wee menace, you have to be with her more so than with say somebody like Liz. Liz is far more sensible than Audrey, she is older and so on. I think really it is your own child and the dangers that you see within your own household...I think it depends on your own situation and the things that you have in your house that provide, would be a problem, you have to think about it, how do you see things developing and what you can do about it to keep them out of harm's way.*

The observational approach to safety was not without difficulties. Mothers found it difficult to watch their children all the time. In some situations the mothers were supervising the children to monitor and prevent their exposure to hazards, but if the mother was busy with other domestic chores or became distracted observation of the child was fragmented. Different levels of supervision were described by the mothers. Some mothers were with the child all the time, in the same room, watching the child and others explained how they were 'keeping an eye on' children from different rooms or inside the house whilst the child played outside. Due to these different levels of supervision, exposure to accident risk varied and some mothers felt that even when they were 'watching' their children accidents would happen.

This mother of four children illustrated the difficulty of supervising her three year old son when trying to care for her younger daughter as well as caring for two older children from her partners previous marriage, one of whom has special needs. Balancing the needs of all children required compromises to be made.

*EHS: How do you get round the problem of him playing outside? What kind of things do you do to make sure he is safe when he is playing outside?*

*M26: Just usually checking on him (telling him off), he ends up running away, disappearing further away. The other week he was up the scaffolding. There is scaffolding near that building*

*which he climbed, he was on top of the phone box, I don't know if you seen it when you came in?..... I keep a close eye on them, even if I am up the stair I keep shouting to see what they are doing..... I suppose it is really going to check them. A lot of things you just can't help happening I suppose....They climb up and fall. They are just exploring, you know.*

The mother felt she had to accept some injuries as part of growing up as she felt unable to prevent some of the accidents that happened to the children. The mothers were accepting of the fact that with this observational approach and this reactive rather than proactive form of providing safety that accidents would sometimes happen.

### **7.3.7 Getting a balance**

The complex nature of the home environment which accommodated several people of different ages, at different stages of physical and cognitive development made keeping children safe within the home a difficult task. The mothers described their need to 'get a balance' between the safety of the individual child and enabling the autonomy of other family members living in the home. The mothers encountered particular difficulties when they had two or more children. As one mother explained she had a four year old child learning to become more independent and learning to walk up and down the stairs alone without the encumbrance of having to open the stair gate. The same mother also had a baby learning to crawl who would try to climb the stairs when there was no stair gate. The mother wanted to encourage the development and autonomy of her four year old and maintain the safety of the younger child. The decision not to use a safety gate on the stair was made only after careful consideration of the consequences. The mother was having to perform a very careful balancing act to care for both of her young children.

*M15: I think just doing things, maybe like the stairs I am a wee bit worried about the stairs. I kept the gate, you know like, some people put one gate at the bottom and one up at the top, but I had to consider Kyle, because it had to be a gate that if he went up to the toilet I didn't need to get up every two minutes if he was wanting to go up and down stairs and open the gate. So we decided on just the one because at the living room door there is just a wee hall then it is up the stairs so we just tend to*

*keep the living room door shut because there is nowhere for Scott to go when he was crawling.*

The need to close the door and observe the child was seen as the alternative to the stair gate in this situation. The mother was attempting to accommodate the autonomy of both children and keep them safe

This mother went on to explain how she balanced the safety of her children with the need to ensure access for the adults in the house.

*M23: All my cleaning equipment I keep in a high shelf, similar with all my sewing equipment, needles and things like that and my first aid kit, I try to balance between safety and having it available quickly, so that it is in a cupboard where they don't see it.*

Ross (1998:12) proposed a 'principle of respect for persons modified, to apply to children' which 'guides parents in their decision making for their children's health care'. The principle illustrated how parents are 'allowed a wide discretion in defining and balancing their child's health care needs against the child's other needs and interests as well as the needs and interests of the other family members'. The complexity of dealing with a family in which there is more than one child competing with and conflicting with the needs of another and those of the adults requires respect for all concerned and is a fundamental moral principle.

The mothers in this study found maintaining their children in a safe environment difficult as they needed to judge the modifications to normal domestic routines and make many compromises. Developing safe practices led to the disruption of routines which were in place before the children were born. Many mothers attempted to provide safety from potentially harmful situations without restricting access to other family members for important daily activities. The mothers described how they had made decisions for protective strategies which often required a compromise between one child's safety and other people's needs for access to the home and autonomy. The mothers made decisions between:

- changing their usual practices and using safety equipment which often led to some aspects of the home being less accessible to other adults and older children, but safer for the pre-school child or
- managing without using safety equipment or changing routine practices to maintain accessibility for different members of the household, but required supervision and socialisation of the pre-school child to maintain their safety.

Different safety strategies were adopted and related to the mothers' perceptions of the likelihood and severity of the potential injuries and the perceived efficacy of safety strategies. Mothers had to contend with the individual needs of multiple members of the family and balance their pre-school children's needs with those of the other family members. The mothers were required to make rational decisions as they weighed up and balanced the perceived benefits and barriers to specific safety strategies and the risk of injury in relation to the safety actions they believed were appropriate to adopt within their social context. This process often resulted in some form of compromise between the safety of the individual child within the context of the family.

### **7.3.8 Balancing the cost of accidents with the cost of safety**

For some mothers the hesitation to adopt safety strategies for known hazards related to the costs involved in either modifying the home, buying safety equipment or the restrictive nature of safety equipment. Therefore the expense of some safety strategies was inhibitive. The mothers had to make difficult decisions to prioritise which safety strategies they adopted based on their perceptions of the potential risk of an accident and the cost of acting safely.

The three mothers below explained why they did not perform some safety actions due to the financial costs attached to performing the safety strategy:

*EHS: What kind of thing influenced whether or not you would have something?*



*M15: Well, I think we had to think if it would be that useful to us in the family. A lot of things that you can get, that I just feel, well, it's a bit of a waste of money. I suppose at the end of the day it was the money aspect in terms of, well, is it really worth while, is really going to be worth £20 or whatever, and would it be that useful in terms of, well, can I sort of tell him just as much rather than buy this particular item? I mean, there were a lot of things that I didn't buy, purely because well, I said, "Well, no, I'm going to sort of stabilise it, not spend money on that".*

*M1: It wasn't just the cost. Well, I didn't think, at the time you think, yes, it could happen, but I'll make sure it doesn't, so depending on the price of the items, depending on what it was, if it was very, very, expensive, but if I felt it was something that, well, I really need to have it, I would have had it, no matter the cost, but, no it wasn't just the cost.... I wouldn't be without my car seat when they were small at all. But I thought it was a great idea the fact that the hospitals introduced the scheme. The car seats were expensive, and it helps people who maybe aren't on a large income, but again for a child's life, or maybe end his life, it's not a lot of money when you think of it.*

*M6: If I thought I really needed it I would have got it obviously, I think any parent is the same but I felt that I don't know, I think being there is more important.*

Multiple births also had financial implications.

*M11: I think it was probably just - probably the expense as well because I had to give up my job when I had the twins and having twins you need two of everything, so you are trying to buy what you thought was necessary before you were buying, like other bits and bobs and they had things like baby walkers, things like that, everything that they needed I felt I provided for them and as I say if probably if something had happened I would have blamed myself but at the time I never ever had any problems.*

This divorced, lone mother of five children below, explained how her lack of income restricted the health and development of her three pre-school children. Some mothers felt that if they were perceived by health professionals or social workers to be giving

care which addressed the immediate and most basic needs of their children, they would receive little practical help from the local authority to improve the safety of their home and prevent access to hazards within their neighbourhood.

*M3: Because I am not with a social worker, you know, Because I have a house like this that I am not entitled to anything..... Because I am not with a social worker. I buy their clothes with my own money. On the Monday I get my money, on Tuesday I have none. Sometimes. I greet(cry) at night because I can't afford to give my bairns (children) a better life than I had.....I couldn't get a (fire) guard to stop her they wouldn't give me that. If I battered them I would be homeless and I would get more. It's true. I give good care. Because they know that I don't get nothing, it is not fair really.*

This mother spoke of how she felt she was judged by the professionals as providing basic food, warmth and shelter for her children and thought that because she had not been assigned a social worker for abuse or neglect she felt unable to obtain further benefits or practical support to help her cope with protecting the children and keeping them safe. Many of the mothers also spoke of meeting these essential needs of children in a similar way to meeting the basic tasks described by Will and Wrate (1985) when they were describing the safety strategies they were adopting to maintain the safety of their children. Some mothers did not differentiate between hazardous events associated with accidents and basic tasks. The mothers established safety within the context of their childcare routine and this demonstrated the centrality of safety to general childcare practices.

The mothers' accounts revealed how the financial costs of some safety practices constrained their choice of protective practices and were a barrier to the mothers' motivation to adopt safety strategies. Particularly the most disadvantaged mothers living in local authority accommodation and those caring alone identified the financial burden of some safety strategies as demoralising as they perceived it limited their ability to protect their children from injury. Kendrick (1984) also identified the cost of safety equipment resulting in mothers not purchasing it. The value of safety equipment made available through a loan scheme managed by health visitors has

been identified by Thompson et al (1998) as it can benefit the more disadvantaged families.

For some mothers the cost of performing safety actions could be outweighed if an accident was perceived as likely to harm the child severely and if the safety equipment or strategy was perceived to be effective. A recurring theme was that if mothers perceived that their child was at risk of having an accident and that a specific safety action was effective in preventing the accident, then they often obtained the equipment or carried out the safety action despite the financial expense. However for the most disadvantaged mothers their inability to finance safety strategies resulted in them being anxious and disempowered when endeavouring to promote their children's safety

### **7.3.9 Motivation to use safety equipment to reduce injury risk**

Several mothers described why they decided not to use safety equipment and adopt safety strategies. Many felt that the safety equipment available was not effective or of no particular benefit to their children's safety, whilst some preferred not to use safety equipment for aesthetic reasons. The safety equipment was often perceived as imposing on the activities of adult members of the family as a consequence of it restricting their access to parts of the home. Safety equipment which was perceived as awkward, restrictive and bulky resulted in mothers being less motivated to use it. The design of the safety equipment often acted as barriers to its use. Several mothers also believed the use of certain items of safety equipment inhibited their children's social and cognitive learning with respect to hazard identification and safe behaviours. The mothers perceived interaction with hazards to be necessary for them to learn how to behave safely as they developed. As a result of these perceptions the mothers used alternative strategies to safety equipment or environmental change. Deciding to supervise the child in the presence of hazards and teach them about the hazards and how to avoid them was a common way for mothers to promote the safety of their children. Through this socialisation to the environment the mothers believed their children would behave safely.

The three lone mothers and one supported mother below exemplify how many mothers perceived the design of some safety equipment to be ineffective or undesirable. In some instances the safety equipment was perceived as increasing the child's curiosity so it was perceived as more of a hazard than a protective strategy.

*EHS: Do you use any of the safety equipment that is on the market?*

*M2: I used to when she was wee, when she was a wee baby I used to have a fire guard and a safety gate and that, but I don't use locks on doors or anything because I felt that she should be able to learn for herself not to go in them. I actually think it is a bad thing to show them that the locks are there. I think it gives them a, a thing to try and get into them, like curious because they are not allowed in there, why are we not allowed in there, kind of thing.....The whole thing about the fire guard was that it was a bit too bulky, too, it was the big one I had, it went right round it (the fire), it was too bulky, it just sat there. You ended up putting stuff on top of it, or something, you know. That is why I took it away. Ann never went near it. I had it for about a year and I didn't really need it.*

*M6: I never got a cooker guard or anything because I think you can make your point. They are not going to learn not to touch the cooker because mum's got a cooker guard, they are not going to know that, are they. They are not going to know you can drink what is in the blue bottle or the white bottle because mum's put a lock on the cupboard. The first time that is unlocked that is where they are going to go. Know what I mean. I didn't use cupboard clips, I didn't use cooker guards because I don't think the kids learn anything.*

*M10: The fire guard is quite awkward because it is at a height where I have to pull it out every time to go round it and it always concerns me in case he comes round behind me, in case he pushes me.*

*EHS: Why had you initially delayed using them (cupboard locks)?*

*M8: Because the thought of them, it was a restrictive thought, it is much easier to just open the cupboard door. But once they were in place and we were used to them I didn't think about it.*

The mothers preferred to socialise their children to the environment and to teach them from a young age about hazards and how to behave safely. This process required social interaction between the mother and child within the home environment and reiterated the importance of lay sources of information in shaping a culture of safety. Many mothers believed that because their pre-school children had been educated and socialised in safe practices, they had the necessary knowledge for safety actions and were not at risk of an accident. However, some mothers described how they had overrated their pre-school child's capabilities or had trusted the child to behave safely and that this had resulted in an injury. In contrast, some mothers recognised the pre-school child's limited cognitive and physical development and used safety equipment and supervision to maintain the child's safety in addition to socialising the child to their environment. The mothers' motivation to adopt different safety strategies was related to how they understood their children to develop. A perception of high accident risk in relation to their children's interaction with the environment often motivated the mothers to use safety equipment. In contrast mothers protected their children from hazards which they perceived as low risk by socialising and supervising the child.

### **7.3.10 Conclusions**

The main conclusions concerning the development of mothers' knowledge, perception of injury risk and how these were related to maternal motivation to adopt safety strategies are presented here:

- Relatively few women considered the implications of accident hazards in relation to child safety until they became mothers. This indicates that the culture of safety with respect to protecting children was limited.
- The mothers' accounts revealed how much of their knowledge for identifying accident risks and developing protective strategies evolved through the social

process of caring for children. Child safety was important to mothers but rarely was it separable from the process of childcare. Professionals who can influence childcare practices are therefore well placed to explore safety issues with mothers.

- Mothers, particularly young, lone mothers were occupied meeting the basic needs of their children in the early stages of motherhood and safety was less of a priority. As a consequence of this specific acts of safety can be understood to be lower down the mothers' perceived hierarchy of needs for the child.
- Mothers rationalised their personal safety strategies and about the safety needs of their children in relation to others in their social networks. Mothers learned and constructed much of their knowledge about safety from interaction with other mothers. Lay informants were used more commonly for sources of information about protective strategies than health or nursery education professionals.
- The way in which mothers established their norms for protecting their children was through ideas of morality perceived through their social networks. The ideology of motherhood was often seen to be too unrealistic and often demoralised many new mothers endeavouring to protect their children in diverse social circumstances.
- Mothers adapted their approach to developing knowledge for providing safety from more active methods in the early stages of motherhood, to more passive methods as they became more experienced.
- Mothers were more concerned about the risk of accidents outside the home than within the home, yet most accidents to pre-school children occur within the home. Mothers commonly underestimated the risk of injury to pre-school children within the home.
- Mothers living in relatively more disadvantaged contexts were most concerned about safety in the home and the immediate environment outside the home, but often felt least able to influence the safety of their children in these environments. This lack of control over the safety of the environment was usually attributed to financial constraints and dependency on the local authority for maintaining the physical structure of their environment.

- The relatively more disadvantaged mothers described being less in control and more disempowered in their abilities to promote the safety of their children.
- The mothers' motivation to protect their children related to their individual perceptions of the main risks of injury to their children within their specific social context.
- Accident experiences motivated mothers to adopt specific safety strategies to prevent the same accident re-occurring, but mothers did not generalise from the specific accident to other similar potential accidents. This lack of generalisation limited the protective capacity of accident experience. The lack of transferability of knowledge about hazards and safety strategies makes reducing childhood injury a sensitive, complex and demanding task for mothers and health professionals.
- The mothers' perceived many accidents as extraordinary events and some of the accidents were perceived as unforeseeable. In contrast some of the extraordinary events were foreseeable, but as a consequence of unusual or extra-ordinary protective behaviours an accident had occurred. Mothers sometimes experienced difficulties in sustaining their usual safety behaviours due to other pressures and distractions and as a consequence of not following their usual protective behaviours an accident occurred.
- Mothers rationalised about the safety strategies they employed and often the safety of the child was compromised as a result of the needs of other family members and because of financial constraints. Safety of one child was usually addressed within the wider context of the family.
- The mothers made complex decisions about the safety strategies they needed to employ in relation to their children's interaction with the environment. They believed that not all children were at the same risk of injury. This belief that different children would intrinsically have different susceptibility to accidents lead many of the mothers to only develop protective strategies in response to the exposure of their child to a specific hazard.
- Anticipatory guidance for developing safety strategies was useful in motivating those mothers who perceived a high risk of injury to their children, but less so for those who did not perceive their children to be susceptible to injury.

- Different perceptions of injury risk resulted in different protective strategies. Mothers who perceived a high risk of injury were more motivated to adopt environmental or other passive safety measures and to use safety equipment. When low injury risk was perceived, the mothers preferred to socialise their children to hazards and to rely more on supervision and education as the main safety strategies.
- The disadvantaged mothers were constrained in their choice of safety practices as a consequence of limited financial resources and their reliance on the local authority for example, to maintain the home in good repair. These mothers had lower levels of self efficacy and a more external locus of control compared with the relatively advantaged mothers.
- Several factors reduced the mothers' motivation to adopt safety strategies and of these, social context issues such as family structure were found to be equally if not more influential than the economic or financial implications of some safety strategies.
- Social context issues mediated the mothers' capabilities to provide safety for their children.



## Chapter 8

### What is the value of health visiting for preventing accidents to pre-school children?

*A good nurse scarcely ever asks a patient a question - neither as to what he feels nor as to what he wants. But she does not take for granted, either to herself or to others, that she knows what he feels and wants, without the most careful observation and testing of her own observations.*

*Florence Nightingale (1860)*

### 8.0 Introduction

Several health professionals have described their opinions of the health visitor role in preventing childhood injury in the research literature. Apart from the work of Laidman (1987) and Combes (1991), however, there has been relatively little research on clients' perceptions as opposed to professionals' perceptions of the health visitor role. This study is intended to help redress the balance and facilitate knowledge about clients' perceptions which can help inform the development of the health visiting service. The mothers' responses to the quantitative research identified variations in health visitor work to reduce injury in relation to the different family contexts. This qualitative research aimed to examine more closely the mother's accounts of the process of health visitor work with them and specifically in respect to attempts to reduce childhood injury. A further exploration of the mothers' perceptions increases an understanding of the value of organisational and professional qualities in health visiting from a different perspective. The research also offers an insight into important theoretical issues for both health visiting and injury prevention. The relevance of the social as opposed to the medical origins of health visiting become apparent in the sphere of professional practice, as do the personal and professional qualities of health visitors in contrast to organisational qualities.

## 8.1 The health visitor role: accident prevention?

In congruence with the findings of the quantitative study, few mothers identified health visitors as a major source of information on accident prevention and child safety. Most mothers did not identify with the health visitor performing a specific safety role in the context of their organisational or professional practice. The health visitor was, however, perceived as potentially the most appropriate person for working with mothers to improve pre-school child safety.

These married mothers exemplify the views of many mothers.

*EHS: Quite a lot of it you mentioned that you got information from shops or from magazines. Were you encouraged by anything else, actually, to use equipment, or do certain safety practices?*

*M1: Not that I can think of. I mean, possibly, the Health Visitor when she came to visit would .. again, I can't really remember her sort of particularly mentioning any sort of safety things. She probably did, but I can't remember anything specific that they were sort of telling us to do or not to do. It was really more to cope with their illnesses.*

*EHS: Did you have any information from the health visitor at all?*

*M34: Not really, I went back to work when Peter was quite young, after 7½ months so the health visitor I didn't see her that much. She came when he was a baby and then I went back to work so I never had time, I never went to clinics and things like that so I didn't really sit down and chat about these things. She came. But at that stage when she was coming he wasn't walking or doing anything like that anyway.*

When describing their encounters with the health visitors many mothers explained the health visitor did not visit enough at the time when they felt they needed safety information. The mothers often had a high level of contact in the first few weeks of their child's life, but these visits were seen to relate to the health visitor identifying health needs in the child and assessing if the mothers were 'coping'. The health visitor role was perceived as mainly offering advice about childcare and providing psychological support to the mothers. The mothers believed the health visitors did not visit enough at the times when their safety role would have been most relevant

and their value optimised, for example, as the child became increasingly mobile and autonomous.

### **8.1.2 Better late than never?**

The accounts of a few mothers depicted the health visitor role in safety becoming more evident after their child experienced an injury requiring medical attention. The mothers often recollected little or no health visitor role in safety until they experienced a post accident visit. The few mothers who had received these visits perceived them as mainly supportive. The health visitor was considered to have been the person who reassured the mother about her childcare skills around this time of stress and helped to relieve the guilt most mothers described feeling after an accident. The value of the health visitor role post accident was related to the health visitor's interpersonal skills for supporting the mother at a time of distress, to encourage her through reassurance of her capabilities and to relieve the mother's guilt through understanding the mother's situation. To a lesser extent the health visitors worked with some mothers to avoid similar injuries or other accidents occurring by identifying hazards in the home and discussing feasible safety strategies. However, the main purpose of the visits were perceived as enabling the mothers to continue to feel confident about their ability to care for their child rather than undermine their efforts. The health visitor role was not envisaged as intending to criticise mothers who have the main responsibility for caring for their pre-school child, but to empower them to continue in their caring and where possible make changes to benefit the safety of the child.

*M23: I think in these sorts of circumstances (after an accident) it depends on the person, they might feel a bit threatened, you know, that they are being accused of, I don't know, some form of neglect or doing something they shouldn't have done, you know, I am confident that I try and be a good parent as does their father and they (health visitors) were just more concerned about backup rather than accusing us.*

This mother identified how the health visitor's main concern was to reassure the family following the accident, but appreciated that the seriousness of her son's fractured skull could have been linked to neglect or intentional injury. As a

consequence of this she understood there to have been an inspectoral role to the health visitor contacts. Having self confidence was seen as enabling this mother to cope with the envisaged inspectoral capacity of health visitors.

This widowed mother below, explained how the health visitor helped to relieve the guilt that developed as a result of intensive questioning by other health professionals.

*M22: I think in a way, because I was feeling that guilty because I really felt the staff in the hospital made me feel it was my fault, I had done it.....Everybody you spoke to, every question was the same, how did it happen?.... If they had only said it once, end of story, but you go into casualty and they get the story and then our own doctor came in on the Monday, because a health visitor that was at the day nursery had contacted him and he came in and I said 'well I will take him up to the children's ward'. So he got up to the children's ward, you tell them on the admission and a wee while later the doctor comes round and you tell him and a wee while later another doctor comes and you had to tell him and it is all starting to build up. They think I have done it. ... I felt I was a criminal. I wasn't the criminal, it wasn't me who put the post up.*

*EHS: How was the health visitor?*

*M22: She just, she could just tell it was an accident that could have just happened to anybody because knowing what I was like and where it happened.*

These accounts illustrate how the health visitor knowing the families helped to alleviate some of the stress and guilt around the time of accidental injuries.

*M29: I went up after Philippa, that was the one that ended up in casualty, I went up to the clinic because I think it happened on the Monday and she got out on the Tuesday and it was the Wednesday when this clinic was on and I went up then and spoke to her (the health visitor) about it and she was just reassuring me I think because at that time it was me that was the worst. The guilt, you feel absolutely terrible and also Philippa when she was actually a baby, she was only about 8 weeks old she choked, she had a choking fit and that was another time we had to go into casualty and that was terrible, she was really, really ill and again I went up to see the health visitor and she advised me what to do if the circumstances happened again, how to help her because I just completely didn't know what to do, totally helpless, so was my husband.*

*So I have always kind of went after it (the accident) and spoken about it to try and make sure that I know what to do or how to prevent it again.*

This mother below, explained how the health visitor was a resource around different times of stress or conflict

*M36: If I had any problems, then all I had to do was to phone her (the health visitor) and she did come. We had a run in once. It is my sister in law who watches Nichola and she was in the hospital and there was a friend who was watching her who wasn't a registered child minder and someone had phoned her one day, 'I know you are watching a girl, I know when you watch her, if you don't do something about it I will'. So I phoned the health visitor and she was up the next day to try and help and see what we would do to alleviate the problem. She stopped going eventually. But if there is a problem she comes up. No bother.*

So for these mothers the health visitor was a person who could help relieve guilt and reassure them around the time of the accident in addition to suggesting approaches to first aid.

However, the lack of emphasis on safety prior to an accident caused some mothers to feel antagonism towards the health visitor role in post accident visits. Some mothers perceived that the health visitors were not doing enough to prevent the injury, but willing to reproach the parents after an accident had happened. The mothers who perceived the service as more critical and reproachful tended to have had less contact and a less well established relationship with their health visitor than the mothers who perceived the service as supportive. The diminished acceptance of the service was related to both the interpersonal, professional qualities of the health visitor and the organisational structure and content of the visit. The mothers were generally accepting of the potential benefits of post accident visits, but it was the health visitor's manner in undertaking such visits which was seen as unhelpful to a few mothers. The ability of health visitors to find time to visit after an accident angered some mothers who would have liked more contact with their health visitor in general to safeguard their child, not just after injuries.

The comments of this married mother of two children and lone mother of two children were typical of how the health visitor role in safety was perceived.

*M12: The health visitor only came when they were babies.... Although I am saying that if I called her up, she would have come quite willingly because she was a nice lady, but I think if she sees everything fine, she has that many other things to do.*

*EHS: You don't think there was anything to be gained by visiting after the accident?*

*M6: No, I think actually, I understand why they call, you know, I understood **why** she had to come (after the accident), but I think really, they should actually be more attentive than they are at first, in the first year or two years even because that is when the majority of things happen.... I understand the fact that it takes time but I thought that was the whole point of having a health visitor in the first place. And they have one or two health visitors for a full area of hundreds and hundreds of kids is a wee bit sad. I think we should have more, or why bother having one at all.*

This mother illustrated how several mothers perceived that health visitors were not attentive enough prior to accidents and that they did not invest enough time working towards preventing accidents, but only responded to their occurrence.

Post accident support visits were seen to have a place, but anticipatory guidance remained the mothers preferred method for receiving information on safety to develop knowledge and skills in safety. Constraints in service provision were seen to reduce the health visitors work with mothers and the perceived lack of health visitors called into question the existence of the service by some mothers as it was seen as unable to meet the needs of the people it was intended to serve.

### **8.1.3 The traditional health visitor role in safety**

A minority of mothers did report the health visitor as having discussed some aspects of safety with them, but often the discussions were considered brief and they felt more safety information would have been beneficial to them in caring for their children. However, most of the mothers who identified with a health visitor role in

safety considered the organisational timing of the health visitors' work to be inappropriate for their safety needs. The timing and content of development-related safety information influenced the mothers' perceptions of the appropriateness of the health visitor role in safety. These findings support those of the quantitative survey with most mothers valuing the accessibility and availability of the service, but the poor timing and content of safety work limited the value of the accident prevention work. Figure 8.1 illustrates the positive and negative aspects of the organisational qualities of the health visiting service for promoting safety derived from the mothers' accounts in this study.

These accounts given by two married, supported mothers represent the few mothers who related to the health visitor role in safety. Whilst the first demonstrated that some health visitors related safety information to development, the second mother illustrates the concern about the organisational aspects of the health visiting service in relation to the timing and content of visits:

*EHS: Has anybody helped you with safety over the years? Have you discussed it with anybody?*

*M8: With the health visitor. At check ups....I suppose I've looked through catalogues and they give just basic ideas. Mostly it would have been the health visitor and experience with my sisters.....I remember Becky's 3-year check she (the health visitor) was talking about road safety. I think she came to the home for a 18 month check and mentioned household safety and had a look around generally....Now I feel that I ought to know the basics of safety really, I certainly wouldn't be offended if the health visitor reminded me of them or came and made suggestions but I wouldn't see it as a prime necessity at the moment.*

*M10: The health visitor when she came initially, like it was right at the beginning, you know, when he was just very small she mentioned some things, she mentioned about the cupboard locks and all those kind of things, but really it was only mentioned briefly and I don't think a lot of people would have remembered it and taken it on board from the time it was mentioned. I think it maybe could have been done, mentioned later, at a later time when you were ready to be thinking about it..... I can't think of anybody else who would have done it because you wouldn't have gone to the doctors for that kind of information.*

### Organisational qualities of health visitors to promote safety

<i>Positive qualities</i>	<i>Negative qualities</i>
visited at appropriate times as the child developed	'only visited when the child was a baby'
'unhurried' at visits	'hurried', 'rushed' visits
proactively contacted the mother	waited for the mother to contact the health visitor
accessible, mother 'could always telephone' the HV	HV 'did not phone' or 'drop in' on the mother
spoke about issues that the mother raised	directed or controlled the topics of discussion
HVs made themselves 'available'	HVs 'did not visit enough' before accidents happened

**Figure 8.1**



The health visitor role was perceived by a few mothers as beneficial for helping them to think about safety strategies and for motivating the mother to adopt safety action. A few mothers spoke of the health visitor discussing issues of safety in some detail, these tended to be the supported mothers as these accounts below illustrate.

*EHS: How have you found the help from the health visitor, have you had much discussion about safety or has it been mainly the leaflets?*

*M31: She is an excellent health visitor and she sits and discusses various things, often with a leaflet and ask, 'have you thought about fire safety'? And she would hand you a leaflet then. She is good that way.*

*M29: My health visitor sort of advised me about things that attract them. It is funny because there are some things that you would just never believe they would do at that age, the things they get into, for goodness sake, 'how did they think of that' and quite a few times the health visitor said 'watch for this, watch for that', likes of the toilet seat, I had to get a lock for the toilet seat. There are that many things, fire, door, toilet pan, she was trying to wash her hands or something in the toilet, things like that. You just don't honestly, you wouldn't think of, there are some things that you just think 'oh god I should have thought about that',*

*EHS: Was the health visitor helpful in that way?*

*M29: Really helpful. Giving me bits of advice you know and telling me what kind of equipment and things like that you could get.*

These statements suggest that some health visitors were identifying the mothers' needs for safety advice and gave information. There were, however, some health visitors who under estimated the mothers' requirements for accident prevention information or delivered safety information in an ad-hoc manner.

*M9: The health visitor, when she first visited, she left different (safety) leaflets*

*M17: I mean you get brochures that the health visitor gives you when she was wee, but I haven't really had a great deal of contact with the health visitor.*

Of the few mothers who identified with a health visitor role in safety most described this role as the health visitor mainly just leaving leaflets about safety for them to read as opposed to entering into dialogue with the mother. The importance of oral information was made in the earlier chapters and in studies by Belenky et al 1986, Tannahill 1990 and described by Welch 1991. It is possible that some health visitors adopted a covert approach to safety and that this led to many mothers perceiving their contribution as mainly unremarkable. The use of safety leaflets or more covert approaches to safety which submerged it in more 'general conversation' may have been employed so as not to offend mothers. There also may have been concerns that a dialogue about safety would provoke antagonism or hostility at visits.

*M39: I think health visitors are a wee bit scared as well. Because somebody might go, 'excuse me a minute', not understanding they are trying to teach them, especially a young couple with a new baby they might take offence to somebody, you understand what I am saying, people do, you have to be very careful I think who you are talking with now. I think they are a bit reluctant to speak out with a certain family because they are maybe scared of them and to be honest with you I don't blame them and it is a shame because this is maybe where things can happen, in the home environment.*

This mother expected that health visitors could encounter some aggression as a result of discussing a sensitive subject such as the prevention of accidents, remarking upon the conflicting views of health visitors for promoting health and surveillance.

Interestingly, the supported mothers generally associated the health visitor role more with safety advice than the lone mothers. The health visitors' role in accident prevention could be perceived as limited and at times almost a barrier to helping mothers adopt safety actions as they were mainly receiving snippets of information. The interpersonal skills were perceived positively by most mothers, but for a few mothers the poor interpersonal skills of the health visitor diminished their enthusiasm to adopt safety strategies. However, the apparent lack of health visitor role in safety did not discourage the mothers from believing the health visitor had a potential contribution to promoting safety in the future. The majority of mothers recognised

the opportunities for health visitors to develop the safety component of their role and the health visitor was most frequently identified as an appropriate person to work with the mothers to reduce childhood injury in the future.

Health visitors have also been recognised by parents to have an important contribution to the reduction of childhood injury in several other studies (Combes 1991, Cameron and Fletcher 1989, Roberts et al 1996). The findings of this study supports those of the earlier studies, but also draws attention to where the gaps in service provision are evident to the population the health visitors are intended to serve. Much of the limited, earlier research on the health visitor role in safety evaluated purely the health visitors' educational role to prevent accidents in families with young children. Few mothers in this study or the earlier studies elaborated on their perceptions of the health visitor role in safety with regard to the environmental or enforcement principles of accident prevention suggested by Avery and Jackson (1993). This study illuminates the nature of child safety as embedded in childcare and clarifies how it is socially constructed.

#### **8.1.4 Safety embedded in childcare**

The mothers' descriptions of the importance of the health visitor role in safety were embedded in aspects of their role which were perceived as relating to general childcare issues or maternal support. Many mothers were unable to recall specific safety advice or information given in the traditional teaching sense of active and passive learning (Rolls 1992), but were able to associate the benefits of health visitor support in the more medical and social sense as promoting the mothers' mental health or the social and physical health of the child. These acts of the health visitor can be seen to promote indirectly the safety of children. For example, a single, lone mother when asked about the health visitor role and safety, identified the health visitor as important for helping her to learn about hygiene when wiping down the baby changing mat and kitchen work tops before preparing bottles. The mother then went on to explain the health visitor had helped to organise a 'Gingerbread' lone parent holiday for her and her two children. The health visitors also arranged for

support from a social work assistant who the mother spoke positively about and also organised a nursery place four mornings a week to ease her childcare responsibilities. The mother expressed how this had helped her mental and emotional health and subsequently her ability to cope with childcare and improve the quality of childcare.

The accounts of these two single, lone mothers of two pre-school children illustrate the complexity of evaluating health visiting, particularly in relation to preventing accidents and promoting safety.

*EHS: You have got a lot of knowledge, a lot of information about the kind of things that you are doing. How did you build up all that knowledge. How did you find out all the things that you do?*

*M13: From the health visitor....The nursery were very good. They told me quite a lot of things.*

*EHS: Did you contact the nursery or was that organised for you?*

*M13: The health visitor got the social work assistant and it was actually a social work assistant who organised it. She helped me get the children in.*

*EHS: Do you think that has helped you?*

*M13: Yes.*

*EHS: In what kind of way?*

*M13: Well, first of all I couldn't cope with the children. Just because I have got the two of them all day everyday. I was just going off my head....I can cope better now I think, just through reading books to them and, I just sort of know a lot I think....As soon as I get up, they want their breakfast sort of straight away so I just give them their breakfast, get them dressed, get them out. ....I try and keep the house clean and use a changing mat and, keep the surfaces clean.*

The lone mother explained how the health visitor organised resources to assist the mother to help her care for her children and how through these psychological and social resources the mother felt more capable of caring for her children.

This mature, lone mother received information about a holiday for lone parents through the health visitor.

*EHS: Has the health visitor ever discussed safety with you at all?*

*M28: No. I don't think so. I am trying to think when he was a baby?*

*EHS: She did visit when he was younger?*

*M28: Yes. I mean when they are a baby you are worrying a lot if they need a cough bottle or don't they?*

*EHS: What kinds of things did you see the health visitor doing with you when she first came in those visits? She wasn't discussing safety. What did she see her job as being with her time with you?*

*M28: Just I think she just could, she was quite good and could assess the situation. When she was visiting me I was still with my mum and dad and I think she could see everything was quite safe. I think she could just tell. I mean, there was no smoky atmosphere, everything is clean. Not that they are just on about cleanliness, but you know what I mean.*

*EHS: What do you think she was doing at the visits with you?*

*M28: She was just, seeing if we were okay, feeding okay. Seeing that he was thriving well....She always asked me if I was okay. I think she feels, I don't mean she feels sorry for me, she knew I had gone from a job in the Channel Islands to be a single parent. She always said I should be getting out more, she was trying to, she gave me the gingerbread information (Holiday information for lone parents) and gave the addresses of the mother and toddlers groups, in fact she got me a form for one of them.*

This lone mother explained how she felt health visitors use their skills of observation and therefore do not need to explore safety verbally with mothers. The health visitor who utilised psycho-social resources such as the gingerbread holiday was seen as helping the mother to cope with childcare and her own emotional health.

Arguably much of the health visitor work in child safety appeared to be implicit in childcare advice. The mothers rarely identified the health visitor role in safety in relation to their social and psychological approaches to their work. The traditional view was for mothers to expect health visitors to tell them about safety either overtly

or covertly, but the additional benefits of the psycho-social aspects of their work seemed least understood for promoting child safety. The mothers recognised the benefits for promoting their mental health and that this would enhance the quality of their childcare, but not explicitly their ability to protect their child from injury. Safety, it seemed for the majority of mothers, was embedded in childcare.

It is arguable that this more social approach to promoting the health of the family did more to prevent childhood injury than the act of giving the lone mothers 'traditional safety information' at this stage in their lives. However, the fact that the lone mothers did not specify the health visitor as contributing to the safety of their children, but emphasised their contribution to promoting childcare and referring the family to others to facilitate resources for health, highlights the problem of evaluating the health visitor contribution to safety and other aspects of health visitor work.

What becomes evident is the multiplicity of approaches to promoting safety by health visitors, but that the approaches were often not directly associated by the mothers to reducing childhood injury. Earlier injury prevention research has also failed to address this aspect of preventing safety due to the non-medical or non-conventional approach to promoting safety through psycho-social support. Specific issues regarding the implicit nature of safety in childcare and lack of directly identifiable role need to be addressed. Considering safety to be embedded in childcare is beneficial as it is seen as central to the child's well being. On the other hand the findings suggest that safety is not emphasised in many childcare issues with the mothers. The health visitors' covert approach to their work is again leading to some ambiguity about understanding the nature of their work, on the other hand the multifaceted nature of a single intervention is difficult to make explicit to all people, but clearly necessary for evaluation purposes.

This implicit view of safety may be contributing to the problem of childhood injuries and unless safety is made more explicit in discussions about childcare, we will continue to see childhood injuries as the single main cause of morbidity and mortality for children between the ages of one and five years in the United Kingdom (Scottish

Accident Statistics 1994). Like the common sense approach to knowledge, the view of safety as being implicit in childcare needs to be valued, but the limitations to such approaches needs to be recognised and addressed.

Mothers' often view safety as implicit in childcare and many are unable to separate the safety of their children from how they care for children. Safety as part of everyday life in childcare appears to be how mothers view reducing childhood injury, however many professionals perceive safety as solutions to specific hazards in the environment through specific safety strategies, including the implementation of specific items of safety equipment, safety behaviours, legislation or design improvements (Avery and Jackson 1993). Whilst some mothers may also hold this view for well known hazards, much of their endeavours to protect children remained implicit in their approaches to childcare and social interaction.

### **8.1.5 Summary**

The mothers considered various aspects of the organisational qualities of the health visitors in their evaluations of the contribution of health visitors to reducing childhood accidents. Apparently resource constraints limited some of the organisational qualities of the service, but generally the service was perceived as accessible, with most mothers appreciating that they could always contact the health visitor by phone or visit their work base. The lack of strategic timing or direction to the health visitor role in safety, inhibited the value of the service for safety work from the mothers' perspective. Evidently, there was a need for improved organisational structures including the development of a strategic direction and specification of health visiting service priorities for injury prevention work. Most mothers did not perceive that the health visitors had a remit for preventing accidents with them. The minority of mothers who associated the health visitors' work with children's safety remarked that this often related to distributing safety leaflets and only a few supported mothers recognised that the health visitors had entered into dialogue with them to promote the safety of pre-school children.

The quantitative and qualitative research clarify organisational priorities for future health visiting work to promote safety from the mothers' perspectives. This knowledge when used in conjunction with accident data should assist the development of a strategic framework for injury prevention work in health visiting. Greater acknowledgement of the social construction of safety needs to be emphasised in the principles of accident prevention to complement the traditional approaches of education, environmental change and enforcement of legislation for reducing childhood accidents.

## 8.2 The ball is in your court

The professional qualities of health visitors regarding their willingness to visit when the mother requested them to were also valued. However, mothers had mixed opinions about the health visitor placing the responsibility for initiating contact on the mother. It seemed the supported mothers were generally happier with this approach than the lone mothers.

This lone mother of two children typified the mothers' reluctance to initiate contact with the health visitors.

*M6: Maybe if they (health visitors) called even once a month or once every two months or something, initially maybe just a five minute call just to see that you are okay, or even a phone call even to see if you were okay, are you coping, if you weren't did you want her to come up or is there a place you can go or are you still keeping a link, instead of, a lot of mums will not do it, they sort of put it back in our court, if you have a problem, phone us.*

The mother is reflecting on changes in patterns of health visiting and how she preferred contact with the health visitors to be little and often rather than only at developmental assessments or in response to feeling needy as a result of a problem.



Almost without exception the lone mothers felt they required more social and emotional support from health visitors than they were receiving. The majority found the health visiting service beneficial when they were in contact and their main criticisms related to health visitors not presenting themselves more often. The mothers described feelings of inadequacy and vulnerability because they wanted more support and felt relying on the mothers to seek help when they were needy was oppressive, rather than empowering. The work of Olds et al (1998) and Cole et al (1998) also emphasised the needs of lone mothers and the benefits of home visits to improve childcare, safety and mothers' emotional health. Marden and Nicholas (1997) also identified lone mothers to have more need for childcare information than mothers with partners.

The evidence from this qualitative work supports the findings of the quantitative study. In both studies the findings suggest that lone mothers perceived more benefit from professional social support given by health visitors than supported mothers, but that they did not receive more support in recognition of their specific lone motherhood needs. Figure 8.2 illustrates the positive and negative aspects of the professional qualities of the health visiting service for promoting safety derived from the mothers' accounts in this study.

When compared with mothers with partners, lone mothers were not a higher priority for health visitor initiated home visiting. Also the lone mothers were less of a priority when compared to other features of disadvantage such as local authority housing or young maternal age which were associated with more health visitor contact. Evidently, the health visiting service had underestimated the needs of lone mothers and the perceived benefit of the professional qualities of the service. It would appear that many mothers valued the professional qualities more highly than the organisational qualities of the health visiting service. Although the service was accessible in the sense that mothers valued knowing how to contact the health visitor, the access was understood by mothers to be on the health visitors terms, as much of

the contact revolved around developmental assessments and rarely the mothers' specific needs for the service.

As these lone and supported mothers explained

*M6: What happened, we had about 4 or 5 (health visitors) in about 6 months unfortunately. I think if they saw you coping okay they just sort of left you to your own devices. But I knew if I needed them all I had to do was phone them..... I mean they come in for the first couple of weeks and you can't really talk about safety when they are in their prams. You don't really see them, the only time you see them after then is when you go for their assessment like at a year or if you have an accident maybe.*

*M23: I think it is something that, I am quite a capable person and I think people generally see that and they just leave me to it.*

The mothers described how the health visitor varied contact in relation to need based on how they saw them 'coping' and if things seemed 'okay' they were unlikely to receive health visitor contact other than at routine developmental assessments. The mothers perceived the health visitors to be skilful in assessing their needs and identifying the priorities for home visits. The mothers rarely seemed intentionally to influence the level of contact for their own benefit. Many mothers seemed to feel there were a lot of other mothers more in need of the health visitor than themselves and felt they would be using up a limited resource if they sought more health visitor support and contact. It was generally accepted that as the child became older or the mother had more childcare experience, the health visitor would decide the mother should have less need for contact with the health visitor. However, several mothers explained they needed more, not less safety advice as their child was getting older and more autonomous. The health visitors' professional skills were seen to relate to being able to make assessments about the mothers' needs and the mothers were not inclined to initiate contacts if the health visitor had not identified a need for them. It seems that the health visitors and mothers have not yet achieved the 'joint agenda' and 'client centred' approach intended by the profession in the revision of its principles for health visiting (Twinn and Cowley 1992).

**Professional qualities of health visitors to promote safety**

<i>Positive qualities</i>	<i>Negative qualities</i>
'earthed' or 'connected' the advice, so the mother could understand it	'text book' approach, not adapted to the mother's context
'friendly', 'approachable'	'pushy', domineering
valued the mother's knowledge	did not take into account the mother's knowledge
'reassured' and inspired 'confidence'	'checking up' or adopted an inspectoral capacity
relieved guilt after accident	heightened feelings of guilt and blame after accident

**Figure 8.2**

The mothers rarely described the health visitor as undertaking environmental and political action to promote child safety. This finding is not surprising since most of this work takes place away from the home visit or contact. Political action is often through health service management, professional bodies and local councils. The political role may not be particularly well developed in relation to preventing childhood injury and further research should consider the health visitor's role in safety in relation to advocacy, policy developments, regulation and legislation. As for their environmental role this too requires further clarification. Several health visitors have been involved in safety equipment schemes (Thompson et al 1998). However, their influence with local councils has lessened over the past few years for promoting safety in the local environment.

The psycho-social approach to promoting health in families does not seem to fit with the conventional principles of accident prevention (Avery and Jackson 1993) as this role is neither educational or environmental and definitely not enforcement. Whilst narrow perceptions of safety promoting endeavours persist, much of the health visitors' work to promote safety will be considered as outside the boundaries of accident prevention and simply part of childcare and promoting the mother's mental health.

### **8.2.1 The health visitor role: development and illness advice**

Many mothers saw the health visitor role as mainly performing developmental assessments and offering advice on the treatment of childhood ailments. Some mothers recognised that the health visitor was also concerned about the mothers' health as well as that of the children:

*EHS* What kind of thing did she help you to do when she was here. You may not feel it was specific to safety, but what kind of things do you think she was doing when she was here? I'm assuming she visited you at home?

*M1:* She did, yes, she visited me at home. Again, thinking back to when she was visiting me, she was checking the baby and asking what sort of, well, how I was, anyway, and how I was coping with the baby. But as far as I can recollect, just sort of

*checking the baby over and seeing that he was okay, and asking if there were any problems.*

*M6: I have never been asked about safety and they have never actually said to me anything about safety. They just ask like 'how they are feeding?' every day. If they have got diarrhoea or a temperature, that sort of thing. I remember that sort of thing being asked but I can't remember safety. 'Are they drawing? Are they going to the toilet?', mainly, no, I can't remember anything about the house at all.*

Safety was not recognised as being a specific component of the health visitors' work with most families, but assessing the child's development and advising on childcare issues were seen as the main purposes for the home visit. Some mothers spoke of the health visitor in an inspectoral capacity 'checking up' on the family rather than in a supportive capacity. A few mothers explained that they expected the health visitor to be looking for child abuse or neglect. However, most mothers felt the purpose of the visits were for the benefit of the child, to ensure it was receiving appropriate care rather than to criticise parenting. Several mothers felt the health visitor was there to support them emotionally and help them cope in caring for the family.

Many health visitors were not seen as using the child developmental assessment programme as a means for offering age or development related safety information. Mothers appreciated being reassured that their child was developing 'normally' and saw the health visitor as undertaking a series of tasks orientated around assessing the child. These findings suggest that many health visitors did not take the opportunity to raise accident prevention as a topic for discussion or volunteer safety strategies relating to child's stage of development at the assessment contacts. However, a few mothers did recollect health visitors relating safety information to their child's development. The competing demands of the developmental assessment and other family concerns may have reduced the time available for discussing safety at the developmental assessment contacts. Ehiri and Watt (1995) reported safety education at developmental contacts as unlikely to afford proper attention to the subject. The

mothers' accounts would support this view and visits between developmental assessments were perceived as more useful by the mothers in this study.

### **8.2.2 The health visitor role: to promote the mothers' confidence**

Many mothers, especially the single, lone mothers wanted the health visitor to reaffirm that their parenting skills were appropriate and expected the health visitor to offer guidance in approaches to childcare. Many of the lone mothers spoke of feeling more confident when the health visitor encouraged and reassured them about the ways in which they were caring for their children. As several of the lone mothers explained many other people were more than happy to be critical of their achievements including their own family and friends that it made the encouragement and confidence building from the health visitor all the more important. The mothers wanted more home visiting to fulfil this expectation of the health visiting service.

The health visitor had a substantial role in promoting the mothers' confidence when caring for their children. This single, lone mother's view was typical of the lone mothers:

*M2: I don't want her to be there every two seconds, checking up on me, it is just that it is handy to have them there, you know. I think it would be better and you could ask them things, say am I doing this right? Instead of going to your mothers or something you know..... I'm not saying I want them there all the time but the odd time. I think it is particularly hard for me because I'm on my own. I don't know about married couples, they don't want it but I found it hard to start. I worry now. Ann doesn't give me any peace at all.*

In having to care for her pre-school child alone this young, lone mother particularly valued the reassurance from the health visitor, but felt she needed more contact with than she had. Again the conflict between promoting health and the inspectorial role is evident in the mother's account.

This supported mother below also felt reassured by the health visitor who was seen as more accessible than the doctor.

*M29: Well really, in a lot of cases it is quite good to have your health visitor as your kind of first point of advice maybe if your kids are not well or something like that. If you don't want to bother a doctor, phone the health visitor and say what do you think? My oldest girl she is actually she is very small, dainty, and once she was a toddler she was a terrible terrible, eater, terrible eater and many is the time I just couldn't get her to eat she was just a picky wee thing and many is the times I called my health visitor in tears, 'what am I going to do, she is not eating' and she was really good and gave me a chart to fill in everything she ate and drank in a week and came back and we looked at it and looking at it then she could reassure me that it wasn't too bad so often I have got in touch with the health visitor but for advice you know, whether if she thinks I should call a doctor or the development sort of thing, you know.*

The health visitor was seen as working collaboratively with the mother to clarify issues so she could make informed decisions about her child's health.

Some mothers required more home visiting to reassure them of their child's health and progress and to inspire confidence in the mother as this married mother explained.

*M10: They don't just pop in as they get older, they only do that when they are small, up until he was about 9 months I think she used to come sometimes. She used to phone and see if she could come and I used to take him to get weighed sometimes as well.... I think maybe I would have liked if he had been checked at one and then at two and then at 3. I think 18 months is a very long time to wait. Because if there was a problem with your child I suppose the average person would probably pick it up but there must be some people who wouldn't, like if the child wasn't speaking correctly or something like that. Also I would think there must be children who maybe aren't being looked after as well as they might be, and she could pick that up as well.*

This mother pointed out that ensuring children are healthy physiologically was the main concern of health visitors, but alluded to issues of child protection from intentional injury and neglect.

Many mothers wanted the reassurance of their child being seen by a professional with good knowledge about the development of children to identify as early as possible any problems so that they could be 'treated' or for appropriate services to be mobilised to help the child. However, there remained a fairly common opinion that health visitors were there to protect vulnerable children, even from their own family, not so much the public. Identification of neglect and abuse was important for many of the mothers as they felt few other people would be in a position to approach families about the well being or care of their children. Interestingly, few of the mothers felt this was the purpose of the health visitor work with them, except for a few mothers at post accident visits. The majority of mothers described aspects of the health visitors' work as empowering, facilitative and reassuring in much of her work. Developing the mothers confidence was seen as a priority for the mothers when the health visitor made contact and although the supported mothers felt this was less important than the lone mothers it still featured prominently in their views of the service. These findings contrast with those of earlier studies by Mayall and Foster (1989) and McIntosh (1986), but are congruent with a more recent study by Machen (1996) who also identified an increasing acceptance of the health visiting service as it was perceived relevant to the mothers' contexts and needs. It would seem health visiting has gone some considerable way to evolving to meet the needs and expectations of the people the service is intended to serve since the studies of the past decade or so. Yet there remains some aspects of the educational preparation of health visitors for reducing accidents that need to be addressed so that the organisational and professional qualities of the service can be valued by mothers.

Most of the lone mothers felt they would have benefited from more home visiting from health visitors. Mothers spoke of their need for emotional support to promote their mental health. Many of the lone mothers were concerned about their own well



being and explained they found it quite difficult to consider the child's needs ahead of their own other than to provide for basic material needs. This was not the case for all lone mothers, but particularly the younger mothers.

The accounts of these two young, single, lone mothers illustrate this finding:

*EHS: What things do you think are more important to do safety wise? If you have a new mum starting out, what kind of things would you say to her are most important to do?.*

*M13: I think look after yourself. If you can't look after yourself you can't look after your kids sort of thing.*

This young single mother described a gradual development of her ability to care for her two pre-school children following practical and psychological support from the health visitor and social services. Like many of the young, lone mothers she found reflecting on safety and articulating the issues complex.

This young, lone mother was able to more clearly articulate her views on safety issues, but also focused on her own emotional health as a pre-requisite for caring for her young daughter and providing a safe environment.

*EHS: Looking back then over what you have had to do on your own, what kind of things do you think the health visitor could help you with now or what would you have liked help with over the past time?*

*M2: Just to know there is somebody to talk to if you must. I have had a few problems over the past months just with myself and I have tried to find somebody to go and talk to, but I have not had that somebody there, you know. I'm trying to cope on my own, but it's just not working so I am needing to find somebody that will do something, even just to shout at, get all my problems off because I can't keep going to my friends and that and the doctor doesn't understand. My doctor anyway.*

This young, lone mother spoke of the need to have someone to 'shout at' as did many of the lone mothers in this study, reflecting their need to express themselves and share their thoughts and concerns with other people.

The mothers found the constant pressure of caring alone physically and mentally exhausting with little reprieve. The social support provided by health visitors or through their referrals to other agencies afforded mothers the opportunity to share their concerns and express themselves.

These lone mothers below explained the constancy of childcare and not having time to themselves for even the most basic of human functions. The mothers were trying to establish some time for themselves alone to recharge their own batteries for continuing to care for their children. The mothers sought help from people and agencies they felt would care well for their children in their absence. They ensured the children were stimulated and that they enjoyed their time away from the mothers too.

*M2: The last nursery she was at, I did speak to the teacher, I got quite close to the teacher and I could speak to her about my problems and that and she knew I was having problems...A lot of the time I was with the social work assistant and she helped a lot but I don't see her now... She was more of a friend to me actually....I am missing that support, not for Nichol, but for my sake for somebody to talk to, somebody to shout at, ken. Like this isn't happening.... Playgroup was useful. They were quite good and it gave you a wee bit of space away from them and they get space from you and they get to play.*

It was important for the lone mothers to be able to have some time away from their children to take stock of their own lives.

*M28: I mean I go to three mother and toddler groups a week and I will hopefully get him into a playgroup after the summer and that will probably, he will feel the benefit of that, getting him 2½ hours and then you are away from him. He is quite clingy. He is not clingy, clingy, but people feel he is good he plays away at the toddlers group, but in the house he is, he likes to be lifted and with you, after your tea you don't get a cup of tea in peace, if there is somebody else in the room he tends to play better..... I think you see sometimes come tea time, they will get quite tired and that - Christopher gets quite funny and clingy at that stage when you are making tea, I am bringing Christopher up on my own I think that is tiring as well.....I think, well, unless my mum and dad take him you never get away from him, you know what I mean. You are continually*

*with him and then he comes into my bed a lot. Then obviously you are with him all day and all night.*

This mother's account illustrates how caring alone was seen as stressful due to the constancy of the care.

The single, lone mothers felt they needed to maintain their own mental health to care well for their children and when they felt they had no one to share the burden of childcare with they felt most challenged, both physically and mentally. The mothers expressed how they felt a partner could be supportive and capable of relieving the mothers of some of the burden of caring for children safely. The mothers felt that a supportive partner would be a help, especially at bath times and meal times or if the mother wanted to be alone for a short period of time.

As this single, lone mother explained

*M28: I mean, you don't have a husband to take them away on a Sunday afternoon or make you a cup of tea after your bath, you know what I mean. You are just on the go all the time... like now he (the child) is down at my mum and dad's...I try and not bother them too much. It is tiring for them. A 2½ year old running about.*

The supported mothers expected similar forms of help from their partners as that which was expressed as missing from the lives of lone mothers. Providing practical help to allow the mothers a break from the constancy of childcare was important.

*M14: Her dad comes back at 5 o'clock he is there at the evening and is there for bath times.*

Particularly in the absence of a partner, the health visitor was expected to fulfil in part, the role of someone the mothers could express themselves to, a person who would spend time and listen to the mothers. The lone mothers considered this beneficial for their own mental health and the support gave them strength to carry on with their responsibilities. However, many lone mothers perceived that they would have benefited from more frequent contact than they had received. Several mothers,

particularly the single, lone mothers felt that they were unable to cope or effectively manage the domestic routines, childcare and maintain their own health. Some of the mothers felt the health visitor failed to respond to their need for increased visits for emotional support and practical advice at this time. The mothers believed the difficulties of their situation were self evident and that they would not request increased visits and that the health visitors with their professional experience would identify the mothers' need for supportive visits. Even when the mothers considered that the health visitor was not visiting as much as they would have liked to help her develop confidence and emotional stability they would not ask for visits. The health visitor often was perceived as the person who helped to arrange time away from the children through nursery places and voluntary workers, but assisting lone mothers to cope with their emotional needs was perceived as an area of health visitor work that should be developed. The supported mothers did not express to the same extent this expectation of on going emotional support from the health visiting service.

Many of these psycho-social aspects of health visitor support go largely unrecognised as making a contribution to the prevention of accidental childhood injury. It is plausible that health visitors who provided emotional support to mothers and who promoted their mental health were indirectly influencing the well being of the child and preventing childhood accidents. The mothers who received reassurance and confidence building visits felt better able to care for their children as they were more emotionally composed. Arguably the quality of childcare and safety was improved through the health visiting contribution to supporting the mothers and improving their confidence. When the children were cared for away from their mothers they may have been in less hazardous environments than if they had been cared for continually by a stressed lone mother. This element of the health visitors role in reducing childhood injury has been a relatively neglected area of interest in contrast to the educational role of delivering specific safety advice in response to specific hazards. Since safety can be identified as being embedded in childcare, advice and emotional support given by health visitors about childcare practices will probably positively affect the safety skills of mothers. Olds et al (1998) and Cole et al (1998)

have identified the value of home visiting for improving the mothers' sense of self coherence and the quality of her childcare skills and safety within the home.

Despite many mothers valuing the reassurance and confidence that health visitors inspired in them, many aspects of psycho-social support were largely unrecognised by mothers as contributing to their pre-school child's safety. Many mothers did not appreciate the psycho-social benefits of health visiting as contributing to attempts to reduce accidental childhood injury as they remained focused on health visitor work as educational. The mothers' accounts reflect the value of clients' perceptions when evaluating or reflecting on an aspect of clinical service. These accounts also illustrate the limitations of evaluation by people other than those providing health care services. This is not to negate the value of the clients' or service users' accounts but illustrate that some dimensions of the service will simply not be apparent to them. This is particularly so when clients are not involved in the planning of their health care.

### **8.2.3 The professional qualities of health visitors as opposed to their organisational qualities**

Several mothers elaborated on aspects of health visiting which pertained to the more 'professional' values of the health visitor as opposed to the organisational values (Figure 8.2). The professional values included the interpersonal skills of the health visitor and how the working relationship was orchestrated. Many mothers described how the health visitors were knowledgeable about their sphere of work in addition to the social contexts of the individual clients. The mothers' accounts suggested many health visitors were credible and informed practitioners with highly developed communication skills which enabled them to deliver an individualised service to families in different social contexts. There was however, some evidence that a few health visitors demonstrated poor interpersonal skills with the mothers and this lowered the value of the service from the mothers' perspectives.

The findings suggest the health visitors' interpersonal skills including their manner and the way in which they spoke to the mothers were as important to the mothers as the actual purpose and content of their discussions. The mothers required the health visitors to have good communication skills including a friendly, non dictatorial approach and the capacity to offer information then allow the mothers to decide the most appropriate course of action for the family's situation

The accounts of the married, supported mother and single, lone mother below illustrate these points emphasising the importance of making suggestions to mothers rather than telling them what to do:

*EHS Do you think there's a role for health visitors in accident prevention and safety?*

*M1: Well, that would be quite difficult because obviously, I don't know, I mean, you don't want people coming into your home and **telling** you what you should do and what you shouldn't do, but if somebody could **advise** and help along the way, but sometimes you object to people **telling**, I know I don't like anybody coming into my house and saying 'You should do this and you shouldn't do that'. You don't like people telling you, but if they have some form of, like, give advice and make it clear it is advice, and some leaflets telling you about what can happen, the best way to deal with it if it does, and things to do to prevent it happening in the first place, rather than to let it happen. Yes, I certainly think there is some way that they could help you and advise parents how to prevent things.*

*M2: If they thought you were doing something wrong maybe say 'well maybe you should do it this way,' not to say 'you are doing that wrong', say 'maybe you should do it this way maybe'. Don't say 'don't do that because that's wrong' kind of thing... I think if they see something wrong they should kind of suggest things, rather than saying you should be doing this, just suggest what they could be doing to make it better for themselves, suggest things, I think.*

The mothers identified the need for health visitors to utilise good skills in communication to adapt information so that it is acceptable to the them.

Many mothers welcomed the health visitor who could make suggestions in a friendly manner to help them keep their children safe. Several studies have remarked upon the importance of a relationship built around the concept of friendship in health visiting and nursing (Davies 1988, Clark 1984). Some features associated with professionalism were not in accordance with friendliness. For example, the health visitors who were considered to be 'text book' in their approach, although knowledgeable they were not seen as using their skills in a friendly manner because they ignored the more personal approach and did not relate the information to the mothers context, as illustrated in the accounts of these two supported mothers.

*M4: My first health visitor was in (name of town), and was a distant relative, we were really more like friends, it didn't seem like somebody giving me advice, if you see what I mean. When we moved to (name of town) the one that came put my back up.... As long as they didn't do it without paying any attention to what you have done, without giving you credit for having done something, then I would be quite happy, but the one from Falkirk gave me a list of rules without ever looking to see that I had done quite a few things and obviously thought everybody was incapable and that I think will put peoples back up, they should pay attention to the mothers, see what their concerns are and maybe point out the things that hadn't occurred to them. They can't think of everything..... She came in and said 'put him in a play pen and stay there all day except when he is in the high chair' , she never looked to see if I had taken any precautions for safety, but assumed that I had no thoughts of taking any precautions in keeping them safe.*

This mother illustrated how the health visitor's lack of appreciation for her own knowledge, efforts and context were considered unfavourably. The health visitor didn't *look* but *assumed* to know about her client. To refer to the quote at the beginning of this chapter from the writings of Florence Nightingale (1860), these qualities of observation and testing of observations are important in nursing, particularly health visiting.

This mother explained how she felt the health visitor was imparting her agenda on the mother at a visit after the birth of her twins rather than seeking an understanding of her needs.

*M11: Well, the first health visitor that I had, the lady that deals with me now she was on holiday or sick or something and the first lady, I felt like they were, just like babies and I was just a new mother and I had never had a baby before and I was nervous and she came in one morning and she sat and she said 'are you going to bath the babies' and I said 'yes'. 'Would you like me to help you?'. I said well, I would rather do it, because I thought I would make my own mistakes, you know what it is like and I felt she was sort of more, how would you put it, not asking me how I felt, but wanting to make sure I was doing things right and I didn't like that.*

In this account the mother described the health visitor as more concerned about the technical aspects of caring than enabling the mother to develop her own skills in caring for her child. This gave the impression of surveillance rather than facilitation.

The mothers appreciated a health visitor who could relate to their personal situation and make practical suggestions. This seemed to suggest the health visitors had a more individualised and therefore interested approach to each family as opposed to a broad or more superficial approach. Relating the information to the mothers' context 'earthed' the information for the mothers and they perceived the health visitor as a more credible practitioner. This approach was also perceived as less dictatorial.

These accounts from three supported mothers exemplify the mothers' views that health visitors need to be approachable, adapting to suit different situations and unhurried.

*M9: I found like mine (health visitor) was really good. She was quite approachable about everything and safety wise she's got a lot of common sense, she is good and I never feel like she is in a hurry to get away, she's got time to speak which is quite good. ....Like I know somebody she has a health visitor, she's maybe text books sort of person, everything by the book whereas, I like mine she has a lot of common sense to adapt each situation, not everything by the book. She's good.*

*M10: I suppose it depends on the health visitor and the mother....it depends how the health visitor puts it across I suppose and the health visitor who came to me is quite sort of not down to*



*earth, but she is not very pushy, the way she puts the information across, just general conversation.*

*M11: My health visitor just came and she asked me how I was getting on and was there anything I wanted to ask her and as I say, she just went through like she said 'not that I'm saying you will have to buy a fire guard, but if you feel better with a fire guard' and just like when they are at the age when they are pulling themselves up to watch like corners, 'you can get corner guards', things like that for furniture. She was really nice about it just giving me information on, even like baby food and things like that.... It was just in general conversation, it wasn't actually her saying you need this or you have got to have that. Just general sort of conversation.*

These accounts illustrate the importance of connecting information, *earthing* it, adapting it and conveying in relevant ways to mothers in different contexts. Not telling mothers what to do in a dictatorial or pushy way was also valued.

Most mothers considered the interpersonal skills of friendship to be important for increasing the acceptability of health visiting. The quantitative study identified that the mothers considered a good relationship as important for injury prevention work and that the value of the relationship correlated with other organisational and professional aspects of the health visiting service. The mothers' accounts in the qualitative study clarify the value of relationship as a basis from which other aspects of the service were judged by the mothers. If health visitors communicated well with the mothers the focus for the visit was more valued by them personally. When the health visitors were authoritarian the mothers were more resentful of the health visiting interaction and unlikely to value the professional values of the service. These qualities have been illustrated through different mothers' accounts and summarised in Figure 8.1 and Figure 8.2.

Foster and Mayall (1990) discussed the importance of the health visitors' manner for developing a client centred health visiting service. The broad, superficial dialogue can be understood to mean that the health visitor did not really consider the clients specific knowledge, context or concerns, the opposite of more personal approaches or

those advocated to achieve the joint agenda of the health visiting service (Twinn and Cowley 1992). Evidently mothers valued health visitors who acknowledged their personal knowledge and context in their discussions.

Mothers who perceived the health visitor's manner positively, identified more benefits with the health visiting service. The health visitors' communication skills empowered the mothers and enabled them to feel more motivated to adopt safety strategies and improved feelings of self confidence. The health visitor's manner when it was poor was a barrier to safety action. The mothers were less inclined to view the information positively as the health visitors manner undermined the mothers' confidence and lowered her feelings of effectiveness for performing childcare and safety practices.

#### **8.2.4 The relationship: knowing me-knowing them**

Several mothers, particularly the mothers whose children had experienced an injury spoke of the value of an established relationship between the mother and the health visitor. Mothers explained that the 'health visitor knowing the family' enabled the health visiting service to be tailored more to the family's specific needs. The mothers and the health visitors 'knowing' each other meant they understood each others' approaches in relation to their own specific roles. Mothers felt that the health visitor understood their particular style of parenting and childcare within the context of the family and in return the mothers understood the 'style' of the health visitor in her work with the family.

In families where the child had experienced an accident, the mothers who had a more prolonged or favourable relationship with health visitors felt they were more able to act as advocates for them, supporting them if their parenting skills were called in to question by the hospital or social services. Some mothers explained that they thought they had not received visits after some accidents because the health visitor knew them and knew they were looking after their children. This implied that post accident visits were associated with inspectoral or advocate roles as well as the

supportive role. Some mothers who had not seen their health visitor regularly or had a poor relationship felt deprived of this supportive asset from the service. A few mothers felt that they were being 'checked up on' if they had little or no relationship with the health visitor. Evidently the quality of the health visitor relationship became paramount around times of family stress and particularly after childhood injury.

This mother explained the benefits of an established relationship for discussing sensitive issues around preventing accidents.

*M11: Well, I think you are dealing with your health visitor right from the start and if you can communicate with them, you take it more as a bit of advice rather than somebody, a total stranger coming in and saying well you have got that like that, you shouldn't have that.*

The advocacy role was elaborated upon by this mother, but only a minority of mothers spoke of the potential health visitor's role in this way.

*M1: Maybe she could be the voice for the parents. I have phoned through to the District Council to complain about the park when I've taken the boys along when they were small on a Monday morning, and it was absolutely covered in glass, so I phoned up and complained. They certainly apologised, and all the rest of it and whatever. Maybe the Health Visitor could be like the voice for the parents, rather than continual phone calls. I don't know how many they get from parents, of complaints about the sort of state, but maybe they could help.'*

This married mother typified the views of many mothers who knew their health visitor and received post accident visits from health visitors.

*M23: Well I think when an accident like that happens you have to expect that people are a bit concerned but I found her (the health visitor) quite helpful, I knew her anyway, she came in and out of the house and she made a point of coming to see me, I hadn't seen her for a while before that in relation to Carl although I had a three week old baby girl at the time, but she made a point of coming and talking about it (the accident).*

However, the mothers who received post accident visits from health visitors they did not know were more critical of the service and expressed concerns that they were being inspected for abuse or neglect.

This lone mother who had little contact with her health visitor and several changes of health visitors within a short period of time explained how she felt about a sudden surge in contacts post accident.

*M6: I think it was like in 3 or 4 weeks I had her (the health visitor) up like 3 times, I couldn't believe it. She came to the door and I felt as if , because at that point I think I was on my own, I was a single parent and you know how like they class the single parents I got really quite, I can't think of the word I'm looking for, as if they were checking up on me, you know obviously like bad mother you know this like bad mother thing comes in all the time. I don't have a lot of confidence.*

The inspectoral role in health visiting described by this mother was perceived by some mothers, but the dominant sphere of professional practice was perceived as primarily facilitative and supportive. The importance of good relationships between health visitors and mothers were seen to play a prominent role in making the distinction between supportive, empowering health visiting as opposed to inspectoral or policing approaches which undermined the mothers' confidence.

The majority of mothers perceived the health visitor as helpful after the accident, but some still viewed the visits as intimidating and the post accident visits cast further doubts on the mothers' ability to provide safe childcare and undermined the mothers confidence. Some mothers found post accident visits quite threatening. This single mother below, explained how she felt the post accident support visits undermined her already low level of self confidence and the frequency of post accident contact was generally perceived as intimidating, but by her own understanding a necessary part of society attempting to ensure the safety of children through the work of the health visitor.

Importantly this lone mother had little contact with her health visitor and had experienced numerous changes in health visitors in a short period of time.

*M6: If you have an accident maybe, it means somebody automatically calls them out and then they ask you what happened and they make you feel you are the most awful mother on this earth. I suppose they have to ask the questions. I mean, I can understand why they came out, but it doesn't do your confidence much good..... apparently Scott was checked more than the other kids at school, because I was a single parent and he had bruises at one point and I thought 'he is out playing, what do you want me to do, do you want me to stop him playing because he is getting bruises?' 'Oh no, we know you're a very nice lady' and explained because we are a higher risk, because it is more stressful.*

The mothers who had more frequent contact with their health visitor and had known their health visitors prior to the accident were more supported by the post accident visits. The mothers who had numerous changes of health visitor or had not seen the health visitor frequently or recently felt less supported and more threatened by the health visitor contacts after an accident. The importance for mother to 'know' and be familiar with their health visitor re-emerged through out the study. The mother, health visitor relationship is crucial to the progress of accident prevention work with mothers.

The evidence from the quantitative study indicated that mothers in the post accident sample identified a very good relationship with the health visitor as significantly more important to them than it was to the random sample of mothers. The mothers' accounts of post accident experience in this qualitative study, help to develop an understanding of why mothers felt a good relationship was so important. The mothers recognised the benefits of being supported after an accident by a health professional who had knowledge of their circumstances and recognised their competence with childcare. The mothers also understood judgements about childcare skills take place in society, especially after accidents. The mothers preferred to be

judged by a health visitor who they knew and respected through their work with the family.

Several other studies have made connections between health visiting and an inspectoral role (Laidman 1987, Davies 1988, Combes 1992, Machen 1996 and Reynolds 1996). Machen reported a more positive view of health visiting in the 1990's as opposed to the previous decade and this study further supports those findings. There does however, remain considerable scope for improvement in the delivery in both the organisational and professional aspects of the health visiting services. Davies (1988) wrote of the paradox in health visiting, with health visitors undertaking both an inspectoral and supportive role with families. The paradox remains evident and a cause for concern to the mothers in this study and some health visitors (Reynolds 1996).

Cutrona (1996) in addition to Thorpe and Elliott (1998) emphasised the importance of the supportive relationship for women. Supportive action, they argued, has consequences for the development of relationships beyond the immediate moment of when the support is given. This was seen to be evident in the mothers accounts', particularly in respect of how they seemed to consider the different aspects of the health visiting service in accordance with their perceptions of whether the health visitor's relationship was supportive. Social support can be characterised by the availability and actual provision of the support when it is needed. The emphasis of social support is on provision not just availability of support. This differs to social networks which are distinguished on the basis that support may be available, but not necessarily provided. The distinction between the two is the provision of support as opposed to availability (Nolan et al 1996 and Cutrona 1996).

### **8.2.5 Social support and social networks in health visiting practice**

Many mothers spoke of the accessibility, availability and provision of support by health visitors in their accounts and this was beneficial for establishing the health visitor as providing social support as opposed to being a member of the mothers

social network. However, some mothers perceived the need for them to initiate contact with the health visitor as awkward and whilst the health visitor was available and willing to provide support the mothers found seeking support problematic and therefore support was not provided. The lack of provision of support by some health visitors to some mothers indicated that the health visitors were more superficial members of these mothers' social networks as opposed to an important provider of social support. Social support it would seem needs to be more than available, it needs to proactively seek to assist the mother.

Arguably, the lone mothers who wanted more contact from the health visitor to help them with their emotional health perceived the health visitor as part of their social network rather than a person who provided social support. Depending on the provision of available support, a health visiting service may be valued differently by mothers. This study findings are congruent with those of Whyte et al (1997), who identified elements of professional support in family nursing and identified the importance of the availability of support to families through the nurse 'being there' for the family. However the importance of 'earthing', 'connecting' or relating the professional support to the mothers' context was not identified or elaborated on in that study.

The mothers' accounts in this study emphasised that in addition to making professional social support available they also required that it was acceptable to them as mothers in their social context. The need for health visitors to relate their information to the mothers' personal situation was well illustrated in the mothers' accounts. Social support has been shown to be an important contribution of the health visitors work with mothers in this study and when social support was lacking, health visitors were available through social networks.

Nolan et al (1996) identified people to have different perceptions about the nature of support and its effects. This study offers a greater understanding of the organisational and professional aspects of a supportive health visiting service from

the mothers' perspectives. Through the development of social support in health visiting a more conducive approach to the provision of reliable and effective pre-school child safety is envisaged. The value of social support which draws on the families' and communities' resources for health to protect pre-school children from injury requires further investigation, but arguably the potential benefits are numerous and complex.

### **8.2.6 Conclusions**

From the discussion in this chapter the following conclusions can be drawn from the qualitative study which illustrate the value of health visitors, particularly for preventing accidental injury to pre-school children.

- The health visitor role was seen as mainly offering childcare advice in relation to treating childhood illnesses and for offering reassurance to mothers as to their child's developmental progress.
- The mothers considered child safety as an area of the health visitors' work that could be developed. Health visitors were seen as particularly suited to offering anticipatory guidance for tailoring safety advice to the children's stages of developmental and for assisting mothers in the identification of potential hazards.
- The mothers appreciated a proactive health visiting service which made itself available to them, rather than relying on the mothers needing to seek help.
- The mothers evaluated the organisational qualities of the health visiting service and most mothers perceived the health visitors to be accessible and acceptable health professionals for developing accident prevention work.
- The professional qualities of the health visitor were evaluated by mothers and most considered these positively, but negative qualities were identified and these reduced the value of the health visitor for preventing accidental injury.
- Respect for the professional knowledge of health visitors gave them credibility, authority and the conviction to promote childcare and safety practices with mothers, but how they enacted this aspect of their role was important to mothers.



- The health visitors' role required well developed communication skills to identify and meet the needs of mothers. The mothers appreciated health visitors who worked in a friendly manner. The health visitors who connected to the mother's context were more likely to inspire positive feelings of self confidence and motivation to adopt safety practices without undermining the mothers' efforts.
- Health visitors were an important component of the mothers' social networks and some were valued for providing social support. Mothers in more disadvantaged contexts, particularly young and lone mothers needed and valued the reassurance and emotional support available from health visitors.
- The psychological and social support provided by health visitors was appreciated by mothers. This can be understood to contribute to the safety of children, although the mothers did not explicitly associate this aspect of the health visitors' work with preventing childhood injury.
- The value of a good relationship between health visitors and mothers was particularly significant following accidental injuries and during post accident support visits for these visits to be perceived positively.
- The conflicting inspectoral and supportive roles of health visitors were evident to some mothers, but the work of health visitors was perceived primarily as empowering and supportive.

## Chapter 9

# Towards an understanding of how mothers perceive injury risk and how they are motivated to adopt accident prevention strategies

### 9.0 Introduction

In this chapter the main findings derived from the quantitative and qualitative investigations are drawn together and their relevance to the theoretical frameworks described in the review of the literature are considered. This study has examined mothers' perceptions of childhood injury risk and safety strategies through methods that placed the mothers who care for children at the centre of the research. This established mothers in the position of 'knowers' who were able to contribute to the development of knowledge for preventing childhood injury. The social and environmental contexts in which mothers cared for their children were studied to develop an understanding of how these issues related to different maternal perceptions of accident risk, to mothers' motivation to adopt safety strategies and to clarify the role they perceived for health visitors in promoting pre-school child safety.

The purpose of this research was to develop an understanding of how mothers perceive the risk of accidents to their children. The study has identified the mothers' perceptions of different injury risks and their views of the main hazards compromising their children's safety. The study has revealed how the mothers set priorities for the different types of safety strategies they adopt in accordance with their social, economic and environmental situation. The focus on perceived risk as opposed to objective risk and upon the individual's social context further differentiates this research from earlier studies. By going beyond an epidemiological examination of accident statistics, to identifying the relationships between mothers' perceptions of accident risk, their social context, their experiences of parenting and their motivation to protect pre-school children, greater insight into the phenomenon of child safety has been achieved.

In the previous chapters the results and discussion of the two studies were presented separately. This was logical as the study methods were different and the nature of their findings distinct, although links between the studies were made. The use of integrated research methods produced large and rich amounts of data so it was necessary to select results and findings for detailed analysis and presentation. Within this chapter, the main findings from the different research methods are considered together and shown to contribute to the overall development of theoretical perspectives for understanding maternal motivation to protect pre-school children from accidental injury.

The relevance and diversity of social contexts in which mothers care for children are considered first. The importance of social indicators for understanding maternal perceptions of protective safety strategies are explored in relation to the theoretical framework of social cognition models, specifically the Health Belief Model (HBM) (Becker 1974) and Protection Motivation theory (PMT) (Rogers 1975, 1983). Limitations of the present Health Belief Model and Protection Motivation Theory are outlined on the basis of evidence from this study and the literature. Modifications to present theory are discussed and a new model based on systems thinking is proposed from this thesis. Systems thinking was found to be useful for explaining and illustrating maternal motivation to develop protective strategies for the pre-school child within the context of the family and society. The mothers' perceptions of injury and the importance of accident experience are then considered. The main benefits and barriers to preventing childhood injury are then clarified and the relevance of the basic principles of preventing accidents are examined (Avery and Jackson 1993). In the final section the contribution of lay and professional support networks to promoting the development of maternal motivation is examined. The relevance of psychological and social aspects of health visiting for promoting safety are considered and the relevance of social support within social cognition theories discussed.

The discussion that follows argues for a more psycho-social approach to developing a culture of safety. This will be shown to require modification to the current theoretical perspectives and require a broader approach to promoting pre-school child safety than presently advocated from the three basic principles of accident prevention that are usually defined within the environmental, educational and enforcement approaches to reducing injury.

## 9.1 Social context and the reinforcing effects of disadvantage

In the previous chapters the mothers' demographic and social context in which they cared for children were identified. Differences in mothers' perceptions of injury risks and protective strategies were identified in relation to these context issues. In this chapter the relevance of these findings are examined in relation to previous knowledge and social cognition theory.

### 9.1.1 Differences between the random and post accident samples

There were two main social and demographic differences found between the random sample of mothers selected from the general population of mothers with young children and the post accident sample of mothers whose children had attended the Accident and Emergency department within three months prior to the survey. The post-accident sample had significantly more lone mothers and significantly more part-time head of household employment than the random sample. These features are characteristic of lone parenting in the United Kingdom where nine out of ten lone parent households are headed by women who often have to care for their families in poverty (Pearce 1994, Edwards and Duncan 1996, Silva 1996).

The finding that children of lone mothers had a significantly higher representation in the post accident sample in this study, seems to suggest that lone motherhood is associated with an increased incidence of accidents to children that require medical

attention. These findings are congruent with those of Rivara and Mueller (1987) who also identified that accidents occurred more commonly to children of lone mothers. This finding indicates that it would be valuable for future research into childhood injury purposefully to include lone parents in any subsequent investigations. The evidence from this study suggests that a sample of families in which accidents have recently occurred can be seen as important for identifying the characteristics of children and their social contexts which may lead them to be vulnerable to injury.

### **9.1.2 Lone mothers and social disadvantage**

Several characteristics of disadvantage and poverty were found to be associated within the families studied, but young, lone mothers seemed to exist in particularly adverse situations. Their local authority housing was most often without gardens and there was less financial and social support available to them. This study reveals how such adversity limits the mothers' opportunities to maintain their children's safety. The mothers often had to cope with the unrelenting demands of childcare amidst coping with their own emotional needs and as a consequence of these demands, certain aspects of child safety were a low priority for them. When mothers had children later in life they were generally living in more advantageous contexts, whereas young mothers and their children tended to live in situations of multiple disadvantage. Mayall and Foster (1989) identified adversity as being associated with constraints on good child rearing practices in their study of families caring for children. Studies have repeatedly linked social disadvantage to higher injury risk (Townsend et al 1988, Rivara and Mueller 1987, Acheson 1998). In light of this evidence, it was important for this study to compare the views of the relatively disadvantaged mothers with those living in more advantageous circumstances. Mothers were therefore selected as key informants for the interview method on the basis of their responses to specific questions and by their different environmental and social contexts that were identified through the survey method.

A major finding from the present study is the significant association of different demographic variables with the mothers' perceptions of injury risk and safety

strategies. Social context was found to be important for understanding the circumstances that influence the mothers' views of the world in which they care for their children. Specifically, social and environmental factors relate to the mothers' perceptions of injury risk and to their subsequent motivation to develop different safety strategies. These findings are congruent with the theoretical framework of the Health Belief Model (HBM) (Becker 1974) which emphasises the importance of demographic characteristics on motivation to adopt protective behaviours. Protection motivation theory (PMT) (Rogers 1975, 1983) does not place a decisive value on demographic influences and it seems reasonable to conclude that this is a current limitation of the PMT and further developments of it should explicitly seek to include the observed importance of demographic variables.

In response to the evidence accumulated from this research and the limitations of present models and theory, a re-conceptualisation of the process of developing maternal motivation to prevent accidental injury to pre-school children was required. In searching for an overall method for organising the complexity revealed by this research, General Systems Theory offered a useful method to represent the key entities and the flow of information and other interactions that were found to be occurring (Von Bertalanffy 1968). For example, structuring the concepts which influenced the mothers' perceptions of accidental injury and the safety actions they adopted as discrete, but overlapping common areas enabled the interactions between the environment and social context upon the mother, the family and pre-school child to be illustrated.

Systems thinking allows for the interaction between different components of the model as opposed to a linear, one directional representation between the environment, social context, the mother, family and the child. This offers a more inclusive and detailed depiction of factors and the ways in which these may impinge on maternal decision making than the more linear representation of other social cognition theories. Whyte (1994:32) suggested that a study of the family needs to consider systems thinking as this is able to reflect the relevance of placing the child

within a sub-system of the family and its social context. This is particularly relevant as this study demonstrates that decisions and actions regarding safety strategies for the pre-school child are undertaken by the mother within the context of the family and the environment in which they live. Systems thinking allows a more holistic conceptualisation of the mother, child, family, and environmental context as a hierarchy of sub-systems between which interactions take place. Boundaries exist between these different sub-systems but information is able to flow back and forth between the sub-systems since the boundaries are permeable. Hence the environment can influence the mothers' psychological sub-system where perceptions and decisions about accident hazards are formulated, but similarly the mother as a sub-system can adapt and influence the environment in which she protects her pre-school children.

As the mothers' motivation to adopt safety strategies develops, systems thinking allows the interaction of important psychological and social factors to be considered for example, how information about the competing demands of the pre-school child and other family members interact to mediate and influence the safety strategies the mothers adopt in response to environmental hazards. Within the sub-system of the mother, there is a psychological sub-system, within which mothers formulate a view of their children's risk of injury. The interaction between perceptions of the benefits and barriers to safety with perceptions of injury risk can then modify maternal motivation and influence how the mothers adapt or respond to the environment in which they protect the pre-school child. The permeability of sub-system boundaries may be used to show the extent to which the mothers individual actions impinge upon, and are influenced by information flows from the environmental and social context supra-systems. This provides a visual representation to the more abstract concepts of the psychological sub-system which include the concepts of locus of control, self efficacy and social support. The interrelationships, overlap and sharing of common areas within this theoretical perspective reflects how changes or modifications in one sub-system or dimension affects other sub-systems.

Whilst accepting Whyte's (1994) view that systems theory is not an 'all-explaining theory' it is recognised as a useful framework underpinning theory from several disciplines. Evidence from this study suggests it would be a useful for conceptualising and explaining maternal motivation to protect the pre-school child from accidents and the development of safety strategies. The model proposed and its components elaborate on a theoretical perspective derived from this research which allows for an explanation of motivation to protect a person from injury other than the person appraising the risk of injury. This is significant since young children have relatively limited cognitive capabilities and are dependent on their mothers for protection from injury. This is a departure from present social cognition theories which are limited by considering risk appraisal for the one specific individual making the appraisal of risk.

Overall the findings from this research suggest there is merit in adopting a different approach to organising components of models explaining health behaviour to depict the centrality of the interaction between the environment and social context on maternal motivation to protect the pre-school child from accidental injury. Recognising and accepting the systems approach to the family proposed by Whyte (1994:34) this final chapter of the thesis is concentrated on specific aspects of the system to explain maternal motivation to protect the pre-school child from injury. A model built up from evidence of interacting sub-systems such as the one presented in this chapter can explain and illustrate the multiplicity of interactions which determine how mothers protect children from accidents.

## 9.2 Injury risk

In both the quantitative and qualitative studies, mothers consistently perceived injury risks differently in relation to their different social contexts. The mothers' accounts revealed how their perceptions of injury were shaped through their knowledge,



particularly from accident experiences, social networks and by other, different sources of information. Importantly, most mothers reported their main safety concerns for their pre-school children to be related to the areas beyond the boundary of the home and many perceived dramatic incidents, for example abduction and road traffic accidents, as their main concerns for their pre-school children's safety. The fact that these are relatively rare events in Scotland (Scottish Accident Statistics 1994) suggests that the mothers had a tendency towards sensationalism when considering injury risk to their young children. Evidently, the mothers did not perceive the home environment as a major worry for children's safety, yet this is the place where most injuries requiring medical attention continue to occur (Scottish Accident Statistics 1993). Remarkably, and relevant to health promotion was the finding that poisonings were not perceived as a likely injury for a pre-school child, despite these being a main cause for hospital attendance in the study area and nationally (Scottish Accident Statistics 1993, Forth Valley Health Board Accident Statistics 1996). Also surprising was the fact that the mothers did not perceive broken bones to be serious injury, but considered this a more superficial type of injury.

It appears that the mothers' perceptions of *susceptibility* to injury were more important than their perceptions of the *severity* of injuries, at least in so far as these influenced their motivation to develop safety strategies. This study identified that the majority of mothers considered most injuries to be serious. Their perceptions about severity of injury were less variable than their perceptions of the pre-school child's susceptibility to injury. For example, most injuries were perceived as severe when they occurred, but the mothers had not been motivated to prevent all injuries to the same extent. This suggests that severity of injury is not the key to understanding cues to action or the variation in safety strategies adopted by mothers. Rather, mothers tended to consider the likelihood of the injury occurring in their specific home circumstances and with respect to the nature of their own children's personalities and behaviours. If an injury seemed a highly probable occurrence with their own child, they were then more motivated to develop some form of protective, safety strategy.

The factors which influenced maternal motivation to protect pre-school children from injury were also found to have a specific influence on decisions about the precise nature of safety actions, for example, whether the socialisation of children to hazards was perceived as a more appropriate protective strategy than the use of safety equipment which acted as a barrier to hazards. For certain kinds of injury which mothers believed were unlikely to happen to their children, they were less motivated to use a specific item of safety equipment to protect their children from that injury. However, some injuries were perceived as highly likely to be encountered by the children unless the mothers adopted some form of action which would result in a protective barrier for the child from the hazards. If injuries were perceived as severe and probable, then mothers tended to consider erecting barriers to these hazards as most appropriate. For example, this action would often include the use of safety equipment to protect the children. If on the other hand, the injuries were perceived as less severe or unlikely to occur, then mothers tended to prefer the approach of socialising their children to hazards and supervising them to offer protection. It can be concluded from this evidence that as well as influencing maternal motivation to prevent injury, perceptions of injury risk also shaped the mothers' approach to protective strategies for their children. Specific attitudes to the adoption of safety equipment are considered in more detail in section 9.3.2.

The conclusion based on this evidence is that the perceived *susceptibility* to an injury is a more motivating factor than the *severity* of an injury. Figure 9.1 is a diagrammatic illustration of the subjective appraisal of injury risk performed by mothers within their social contexts. The utilisation of systems thinking to understand the interaction between the mothers' social context, the environment and the psychological sub-system where different perceptions of injury risk are formulated is illustrated. Consistent with systems thinking an interactive exchange of information between the environment, social context and the mother is represented by the permeable boundary of social context, and environment. The axis representing the perceived susceptibility of injury is emphasised as this is considered to be more relevant than the perceived severity of injury for influencing maternal motivation.

The different domains of perceptions of safety and degree of motivation are also depicted.

Evidence from this study suggests that if children are considered not to be susceptible to injury and that the severity of any potential injury is mild or low, this results in mothers perceiving their children to be *safe* and they are least motivated to adopt specific safety actions. Mothers who consider their children not to be susceptible to injury, but view potential injuries to be serious, perceive their children to be *moderately safe* and this results in little motivation to adopt safety strategies. However, *quite unsafe* perceptions of children's safety result from mothers' considering the susceptibility of their child to injury as high, despite them considering the seriousness of the injury as relatively mild or low. This *quite unsafe* perception of injury risk motivates mothers to adopt protective strategies relatively more than *moderately safe* or *safe* perceptions of injury risk. *Unsafe* perceptions of injury threat result in most motivation to adopt safety strategies as mothers perceive the risk of susceptibility and severity of injury to their pre-school children to be high.

This finding that the mothers' perceptions of their children's susceptibility to injury influences their motivation to protect children more than their perceptions of the severity of injury is congruent with a review of published research by Sheeran and Abraham (1995) who found the susceptibility dimension of the Health Belief Model to be more predictive of health behaviour than the severity dimension. However, Boer and Seydel (1995) found considerable variation in the evidence for the importance of different components within Protection Motivation Theory. They argued that both severity and vulnerability were considered important for conceptualising threat appraisal, but the relative contribution of these two components in the models varied depending on the stage in the decision making process (Boer and Seydel 1995). For example, decisions to develop protective strategies will vary in relation to whether injuries are imminent as a result of a real life situation or whether they are more abstract or hypothetical circumstances to consider for the future.

1 = Most Motivation  
4 = Least Motivation

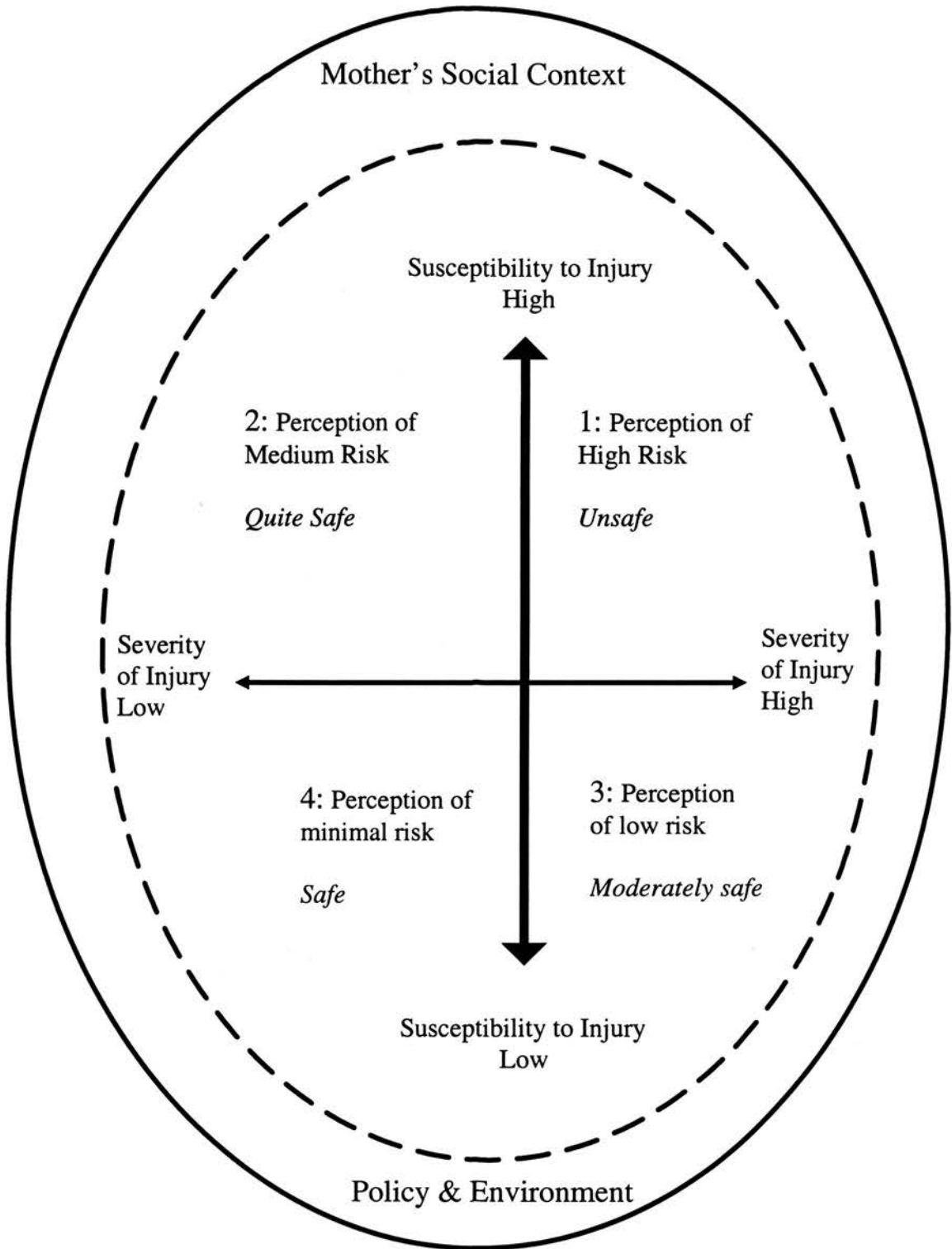


Figure 9.1 Maternal perceptions of the threat of injury risk

### 9.2.1 Different perceptions of injury risk amongst mothers

Given the importance of the perception of injury risk and particularly the susceptibility to injury for motivating mothers to develop protective behaviour, it is significant that young and lone mothers perceived the pre-school child as *less susceptible* to injury than older mothers and those with a partner. It is also interesting that mothers in the lower social classes perceived serious injuries as *less severe* than mothers in the higher social classes. There are firm grounds for concluding that elements of unrealistic optimism (Weinstein 1980, 1982) were operating for some mothers, particularly those living in more disadvantaged circumstances. It might be that these perceptions reflect a coping mechanism adopted by mothers when they feel unable to control or influence the safety of their children. Since the mothers in more relatively disadvantaged contexts felt most dis-empowered when it came to maintaining the safety of their children, they may have coped with the threat of injury by denying its impact on their children's lives.

Importantly, mothers in local authority housing perceived superficial injuries as more serious than mothers in private housing. It seems reasonable to conclude that mothers living in housing schemes maintained by the local authority perceived their environments as more hazardous when caring for their children. Injuries which might have resulted in a more superficial injury in a privately maintained home were seen as potentially more serious by those in local authority residences. For example, a fall from a bungalow window would possibly be perceived as resulting in a less serious injury than a fall from a high rise local authority flat. Also a private garden was probably viewed as better maintained and to have less broken glass on which a child could cut itself than a shared garden of a local authority flat. Such environmental context issues are shown in this study to be important in appraising the threat of injury.

Protection Motivation Theory (Rogers 1975) and the Health Belief Model (Becker 1974) both stipulate the importance of perceived vulnerability or susceptibility respectively as providing motivation to adopt protective behaviour. As the young

and lone mothers perceived a relatively low risk of the susceptibility of the pre-school child to injury compared to older mothers and those with partners, the theories and the evidence presented lead us to conclude that young and lone mothers were less likely to adopt specific, complex safety strategies and protective behaviours.

The theoretical framework of the Health Belief Model (HBM) (Becker 1974), whilst specifying the importance of demographic characteristics, appears to consider social and environmental context issues in a manner divorced from the rest of the model. Protection Motivation Theory (PMT) (Rogers 1975, 1983) does not consider demographic influences to be important enough to specify them within the model. Evidence from this study suggests social cognition models should be situated within the social context of the individual making health behaviour decisions. A modified model, which illustrates the importance of social context issues in the decision making process in relation to safety strategies, is argued for in this thesis. The model proposed is intended to better illustrate and explain the interaction of different components than is possible through using the HBM or PMT.

The qualitative approach examined more closely how mothers made decisions about injury risk as a precursor to developing protective strategies. The qualitative research was able to reaffirm some and reveal further reasons for the relative differences in the young and lone mothers' perceptions of injury risk and how this related to their approach to maintaining safety. The accounts from the young, lone mothers explained how they had many competing demands when caring for their child and that safety as a specific concern was a relatively low priority in their lives. Many of the lone mothers saw safety as entwined in childcare routines and not as a specific set of hazards to be rectified. For many young and particularly lone mothers, coping with their own mental health issues and the basic material needs of the child were all encompassing. The unrelenting demands of childcare for lone mothers was particularly difficult and they often had feelings of isolation. They felt that the burden and responsibility of caring for the child rested with them alone. A few of the

mothers talked of the rewards of caring alone, but the struggle was evident in the mothers' accounts. It is reasonable to conclude that given the competing stresses of childcare for young mothers and specifically lone mothers, calculating injury risk was a relatively low priority, but that childcare routines involved some implicit actions that would protect the child from injury or harm. Evidently the competing needs of the mother and other family members interacted on the other components of the model to influence the mothers' motivation.

This practical approach of subsuming safety within childcare routines is different to the 'intellectualised' approach to safety held by many health professionals and injury prevention researchers. Many professionals measure the prevention of injury by observing specific hazards which are remedied by specific safety strategies, often for example, involving safety equipment. The qualitative interviews revealed how this professional view of how to prevent injury and maintain safety is often quite divorced from the social context of the mothers' experiences of childcare. Theory to explain maternal motivation to adopt protective strategies needs to consider the socially constructed influences on maternal motivation more explicitly. The model proposed is intended to clarify the nature of mothers' motivation to protect the pre-school child more robustly than previous theory.

### **9.2.2 Limitations of accident experience for developing a perception of injury risk**

The mothers' perceptions of injury risk were often influenced by the accidents experienced by family and friends and by near-miss accident experiences. The interviews revealed that several of the mothers used a responsive approach to protecting their children, rather than a proactive or anticipatory approach. Whilst the mothers recognised many hazardous situations that could result in injury, they believed that their different children were susceptible to different hazards and injuries. For example, not all children who lived in homes with stairs would fall down them if there was no stairgate; not all children would poke their fingers in plug sockets despite them being accessible in many homes. It was perceived as

unnecessary by the mothers to prevent every potential injury through the removal of all hazards, as some children were considered to be less susceptible to certain hazards and injuries than others.

Mothers often adopted safety strategies in response to the child becoming interactive with a hazardous situation and at a time when the mother perceived an immediate or realistic threat to the child's safety. Generally, the mothers did not seem to adopt safety strategies in anticipation of the child's capabilities or stage of development. Sometimes no injury occurred during the exposure to the hazard. This was considered a near-miss experience. However, sometimes the child experienced an injury and then the mother developed an effective safety strategy to prevent the accident or injury from re-occurring. The findings from this study identifies how phases of decision making can be seen to relate to the immediacy of the danger. This evidence further supports the suggestion by Boer and Seydel (1995) that different phases of decision making may determine the protective behaviours, for example, if accidents are perceived as imminent. Evidence from this study also depicts the interaction of the pre-school child within the environment as influencing the mothers' motivation which has not previously been considered in studies predicting protective strategies.

Accident experience or near miss accidents were a powerful way for developing a perception of injury risk and we may conclude that they were influential in motivating mothers to adopt specific safety strategies. The mothers' accounts however, revealed that although accident experience or near-miss experiences motivated them to prevent the same accident, they rarely used the knowledge from this experience to make associations with other similar hazards and potential injuries. Given this lack of generalisation it may be concluded that accident experiences had some benefit for preventing the same accident, but limited benefit to the prevention of other similar types of injuries.



An interesting fact from the literature was that as well as the number of accidents in total, a particular cause for concern are the group of children who are repeatedly admitted to hospital for serious injuries. Kendrick (1993) reported attendance at Accident and Emergency Departments by pre-school children to be predictive of future hospital admission also resulting from an injury. Clearly, the experience of accidental injury requiring medical attention did not prevent these children from subsequently experiencing another accident and being admitted to hospital.

Conversely, however, when the idea of repetitive accident experience was raised with the mothers in this study, most mothers did not agree that this was the case. They considered that most accidents were extraordinary or one-off events which mothers learned from and subsequently their children were better protected. Some mothers also believed their child would also learn from the exposure to the accident and be safer in the future. Given Kendrick's evidence to the contrary, it may be concluded that accident experience has many limitations as a means for preventing further injury. Many mothers believed their children would learn to behave safely in response to their exposure to hazards and as they became more familiar with the dangers. However, during this socialisation process mothers were required to intervene when hazards were beyond the children's skills for coping with dangers but mothers frequently mis-judged these situations. The importance that mothers placed on responsive approaches to safety, through exposure of the child to hazards, may go some way towards explaining the prevailing rates of accidental injury in pre-school children.

Whilst knowledge built up from accident experience is recognised to have a powerful influence on the mothers' perception of injury risk and motivation to adopt accident prevention strategies, it also causes some concern. In short, since most people would prefer accidents not to happen, it defeats the purpose of safety if the accident must first be experienced before a safety action is taken. Whilst health professionals use information on the occurrence of accidents to inform injury prevention programmes, they wish to reduce the number of accidents which are experienced before mothers become motivated to adopt safety strategies.

The findings from this study are relevant to the development of social cognition models for understanding and predicting future protective safety strategies. Whilst assessments of susceptibility and vulnerability are recognised as being important for predicting health behaviour (Conner and Norman 1995), they appear to be quite context specific. The findings from this work also indicate that a person's perception of susceptibility to a specific injury may only be understood in a certain situation and this does not necessarily reflect their perception of susceptibility to the same injury or a similar injury in different circumstances. When designing studies and in the future development of social cognition models it may be necessary to circumscribe the specific context and conditions under which the accident occurs, in order for links resulting in motivation to develop safety strategies to be analysed and understood.

### 9.3 The benefits and barriers to injury prevention

The three approaches described in the principles of accident prevention of education, environmental measures and enforcement (Avery and Jackson 1993) were evident in the analysis of the mothers' perceptions of the benefits and barriers to injury prevention. While there appeared to be a consensus amongst mothers of what constituted the beneficial approaches to injury prevention, there was considerable disparity about the barriers to injury prevention. The main differences between the perceptions of the barriers were found to relate to differences in social class. The majority of mothers in the higher social classes perceived the main barriers to injury prevention to be associated with parents 'not knowing' enough about safety. This relates to the educational approach to safety and reflects a view of pre-school injuries being a parental responsibility best remedied by teaching parents how to prevent injuries. However, mothers in the lower social classes perceived the barriers more as problems relating to the poor socio-economic and environmental circumstances in which they had to care for children. For example, environmental factors such as the lack of appropriate play areas and their residing in local authority maintained housing

were seen as particularly problematic barriers to safety for the more relatively disadvantaged mothers.

From this it seems reasonable to conclude that the mothers' social contexts were associated with their different perceptions of the barriers to injury prevention, whilst there was a consensus of the benefits of enforcement approaches to safety. There are firm grounds for concluding that mothers in relatively more disadvantaged contexts had a more external locus of control for their children's safety, perceiving the barriers to safety often to be beyond their control. They also felt less empowered to provide safety for their children. The opposite perceptions were associated with the relatively more advantaged mothers.

Roberts et al (1995) stressed the need for improvements in the environment in which children live to lower the dependency on individual behaviour change for achieving child safety. The evidence presented in this study leads to the conclusion that modifications to the environmental and social context in which families live would benefit the safety of children, particularly those living in the most disadvantaged circumstances. However, contrary to the view of Roberts et al (1995) the evidence in this study supports the use of the educational approach with parents to achieve the safety of many pre-school children. Mothers in this study were able to explain how discussions with the health visitor had motivated them to adopt safety strategies. Such an educational approach was of some merit to mothers endeavouring to protect their young children from accidental injury. This is a particularly useful finding when one considers that not all hazards are amenable to environmental or legislative change.

In this study, understanding the mothers' demographic context and their perceptions of their social context helped to clarify how they perceived accidental injury risk and the barriers to injury prevention. Sheeran and Abraham (1995:29) reported the barriers component of the HBM to be 'the most reliable predictor of behaviour, followed by susceptibility, benefits and finally, severity'. The evidence from this

study supports the assertion of the barriers component being more important than the benefits component for understanding the variations in approaches to safety, as there was greater diversity in the mothers' perceptions of barriers in relation to their social contexts than of the benefits. The mothers in different social classes made sense of their social world differently and perceived the barriers to injury prevention in different ways which related to their views of their social world. One can conclude from this that knowledge about mothers' perceptions of barriers to safety is more useful for understanding their different motivation and approaches to safety strategies, than knowledge about the mothers' perceptions of the benefits of safety. Since the mothers in the study clearly formulated different perceptions of their social environment their behaviours would differ as a consequence of these perceptions. This has implications for people working with mothers in different circumstances to prevent accidental injury within the home environment and local community. It is particularly important to address perceptions of the barriers to safety when attempting to promote protective strategies.

### **9.3.1 Balancing the benefits and barriers to safety**

Whilst Weinstein (1988) contends that, at a theoretical level, qualitative differences exist in the benefit and barrier constructs, the evidence from this qualitative and quantitative study demonstrates that the constructs interact and the two can be considered together in analysis. Factor analysis, as suggested by Abraham et al (1992), of the benefits and barriers scale revealed how the benefits and barriers can be considered as distinctly opposing components. However, mothers in the qualitative study gave some insight as to how these opposites can some times interact and mediate the impact of either the benefits and barriers to safety when caring for children in the family context. For example, the mothers spoke of the 'balancing act' they performed between the safety needs of one child and the benefits of adopting a safety strategy to protect that child, whilst the same strategy sometimes acted as a barrier to the autonomy and independence of an older child. In more typical families with several different children at different ages and adults, it was rarely possible to consider the benefits and barriers to safety in isolation from the family context.

Interaction between information about the environment, the mother, family and child was evident in the formulation of perceptions of the benefits and barriers to safety and appropriate safety actions.

The findings from this study reveal that mothers consider the benefits and barriers to promoting the safety of the child within the context of other family dynamics. Mothers made moral decisions corresponding in some ways to Ross's (1998:12) 'principle of respect for persons modified, to apply to children', She identified this principle as guiding parents' decision making in relation to their children's health care. The principle can be seen to also apply to mothers' moral decision making in defining and balancing their children's safety needs against their children's other needs and interests in addition to the needs and interests of the other family members. The complexity of maintaining the safety of children within a family context where there is more than one child competing with and conflicting with the needs of others and those of the adults requires respect for all concerned. The mothers therefore balance the benefits and barriers to safety strategies within the wider context of the family health needs and not just the specific, pre-school child's best interests.

The mothers conveyed rational and considered explanations of their decisions to use a variety of approaches to promoting their children's safety, and their decisions not to adopt certain specific safety strategies. Interestingly, research has now been commissioned by the government to examine the tensions between ensuring the safety of older children and restrictions on their autonomy within the family (Chief Scientist Office 1998). The evidence from this study further confirms the need to explore this aspect of safety within families. Understanding the benefits and barriers to safety can contribute to predicting safety behaviour, but recognising the mediating effects of the specific family context, different family members and the mother's need to rationalise her safety actions is evident.

The 'cost' of safety equipment was a barrier to several mothers when they decided on safety actions. However they would consider the benefits of having the safety

equipment and the costs were sometimes accepted as necessary to protect the pre-school child. There is an interplay between the constructs as people formulate their decision and 'weigh up' the benefits and barriers to safety action within their social context. One construct will usually dominate and influence the decision as to whether or not to adopt safety actions and this relates to how difficult mothers personally find undertaking safety actions. It would appear that the barriers construct influenced variations in the mothers' decisions to adopt safety actions more than the benefits construct.

It seems reasonable to conclude that people consider both benefits and barriers to specific actions. Figure 9.2 is a diagrammatic representation to illustrate the interaction of the distinctly opposing components of the benefits and barriers constructs within the mother's social context. Through a process of weighing up, balancing and trading off the benefits and barriers to safety actions, different perceptions of safety actions are identified. Some mothers will find adopting safety actions more *rewarding* or *challenging*, whilst others consider them *arduous* or *unavailing*. If the benefits of safety actions are perceived as high and the barriers low maternal motivation is greatest and mothers perceive their attempts to protect the pre-school child as *rewarding*. If the benefits and the barriers to safety actions are perceived as high, mothers perceive protective strategies to be *challenging* and are less motivated than mothers who feel they are rewarding. In contrast, however, mothers who perceive the barriers and the benefits of safety actions as low, they consider safety strategies as *unavailing* and lack motivation, whilst the mothers who perceive the barriers as high and the benefits as low are least motivated as they feel safety strategies are *arduous*. These safety actions adopted by mothers encompass the needs and interests of family members other than the pre-school child within the mother's social context.

1 = Most Motivation  
4 = Least Motivation

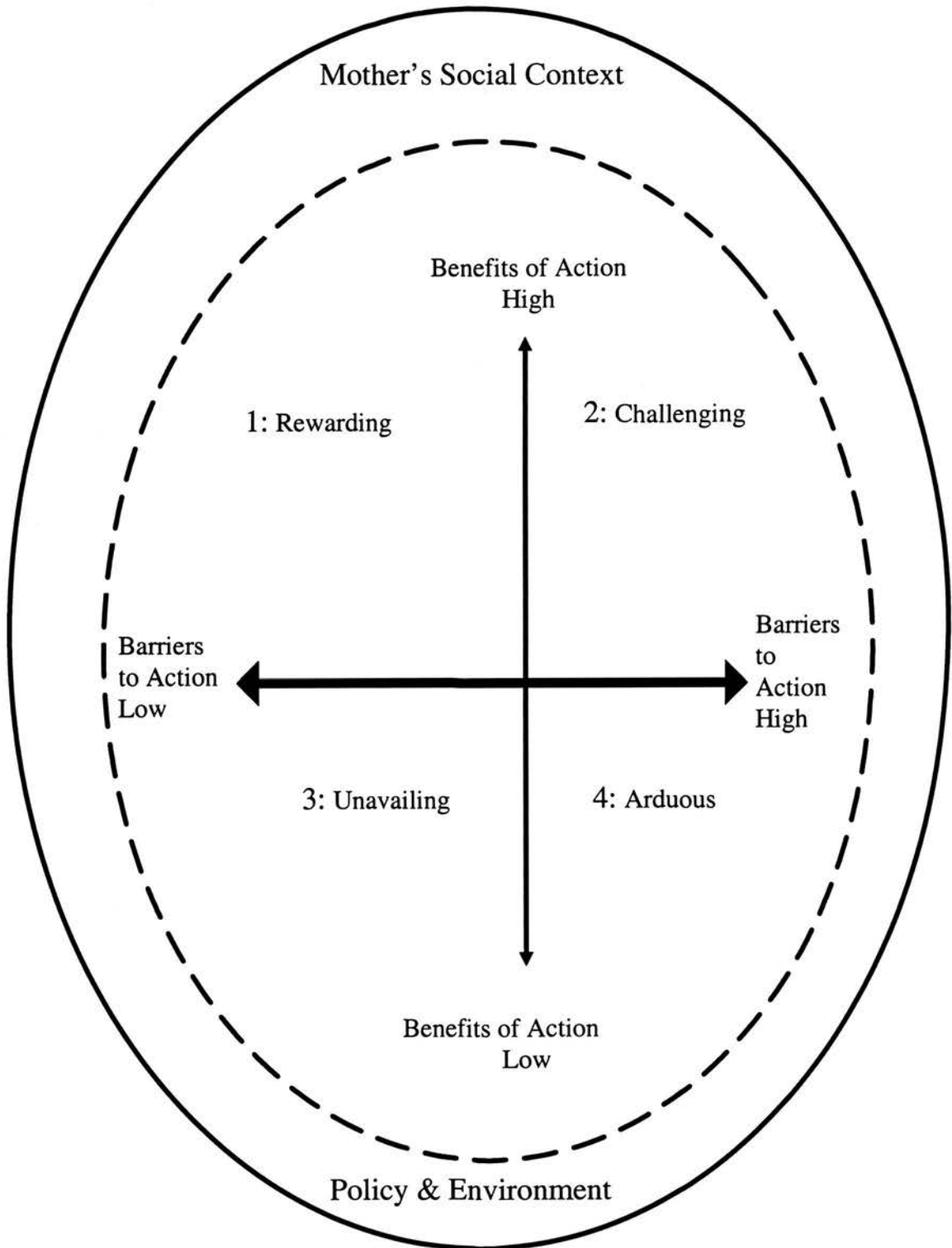


Figure 9.2 Maternal perceptions of the benefits and barriers to safety actions

### 9.3.2 The role of safety equipment

Mothers perceived safety equipment as generally beneficial for preventing injury, but some items of equipment were perceived as more useful than others. The evidence from the survey and from the mothers' accounts identified that safety equipment around which there was some legislation, for example the children's car seat, seat belts and smoke alarms, were those perceived as most useful. The mothers living in local authority housing or whose family's main employment was part time, perceived safety equipment as most useful. A general conclusion would be that the mothers in local authority housing perceived their home environment as more hazardous and that consequently safety equipment was considered useful for alleviating certain dangers.

Mothers in more disadvantaged contexts who were least able to afford safety equipment perceived safety equipment loan schemes as most beneficial. However, there were exceptions. For example, mothers in local authority housing perceived fire fighting equipment as less useful than mothers in private housing. This view may have related to the mothers' lack of confidence or inability to use the fire fighting equipment in their home situation or an inability to afford the equipment. Squires and Busuttill (1996) analysed child fatalities from house fires in Scotland between 1980 and 1990 and reported a higher rate of mortality in young children than older age groups. They also reported that children are not likely to escape from fires without assistance from an adult. The understandable reluctance of mothers to fight fires places an emphasis on them developing safe escape routes for circumstances when fires do occur. The dependency of the child on the adult for a safe escape from fires also emphasises adult, particularly parental responsibility for protecting children from the main cause of accidental child mortality in Scotland.

The mothers' accounts also revealed that they thought some safety equipment was ineffective and at times an actual hazard to the child. On the other hand some safety equipment was perceived as effective and useful despite the expense of the equipment. Some mothers spoke of not obtaining safety equipment due to its



expense, but many mothers reported acquiring certain expensive items because they valued their effectiveness and believed them to significantly enhance safety. On the basis of these different perceptions of equipment utility we may conclude that whilst most disadvantaged mothers viewed safety equipment as generally beneficial and necessary, the perceived benefits were offset at times by concerns about their personal ability to both afford and successfully utilise certain items.

There are many corroborating statements within the accounts of mothers to indicate that safety equipment is useful for allowing them to continue their domestic routines and care for their children more safely. The need to juggle childcare, supervision, safety and work was a frequently cited reason why safety equipment was valued. It was perceived as allowing the mothers to achieve multiple tasks more safely, especially in many families where mothers worked part-time or lived in local authority housing.

The mothers' accounts bring to light a rational approach to evaluating the efficacy of safety equipment in relation to their family's social context. This was one of several pieces of evidence to suggest the thoughtful manner in which many mothers made decisions about their children's safety. However, equipment was often not perceived as a completely effective or more precisely, as a realistic solution to their safety needs. The mothers' accounts revealed a picture that was a montage of different approaches to safety. Sometimes safety equipment was used, often the children were supervised to varying degrees and frequently the children were 'educated' about dangers and how to avoid them.

In these and other ways, the mothers developed their culture of safety that was socially constructed and hence operated differently between the mothers in different circumstances. For example, some mothers used a great deal of safety equipment and barricaded the home to avoid injury to the child. Whilst fortifying the home appealed to some, most mothers felt that supervising the child within their environment and socialising them to the potential hazards and means to avoid injury was a more

appropriate safety strategy. By embedding safety practices within childcare routines and through socialising children to hazards there is evidence to conclude that safety practices are locally determined in accordance with societal norms. Whilst safety equipment had a place in the different family contexts mothers understood it was not designed to prevent every potential injury. This study has shown that mothers culturally contextualised their endeavours to protect children in their everyday lives to address the persistent problem of childhood injury.

### 9.3.3 Optimism and fatalism

In this study the mothers' locus of control also varied considerably in relation to the social and environmental contexts in which they were required to care for their children. Maternal age was particularly important for how mothers perceived their own abilities and competencies in promoting child safety. Young mothers were more of the opinion that accidents were inevitable and this made them fatalistic in their outlook and rather despondent about the outcome of adopting some strategies. Unrealistic optimism (Weinstein 1988) and fatalism can be considered two extreme outlooks on life which can both act as influences on the mothers' perceptions of injury and mediate their motivation to adopt safe practices. Whilst unrealistic optimism and fatalism are extreme opposites, together they reinforce a dismissive view of safety and discourage mothers from developing safety strategies. The young mothers were identified with both these extreme views and therefore it is reasonable to conclude that they were less motivated and perceived more barriers to developing protective behaviours for their pre-school children. Such views of the risk of injury were probably derived as a coping strategy when mothers lacked the power to provide the protective strategies they desired.

Figure 9.3 is a diagrammatic representation of the interaction between maternal perceptions of optimism or fatalism and locus of control derived from evidence presented in this study. The mothers' motivation to adopt protective behaviours is related to their subjective appraisal of their own ability to influence the safety of their child. Highly motivated mothers are more *self assured* as a consequence of feeling

optimistic and having an internal locus of control. In contrast, the least motivated mothers are *diffident* about specific protective behaviours as a result of feeling fatalistic and having an external locus of control. Those mothers who had an internal locus of control, but who felt fatalistic about their ability to protect their children were *pragmatic* in their approach to safety and more motivated to develop safety strategies than the mothers who felt optimistic about their ability to protect their children, but who had an external locus of control and who needed to be more *endeavouring* in their safety strategies. As with the previous diagram, systems thinking has been used to formulate an understanding of the interaction between the components. The evidence presented provides a basis for proposing a theoretical perspective which allows for interaction of information when developing an explanation of maternal motivation to protect the pre-school child from injury.

#### 9.4 Development of knowledge about injury risk and safety strategies

Some specific sources of information can be identified as contributing most to the mothers' development of knowledge about injury risk and safety strategies. In varying degrees the mothers read books, safety leaflets, watched television programmes and received information or advice from friends and family or health professionals. Some of the sources of information engaged the mother more actively as she developed her knowledge. For example, few mothers reported interactive discussions with health professionals, but many reported passively receiving safety leaflets. The majority of mothers reported a tacit acquisition of knowledge for safety through their own life experiences and mainly through their experiences as a mother and as a child. The mothers' accounts in the qualitative study revealed more detail of the mothers' process of knowledge acquisition and showed how mothers in different social contexts learned about childhood injury and developed their knowledge and understanding of child safety from different sources.

1 = Most Motivation  
4 = Least Motivation

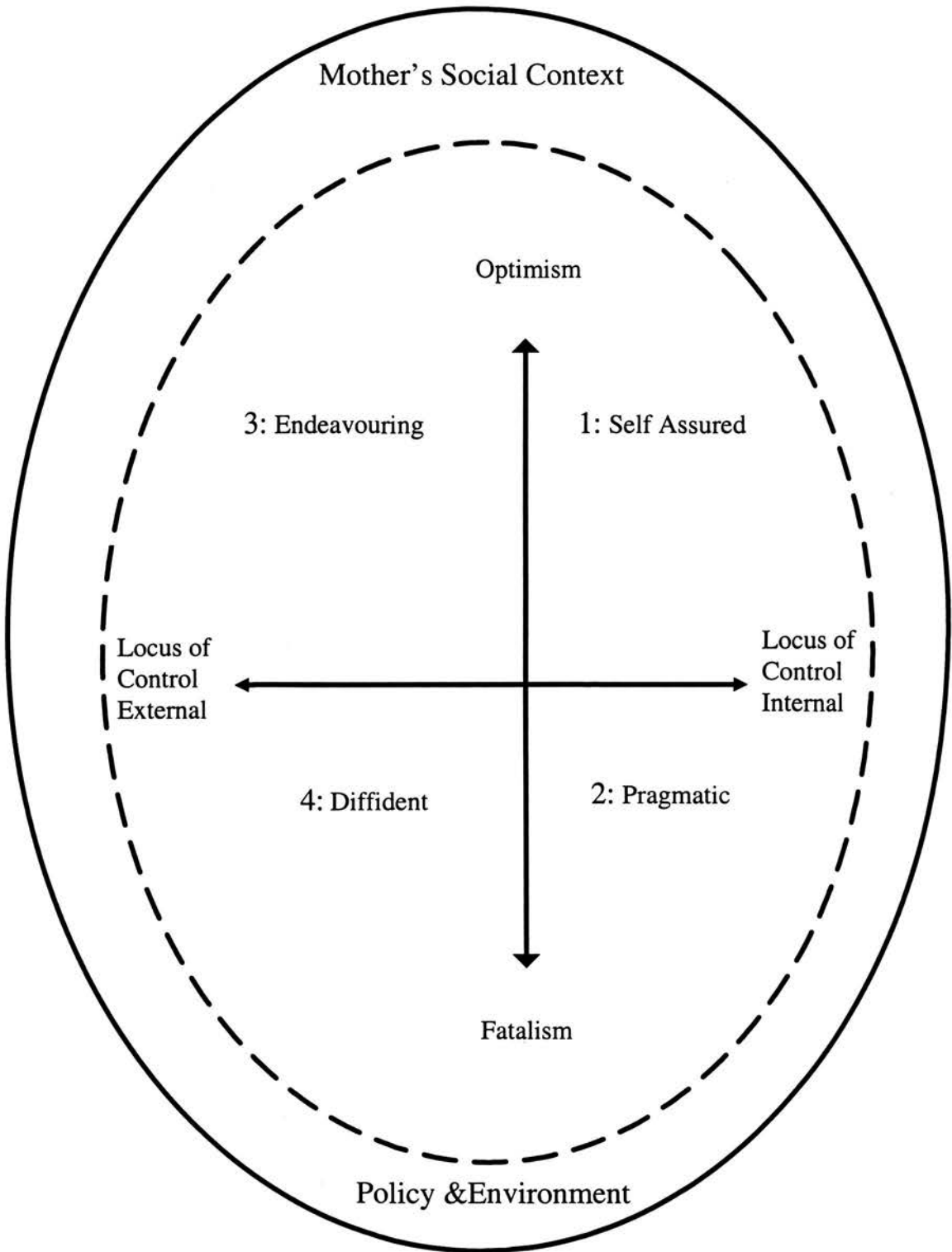


Figure 9.3 Maternal perceptions of locus of control and optimism or fatalism for adopting safety actions

#### 9.4.1 Mothers' ways of knowing about safety

The young mothers and particularly lone mothers had more need and were more dependent on the health visiting service and other authority figures, for example social workers or their assistants and nursery teachers for developing their ways of knowing about child care and safety. The findings of this study have similarities with the findings of Belenky et al (1986) who identified five ways of women knowing. The ways of knowing at the most simple level related to women who tended to be younger and most disadvantaged in this study. Their way of knowing was termed as 'silence' by Belenky et al (1986:26) and *silent* women were described to have 'relatively under-developed representational thought'. These mothers in this study valued the way most health visitors were able to emphasise to them their competence or reassure them that they were 'doing a good job' to encourage the development of their self confidence. Many explained the need to be shown how to undertake basic childcare tasks rather than being told how to do them, bathing babies caused these mothers considerable anxiety and they appreciated being shown at home how to undertake this task safely.

The less isolated and more socially connected mothers spoke of the knowledge they gained through talking with their peer group and the importance of other people for guiding them in safety strategies. This aspect of knowledge development was associated with *received* knowledge described by Belenky et al (1986). Generally, the more confident mothers tended to detach themselves from the contribution of other people for developing their safety knowledge, perceiving the knowledge from health professionals, people in authority and their peer group as less important than the mother's own knowledge. This suggests that the mothers were not using their reference group purely for reasons of 'mutuality, equality and reciprocity' or as a reflection of a 'caring and trusting' relationship (Belenky et al 1986:37), congruent with received knowing. These mothers were *subjective knowers* and they perceived their own knowledge to be most important and other mothers' knowledge less so. The mothers' accounts revealed their views of 'other mothers' being more at risk of

injury and less safety conscious than themselves. Other mothers were often considered to be less attentive or knowledgeable than the *subjective knowers*.

Some mothers demonstrated a reflective approach to learning, where they were able to see the value of their own knowledge and also the contribution of others, for example the health visitor. These more developed ways of knowing included 'procedural knowledge' and 'constructed knowledge'. Belenky et al (1986:26) explained 'in-order for reflection to occur, the oral and written forms of language must pass back and forth between persons who both speak and listen or read and write - sharing, expanding and reflecting on each other's experiences'. These constructed knowers tended to be the older mothers. They were able to articulate the representations they considered to be important qualities in the health visitor and how they contributed to knowledge development. For example they described the 'earthed' or 'connected' health visitor as a positive stereotype to elaborate on the value of health visitors. The mothers in this study used the specific incidents and the behaviours they and their health visitors had enacted to illustrate their knowledge development.

Developing a culture of safety is necessary and important for mothers when protecting their children. Much of the strategies developed and used by mothers to protect children can be understood to be socially constructed. Whilst Avery and Jackson (1993) suggest that the present emphasis of the basic principles of accident prevention is to focus on specific approaches to reducing hazards and designing solutions, the evidence from this study suggests that the principles fail to recognise adequately the social construction of safety amongst mothers. To address problems brought about by new technologies mothers often depend on socially constructed knowledge as environmental and enforcement solutions are often slow in becoming established.

#### **9.4.2 Reflective capacities for knowledge development**

The mothers' development of knowledge about injury risk and safety strategies in this study reflected different ways of knowing. The differences in value held by the mothers for lay and professional knowledge and ways of developing safety strategies can be attributed to the mothers' different ways of knowing. The mothers reflected to a greater or lesser extent upon how their knowledge about risks and protective strategies had developed and on the value of the health visiting service. Whilst young mothers were in most contact and were the main recipients of the health visiting service, they valued the usefulness and practical aspects of the service less for preventing childhood injury than older mothers who had less recent and frequent contact with the service. However, the young and lone mothers valued the supportive and childcare aspects of the health visiting service more than older mothers. These findings suggest that the more mature mothers reflected upon the health visiting service through a constructed approach to knowledge development. Over the years that they had been using the service, the mothers were able to reflect upon the contribution of the service, whilst the younger mothers had the least developed reflective capacities and considered the more immediate impact of the service. Many depicted the more 'silent' and 'received' approaches to knowledge development. The young mothers tended to place most value on the advice that they received that they felt was useful to them in their immediate and every day childcare routines.

This study has demonstrated that safety as a specific issue was less of a priority for many young, lone mothers due to the demands made of them to provide basic childcare whilst coping with emotional difficulties particularly feelings of social isolation. Since safety was a lower priority, the advice may have seemed more abstract and less relevant to them. In contrast, older mothers required least social and childcare support from health visitors, but reflected on the health visitors utility for promoting safety more positively as they considered their work more comprehensively and not just in the short term or in relation to the immediate situation.

The notion of different ways of knowing can assist in understanding the different ways mothers learn to protect their children from injury and also how they can develop childcare skills. Previous studies of the usefulness of health visiting have elaborated on the complexity of evaluating health visiting services from the clients' perspectives (Clark 1984, Foster and Mayall 1990, Machen 1996). Like this study, others have found that not all mothers are able to articulate the contribution or limitations of health visitors to the same depth. In the process of gathering data for this study the young, often lone mothers have difficulty articulating their views on safety. These mothers often had a very drawn out dialogue explaining their views which were not expressed in a manner that could be succinctly presented. The data gathered from the least articulate mothers illustrated the points that epitomise the challenges of protecting children in disadvantaged circumstances, yet their data were least readily presentable. In selecting data for presentation to represent the views of mothers in this study, data were often selected from those mothers most able to articulate and convey succinctly their views to enable the reader to grasp the point being made. Therefore, much of the data which were less concise has not been presented.

Arguably, those mothers most in need are often those least able to articulate their needs and opinions. It is a concern that health visitors are sometimes not 'connecting' with the young mothers and that these mothers are often unable either to perceive the relevance of advice about preventing childhood injury or implement it in the context of their own life circumstances. The health visiting service is perhaps underestimating the needs of the most disadvantaged mothers, those most comfortable with the silent way of knowing as they articulate least what they know, don't know and want to know about protecting their children. This study identified them as the group of mothers who would benefit most from social support and relevant advice about children's safety.

Safety work needs to be directed to benefit the more disadvantaged families as they perceived most need for further information and their children are at increased risk of



injury (Townsend et al 1988). The need to educate mothers in a supportive and 'connected' manner for information to be acceptable and valued requires health visitors to consider the many demands made of mothers within their social contexts and their different ways of developing and valuing knowledge. Supportive intervention by health professionals who recognise the social construction of safety are able to bring about a culture of safety whereby protecting children from accidental injury becomes a core consideration within society. Such a culture has a way of life or outlook that intends to contribute to a reduction in the total number of accidents as part of everyday life. Through this culture of safety, knowledge is conveyed as to how to protect children from injury, from one generation to the next through using lay and professional social networks. Locally determined issues which relate to the environmental context, policy context and social context in which people live will shape the transmission of safety knowledge from one generation to the next and gives prominence to this culture of safety.

## 9.5 Social networks

The majority of mothers perceived their immediate family to have been the most important source of information for promoting their pre-school children's safety, but many mothers, particularly those living in relatively more disadvantaged contexts, identified the health visitor as the best resource for safety information and advice. Friends were also seen to play an important role in the mothers' development of knowledge for safety in this study. The peer group was considered by some mothers to be a useful resource for sharing accident experiences, so mothers could learn to avoid dangers from each other. The qualitative study revealed that the peer group interaction often enabled mothers to enhance their own self esteem by comparing themselves with 'other' mothers who they usually judged as less careful than themselves.

These findings are congruent with Weinstein's (1982) interpretation of the person's reference group being perceived by the individual to be at greater risk than the person themselves. These research findings have implications for understanding the dynamics of group work with mothers where safety and the prevention of accidents is the focus of the discussion. Group work comes from a tradition of supportive discussion (Drennan 1988). However, it may well be that group discussion could be challenging for mothers in the area of promoting safety. Mothers in different stages of knowing may be more or less supportive or supported in group work and peer group relationships. Group work to address the topic of preventing childhood injury may be a positive experience for some mothers as they become confident through making comparisons with their peers, but in contrast some mothers may feel undermined by their peers and consider group work to be a negative experience.

The mothers rationalised their everyday life and childcare safety practices through the social networks of their peer group. Since mothers often made comparisons between their own and their friends' safety skills, their views of child injury risk and safety were socially constructed in their everyday lives as opposed to 'text book' knowledge about injury rates and safety strategies. Given the nature of knowledge development through kinship networks and social organisations it may be concluded that the mothers' perceptions of injury risk and safety strategies were psychologically and socially constructed. The implication is that mothers' knowledge development and their approaches to safety are more congruent with a psycho-social model of health, than a medical model of responding to the problem of accidents that is currently advocated by many injury prevention workers or researchers.

Importantly, the mothers in more disadvantaged circumstances reported most need for receiving safety information through educational approaches, yet they also perceived the environment in which they lived to be the main barrier to safety. This evidence leads us to conclude that environmental approaches to promoting safety would benefit the children of disadvantaged mothers since their environments are generally more hazardous and their social networks are less developed. The

environmental approach would alleviate partly the need for individual mothers to gain knowledge about certain hazards and appropriate safety strategies from poorly developed social networks. However, realistically, not all hazards are going to be addressed through environmental approaches. Mothers will always need to acquire knowledge about those hazards not readily addressed through the environmental approach or resulting from new hazards for example, in respect of new technology. For example the past few years have seen an increase in poisonings as a result of the ingestion of dishwasher powder (Ashby and Routley 1996). There is evidence that although one type of injury may be reducing, another may be on the increase (Scottish Accident Statistics 1994).

Mothers require information about such hazards and how to reduce their children's exposure to the danger and threat of injury until environmental approaches are developed to prevent such hazards. Health visitors are an important resource for disadvantaged mothers with limited social networks and are in a position to promote a culture of safety through the advice they give to mothers to enable them to respond to new hazards. Socially constructed safety strategies will often enable the most rapid accident prevention strategies to develop amongst families, although environmental or enforcement approaches may be more effective in the long term. For example the withdrawal of hazardous washing machines which release scalding water on to young children relies on educational strategies to convey information to mothers to return their machines in the first instance, eventually environmental strategies and some times enforcement strategies ensure the design faults are rectified. Initially, however, it is the passage of information from one individual to another which is required to protect the child from injury.

### **9.5.1 Lay support networks and professional organisational support networks**

Mothers in the lower social classes reported more benefit from professional and organisational support networks, whilst older mothers and those with a supportive partner at home reported most benefit from lay support networks. Whilst support

networks have been identified as particularly important to mothers of pre-school children (Everingham 1994) the mothers living in different circumstances in this study perceived different types of social and support networks as important for helping them promote the safety of their young children. Social support has been defined as the *readiness and responsiveness* of support when it is needed (Cutrona 1996 and Nolan et al 1996). This is quite distinct from *social networks* where although social links are evident, they may not be responsive or readily available. Simply having social contacts or networks does not necessarily make them a form of social support, as they need to meet the criteria of being readily responsive to the individual's need for support.

Mothers in more disadvantaged circumstances perceived the health visitor as a more valuable form of social support than the mothers in more advantaged circumstances who considered the health visitor as just one component of their social network. Lone mothers particularly appreciated the social support provided by health visitors. The least socially connected mothers or isolated mothers valued the professional and organisational support most. The mothers with good family and peer contacts or who were more socially connected perceived less value in professional organisational support as they felt able to draw on the resources of their lay support networks. It would seem plausible that professional and organisational social support such as that provided through the health visiting service will benefit the least socially connected mothers, for example lone mothers more than mothers with a supportive partner. Different family structures therefore have implications for the mothers need for social support, particularly when new mothers are adapting to caring for their children safely.

### **9.5.2 The health visitor**

The health visitor was welcomed by most mothers in this study as a home visitor and a health professional, but not seen as a major source of information about accident prevention. However, most mothers believed the health visitor had the potential to assist them with improving child safety. The role of the health visitor in promoting

safety was expected to be one of offering information on hazards and advice on how to avoid the dangers. Mothers required help to understand child development and the child's limited ability to anticipate hazards in the environment. Some lone mothers had specific requirements for help, particularly with parenting skills and coping with limited financial resources and feelings of isolation when caring for their children.

The enactment of the health visitors' role, including both their professional and organisational qualities, were perceived by mothers to be equally, if not more important than the purpose of the contact. The health visitor's communication skills were found to be central to the mothers' acceptance of the health visitor as a home visitor and as a person from whom mothers felt able to seek information and take advice to prevent childhood injury. It was necessary for the health visitor to communicate well and to develop a good relationship for the service to be perceived as beneficial. The mothers' accounts illustrated that if the health visitors did not relate to them on a personal level and respect their own knowledge as carers of their children, health visitors were unlikely to succeed in developing a good relationship with the mother or progress to addressing health or safety topics.

This research revealed the qualities that mothers perceived as important for health visitors to develop in-order that they could work effectively with parents. These qualities can be considered as the organisational and professional qualities of health visiting. These organisational qualities include the appropriate timing and the content of contacts in addition to the accessible nature of the individual health visitor or organisation. The professional qualities mainly reflected the mothers' perceptions of the health visitor role enactment. The qualities which were appreciated included: good communication skills, approachability and the ability of health visitors to relate to the mothers' situations and to 'earth' or to connect discussions and advice to the mothers' context. Health visitors were particularly valued who could read and interpret the mothers' verbal and non verbal cues and respond in a manner which supported the mothers, developed their confidence and empowered them to care for their children.

### **9.5.3 The health visitor role: education?**

The health visitor role was seen by many mothers as mainly educational for both childcare and safety. Many mothers, particularly those living in relatively disadvantaged contexts, valued more specific and overt discussions about safety for developing their knowledge and confidence about preventing accidents. The concerns mothers had regarding covert approaches to safety related to their uncertainty about their capacity to distinguish messages which were not clear. The overt approach reduced ambiguity and relieved the mothers' anxieties about their capacity to understand, decipher or reflect on the content of their discussions with health visitors. Thus a more direct approach to discussing safety was preferred. Health visitors who used more covert approaches to educate mothers may not have reached some mothers as their ways of knowing may have required a more direct approach for learning and understanding.

Belenky et al (1986) pointed out that some mothers, the 'silent' mothers need to be 'shown how' to do things, whilst speaking the words or explaining things were more appropriate for the mothers who 'received' knowledge, whilst mothers with the more developed ways of knowing for example, 'subjective', 'connected' and 'constructed' knowers would be more able to discern covert information. Mothers in different social contexts or at different stages in their lives and maturity had different ways of knowing. Educational approaches intending to promote maternal motivation to protect pre-school children need to vary thereby respecting the mothers' different ways of knowing and value their different knowledge bases.

### **9.5.4 Psycho-social support given by health visitors**

The mothers spoke primarily of the health visitors working in an educational capacity, although the more social and psychological aspects of their work were also described. The psycho-social processes for promoting safety were most evident in the relatively disadvantaged families. Mothers considered health visitors to be valuable resource when they promoted their psychological health through developing their confidence and empowering them to care for their families. The health visitors

often identified resources within the community beyond the family unit to support the social well being of the mother and pre-school child. The mothers described this aspect of the health visitors' work with them to promote childcare or their own emotional health, but rarely reflected on this way of working as contributing to their children's safety. The use of resources which are psychological or social in origin are least represented in the literature clarifying the process of the health visitors' work for promoting safety.

The psycho-social approach of health visitors is less commonly articulated, discussed and understood by mothers. This unfamiliarity with the health visitor role beyond education is also evident in the principles of accident prevention (Avery and Jackson 1993). Whilst injury prevention workers continue to stress the relevance and importance of environmental and enforcement approaches to safety and tolerate educational approaches, few are addressing or acknowledging the complex issues of psycho-social approaches to safety. The mothers in this study have spoken of the importance of such approaches for improving their capacity to care for children and recent work by Olds et al (1998) and Cole et al (1998) further support the value of home visiting for improving care giving and safety.

There is a need to broaden the understanding of health visitor work from client education to client empowerment. Greater credence needs to be given to the role of health visitors in mobilising diverse social and psychological resources for promoting the health and safety of families with young children. A lack of acknowledgement for the value of developing social and psychological approaches to promoting safety both in theory and practice hinder the evolution of such approaches as a possible contribution of health visiting for reducing accidental injury to pre-school children. Accordingly this approach is not well recognised by mothers of young children and this may lead to health visiting being considered in a purely educational capacity when promoting the safety of pre-school children.

### **9.5.5 The medical versus the social model in health visiting**

The mothers' descriptions of the health visitors' work can be interpreted as involving a medical model of health care relating to pathogenesis, when health is regarded to exist in absence of a disease. Health visitors were seen to assess and identify problems in a person's physical or mental health which needed to be treated. Cowley and Billings (1997) argue that a pathogenic approach to health focuses on identifying and preventing risk factors and determinants of illness. While (1986) also illustrated this approach in her work on health visiting. On the other hand the more social model of health visiting was also seen to emerge from the mothers' accounts in this study. Identifying resources for health in the mothers' psycho-social contexts were clearly important as the mothers explained the health visitors' interest in their ability to cope and these aspects related more to salutogenesis.

Cowley and Billings (1997) describe salutogenesis as the 'processes that actively create health, protect from disease or promote healing'. This approach to health is based on a theory developed by Antonovsky (1987) that emphasises the positive aspects of how health is created and maintained as opposed to focusing purely on the problems of illness. Cowley and Billings (1997) argue that salutogenic theory relates closely to the psychological and social origins of health. Such a process has been considered to reflect how health visitors work with families to promote health as they accumulate resources for health through a lifelong process (Cowley 1995).

Arguably the medical and social models should complement each other to benefit the health of the client, but it would be feasible for the models to conflict and leave the health visiting service in a paradox. Evidently the theoretical base of health visiting needs clarification. Emerging now is a body of literature regarding the process of health visiting and the opportunity to review the theoretical base of the profession. Changing health care priorities and increasing recognition of the social and political aspects of health visiting heighten the necessity for health visiting to make its position regarding health and social care known so that it can be understood by the wider population.



Salutogenesis respects life experiences as they are understood to contribute to 'positive methods of responding and adapting to situations' (Cowley and Billings 1997). Antonovsky (1987) argues that these experiences give rise to 'generalised resistance resources' which promote a sense of coherence or confidence. The psycho-social context, expectations and culture of the theoretical base of salutogenesis have been considered compatible with the process of health visiting revealed by Cowley (1995) as health visitors promote health by using resources for health as opposed to concentrating on a person's illness. The accounts given by the mothers and the findings from this study further support the importance of these concepts in maintaining the safety of children and preventing accidents. It would appear that mothers value a more salutogenic approach and consider the safety of their children more in this context as part of their everyday lives drawing on resources from their experiences than with the medical model of many injury prevention workers responding to specific hazards with specific antidotes to a specific problem.

The health visitor is often identified by other health care professionals as a key person to help reduce injuries to pre-school children (Levene 1992, Carter et al 1992, Jackson 1990). This study identifies the role of the health visitor in injury prevention as under utilised in the conventional sense of educating families, but identifies how by building on psycho-social resources for health, they work towards promoting the safety of children. Much of the current emphasis on injury prevention work has been on the environmental, educational and enforcement approaches to safety. Evidently the contribution of health visitors has been more to promote the infrastructure of the social and psychological resources of families to promote safety than previously recognised as much of the earlier research focused on their educational role. The potential benefits of health visiting have been undermined by the current principles of accident prevention (Avery and Jackson 1993) and a closer examination of the culture of safety is required in future research. This work identifies several ways in which health visitors could develop their role to prevent injuries and build upon the

theoretical underpinnings of salutogenesis to promote resources for safety in contrast to applying the conventional, medical model approach to injury prevention.

### **9.5.6 Social support and maternal motivation to protect children**

This research emphasises the importance of socially constructed knowledge for the development of protective strategies amongst mothers of pre-school children and the variety of social networks and support which act as sources of information for mothers to help them keep their young children safe. The study identifies how different types of organisational and professional support or lay support may be more appropriate for some mothers than others. How mothers are socially supported can be understood to influence their protective safety strategies with their children. It has been argued that the Health Belief Model considers issues such as social support and self efficacy and locus of control implicitly within the components of the model and that this is unsatisfactory (Schwarzer 1992). Protection Motivation Theory however, recognises the importance of social support within sources of information and self efficacy is explicitly defined as a component of the theory (Rogers 1975). Yet, these issues have not been examined in relation to promoting mothers' health behaviours when protecting pre-school children.

In this study, mothers who were particularly lacking in confidence and who had low levels of self efficacy for maintaining their children's safety often valued professional and organisational support from health visitors to promote their confidence to care for their children safely. However, if the mothers lacked confidence and were not well supported or had poor social networks, they were more likely to feel powerless in their ability to protect their children. Figure 9.4 illustrates the interaction of the mothers' perceived social support and self efficacy for influencing their motivation to protect their pre-school children from accidental injury. The mothers with good support and who feel self confident are more likely to feel *empowered* to adopt safety strategies, whilst those with good social support and little self confidence are more *dependent* on their social connections for enabling them to develop safety strategies. Those mothers who are confident, but have little social support are *self reliant* in

1 = Most Motivation  
4 = Least Motivation

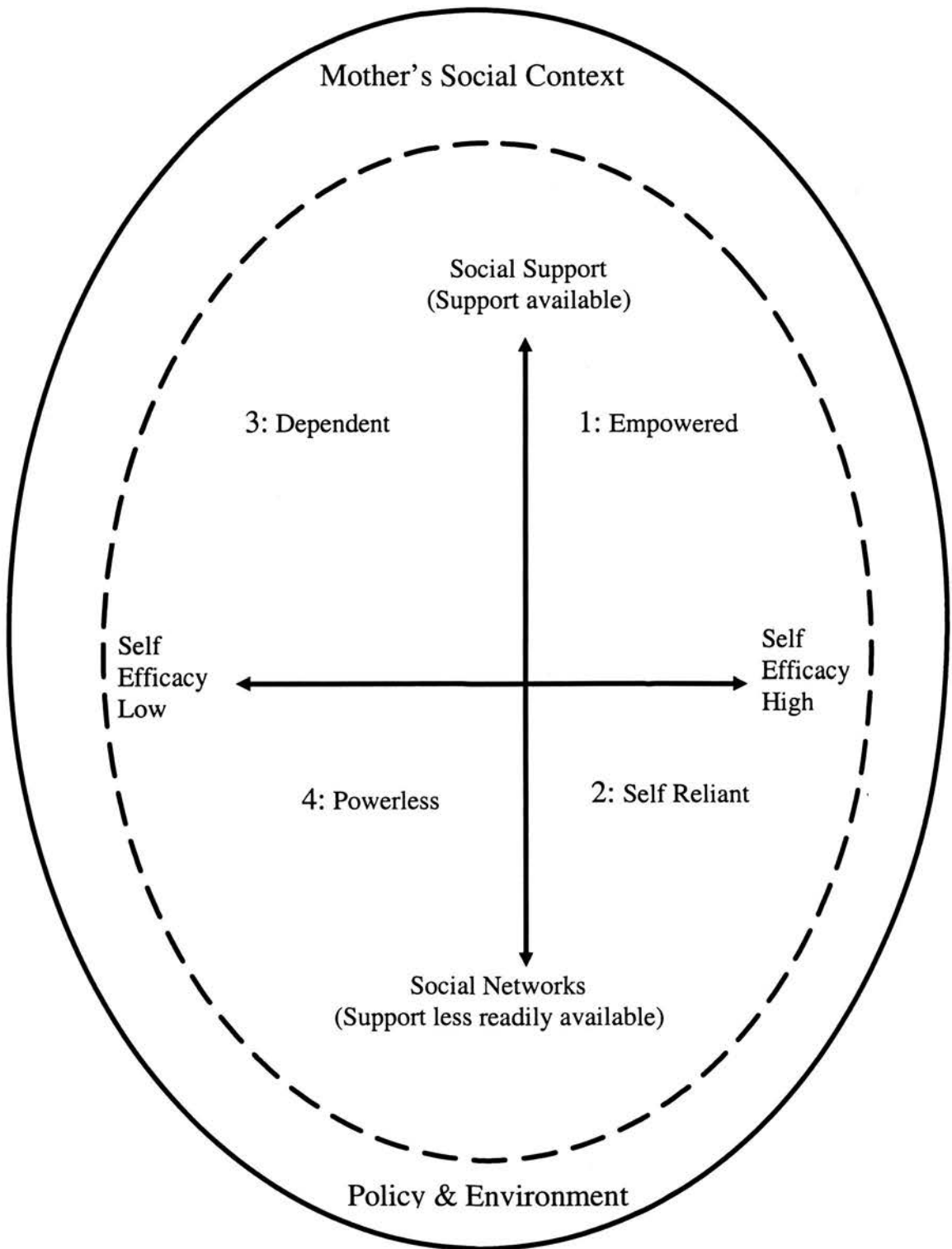


Figure 9.4 Maternal perceptions of support and self efficacy for performing safety actions

their approaches to safety, whilst the mothers who have little self confidence and poorly developed social support feel *powerless* in their endeavours to promote their children's safety. This research illustrates how differing levels of social support and self efficacy can help in explaining and understanding maternal motivation to protect pre-school children from accidental injury. In this study the health visitor has been identified as impacting on perceptions of social support and self efficacy. In the family systems approach proposed by Whyte (1994) it is possible to recognise that the health visitor may be part of the mothers' social system. Information permeating from the social system to the individual system of the mother and the psychological sub-system will influence perceptions of support and self efficacy.

### **9.5.7 Developing an understanding of maternal motivation to protect pre-school children from accidental injury**

The earlier discussion in this chapter drew together the research findings from this study and relevant theory relating to maternal perceptions of accidental injury and motivation to adopt safety strategies. Mothers can be seen to formulate their decisions about protective strategies in respect of their social context, within which their life circumstances are affected by policies influencing health, safety and environmental conditions. Within the mothers social context, perceptions of the susceptibility and severity of accidental injury to their children are formulated. These perceptions are mediated as the mothers weigh up the perceived effectiveness or benefits of safety strategies and the barriers to safety actions in respect of their personal circumstances. The mothers' self efficacy, social support, locus of control and optimism also interact to influence their decisions about how to protect the pre-school child. The mothers consider and balance the needs of all the family members in relation to the specific safety needs of the individual pre-school child when deciding upon the safety strategies to adopt.

Figure 9.5 uses systems thinking to illustrate the interaction between the various components which influence maternal motivation to adopt safety strategies and draws together the detail of Figures 9.1 to 9.4. The holistic view of the components

considered in this thesis are presented in the larger model depicted in figure 9.5 to communicate how decision making for the protection of pre-school children within the context of the family by maternal adults is complex, influenced by the mothers' social contexts and perceptions which are often situation specific. Future scrutiny of the framework may result in its extension in light of further research evidence examining maternal motivations.

This research identifies how health professionals can influence these maternal perceptions and so may positively affect mothers' motivation to protect their children from injury through the social system. Health visitors have the capacity to work with mothers of young children to promote their safety and are acceptable health professionals for undertaking sensitive and complex approaches to preventing accidents to pre-school children and for promoting a culture of safety.

This study addressed the research questions posed to examine maternal motivation to adopt safety strategies to protect pre-school children from injury risk. The study contributes to the development of knowledge about mothers' perceptions of injury risk and an understanding of factors that mediate their motivation to adopt safety actions. In this chapter the limitations of present theory to understand protective behaviours has been identified and evidence has been presented to suggest more appropriate ways for explaining maternal motivation for providing safety to young children. The argument for a more psycho-social approach to developing a culture of safety has been presented. If accepted, the existing theory and approaches advocated within the basic principles of accident prevention and by social cognition theory will require modifications as proposed.

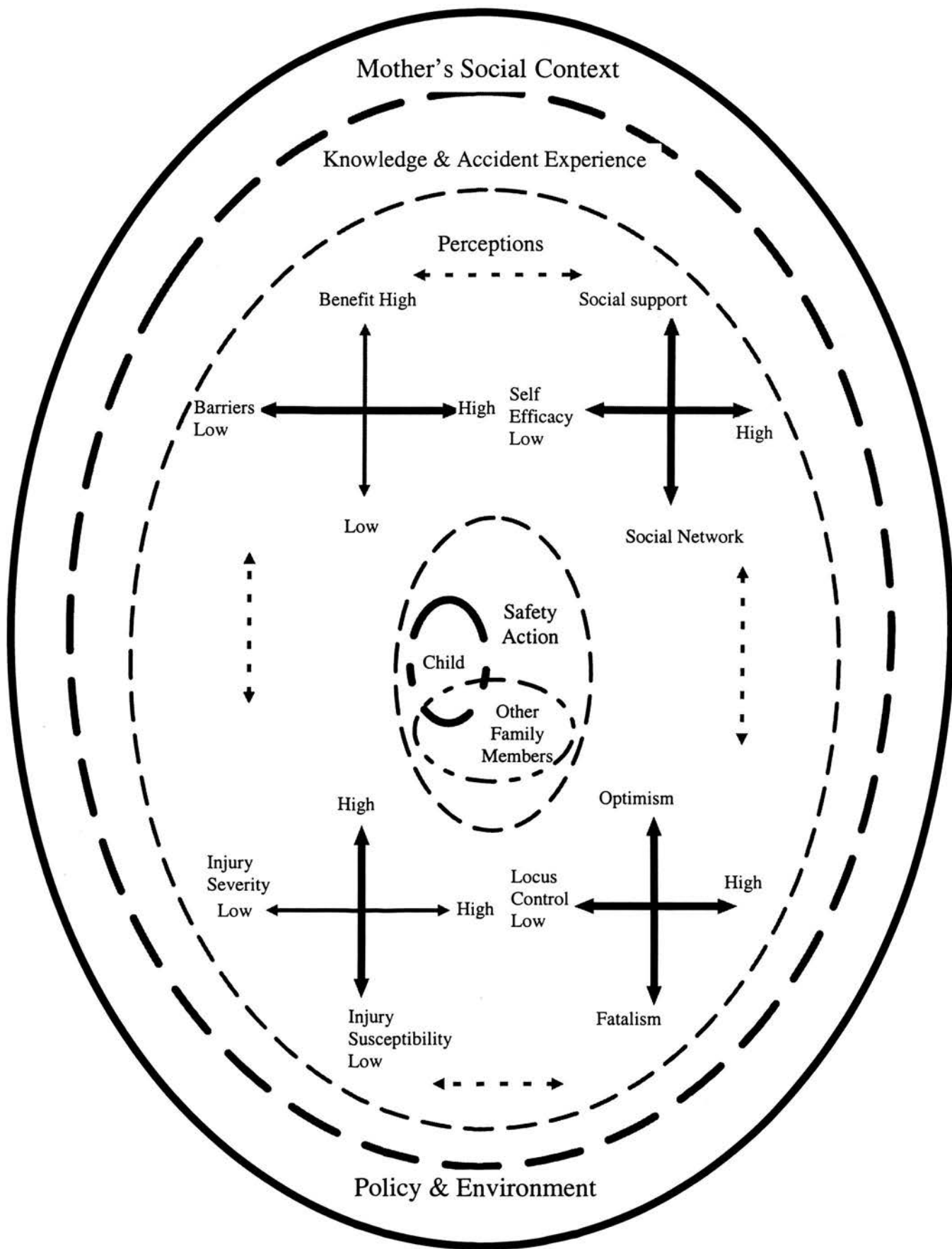


Figure 9.5 Model to explain maternal motivation to adopt safety strategies to protect the in-school child.

# Chapter 10

## Conclusions and Recommendations

### 10.0 Introduction

In this final chapter the limitations of this study are discussed prior to summarising the main conclusions drawn from this research. The presentation of these conclusions correspond to the discussion presented in the earlier chapters. The social context issues are considered first as these are understood to shape maternal perceptions of injury risk which in turn influence motivation to protect pre-school children. The conclusions pertaining to maternal perceptions of injury risk are followed by the conclusions relating to the perceived benefits and barriers to safety, since these have been found to mediate maternal motivation to prevent accidents. The perceived value of health visitors for promoting the safety of children is then presented. Finally, the modifications to theory developed from this research which can help to better explain maternal motivation to protect children from accidents are presented. A series of recommendations formed on the basis of the analysis of evidence from this research conclude this thesis chapter. These recommendations are included as an intention to give direction towards the advancement of clinical practice and future research. These recommendations are considered to be beneficial approaches that health professionals may adopt to ultimately improving the safety and health of young children and their families.

### 10.1 Reviewing the research methods and their limitations

The integrated methods used to research the mothers' perceptions of accidental injury risk and the role of the health visitor were designed to complement each other in the

quest for knowledge. The combining of research methods is considered by some researchers to enhance the research process and to answer research questions more comprehensively than an approach through a single method (DePoy and Gitlin 1994, Polit and Hungler 1995, Cowman 1993). In contrast, Pawson and Tilley (1997:xiv) recognise how some people consider that such an approach can conflict with the 'badges of honour' that are held by some researchers regarding methodological positions. This combining of research methods may be considered as muddying the water or at best sitting on the fence with regard to the philosophical foundations of the research or specifically consider such researchers to 'sit happily on the methodological fault line' (Pawson and Tilley 1997 :xiv). In recognition of the limitations of the quantitative and qualitative research methodologies it was intended that a considered approach to the integration of different research methods would strengthen this particular study. Pawson and Tilley (1998:158) argue that 'the combination of qualitative and quantitative data should offer something more than *weight of evidence*, but also should invite a sense of *explanatory completeness, synthesis or closure*'. This research has demonstrated how this can be achieved through a systematic approach to a more comprehensive understanding of maternal motivation to protect pre-school children from accidental injury.

A combined approach can complicate the analytical process, but the advantages of undertaking such a multi-method design are the greater extent and depth and completeness and robustness of the findings derived and their subsequent contribution to new knowledge about mothers' views on injury risk and accident experience. This allows greater confidence in the findings and their contribution to knowledge. Guba and Lincoln (1989) and Crotty (1998) discussed the complexity of different ontological and epistemological belief systems and how these shape the methodology of research. Integrating different methodologies has not detracted from these different belief systems, but recognised the more and less appropriate philosophical positions for developing an understanding of maternal motivation to protect children and the value of health visitors.



'As researchers we have to devise for ourselves a research process that serves our purpose best, one that helps us more than any other to answer our research question' ..... 'Rather than selecting established paradigms to follow, we are using established paradigms to delineate and illustrate our own' (Crotty 1998: 216).

The limitations of the study method were a consequence of the limitations of the constituent methodological approaches. Some of the limitations of the quantitative study were considered earlier in the results chapters, such as the response rate of the survey method and the lack of representation within this study of travelling families. In addition, some specific modifications to the scales and constructs developed for this study would be appropriate before using the research tools in the future. For example, asking about 'head of household employment' was not only out-dated, but it simply did not capture the employment activity of all adults within the family unit. Some of the open-ended questions could in future be asked in a closed question format to permit more complex statistical analysis. The length of the questionnaire may have been disconcerting for some mothers, but given the number and range of respondents, we may conclude that the readability assessment and pre-test methods were highly beneficial. The questionnaire was able to capture and identify the issues pertinent to the study. The scales require further validation, but analysis of the constructs indicated that they capture the essence of maternal perceptions about injury risk, the relative strength of opinion concerning educational, environmental and enforcement approaches to child safety and measure the perceived relevance of professional and lay support networks.

The decision to involve only mothers in the study may be considered correct as involving the views of male respondents would have introduced an additional and potentially complicating variable into the study. Men have been shown to have quite different perceptions and ways of viewing the world (Belenky et al 1986) and caring (Watson and Lea 1995). Whilst they contribute to childcare, they are still rarely the main carers within the study population. It was however, evident from the findings of this study that

a supportive partner was influential in the mothers' perceptions of injury and in future it would be beneficial to develop knowledge about fathers' perceptions of the same issues and to study how partners work together in promoting their children's safety. Examining family structure is essential when investigating maternal perceptions of injury risk or their motivation to prevent accidents and the perceived value of health visitors.

Whilst the qualitative study afforded greater insight into the mothers' views, the findings can be considered relatively context specific. As the findings demonstrate, what can at first appear to be a relatively homogenous group is in reality quite diverse. For example, the circumstances of the lone mothers differed; some lone mothers were older, more mature, well educated and felt themselves to be confident and coping well. Other lone mothers were young, lacking in confidence and desperate for social support. Careful attention to the transferability of the findings is required as differences existed not only between defined groups of mothers, but amongst them. It is possible to make associations with the mothers circumstances and their revelations to recognise that the findings inform knowledge about social context and safety issues, but in a relatively specific way.

Greater insight in to the many issues relevant to mothers in different social contexts was achieved through using a qualitative method and when considered within context such findings can increase our understanding of the needs of mothers and help to shape a more sensitive and appropriate anticipation of, and response to, their specific needs.

There can be no doubt that something is lost, particularly in enunciation when what is spoken by a mother is then transcribed, written down and presented as text by a researcher. The accounts presented remain faithful to the mothers' spoken words, but some of the emphasis conveyed by expression may be lost in recording the accounts on paper. However, by recording the mothers' spoken words verbatim and systematically analysing them, much has been gained about their views on safety and the value they

ascribe to health visitors. The qualitative method contributed a way of recording maternal experiences of accidents and protecting children. This method then enabled a picture of mothers protecting children in a rational and considered manner to be revealed.

Through the integration of research methods much rich and valuable data has been gathered which enabled a thorough analysis of maternal perspectives of accidental childhood injury and the value of health visiting for promoting safety. In the following pages the main conclusions developed from the analysis of the data are summarised.

## 10.2 Concluding on the importance of social context and family structure

From the evidence presented in the preceding chapters it is reasonable to conclude that there is a significant association of different demographic variables with the mothers' perceptions of injury risk and safety strategies. Social contexts and environments are important for understanding the circumstances influencing the mothers' view of the world in which they care for their children. Lone mothers had a significantly higher representation in the post accident sample and it seems reasonable to conclude that lone motherhood is associated with an increased incidence of accidents to children requiring medical attention. Young and particularly lone mothers and their children tend to live in situations of multiple disadvantage that limit opportunities to maintain safety. Generally these young and lone mothers are less likely to adopt specific, recognised safety strategies and protective behaviours than older or supported mothers. The evidence suggests that safety as a specific issue is less of a priority for many young lone mothers due to the competing demands made of them to provide basic childcare and to cope with

their own emotional difficulties. In conclusion, a systems model such as the one presented in chapter nine provides a more structured organisation of the components influencing maternal motivation and is able to depict the centrality of social context and family context issues within which mothers' perceptions of injury risk and motivation to protect children are constructed of interactions which influence maternal motivation.

### 10.3 Concluding on mothers' perceptions of injury risk for motivating them to adopt safety actions

The findings from this work indicate that the mothers' perceptions of susceptibility to a specific injury are context specific and perceptions of injury differ with respect to their different circumstances and the perceived needs of their children. Perceptions of the susceptibility to injury and severity of injury to children influence mothers' perceptions of their children's safety. The susceptibility of the child to injury is identified as being more influential in motivating mothers to develop protective behaviours than the severity of injury. Mothers do not believe it is necessary to prevent every potential injury through the removal of all hazards as some children are considered to be less susceptible to certain hazards and injury than others. Accident experience is identified as a method for developing a perception of injury risk and it is influential in motivating mothers to adopt specific safety strategies. The importance that mothers place on responsive approaches to safety, through exposure of the child to hazards, goes some way towards explaining the prevailing rates of accidental injury in pre-school children. The lack of generalisability of accident experiences limits the benefits of accident experience as a means of preventing other types of injuries. The mothers in more relatively disadvantaged contexts feel most disempowered when it comes to maintaining the safety of their children. Such mothers may cope with the threat of injury by denying its potential impact on their children's lives.

## 10.4 Concluding on mothers' perceptions of the benefits and barriers to safety actions

This study has shown that mothers culturally contextualised their endeavours to protect children in their everyday lives to address the persistent problem of childhood injury. The mothers' social contexts are associated with their different perceptions of the barriers to injury prevention, yet there is a consensus of the benefits of enforcement approaches to safety regardless of maternal circumstances. Therefore developing knowledge about mothers' perceptions of the barriers to safety is more useful for understanding their different approaches to safety strategies and motivation to protect pre-school children than knowing their perceptions of the benefits of safety. Mothers consider the benefits and barriers to promoting the safety of the pre-school child within the context of other family dynamics. They define and balance their children's safety needs against their children's other needs and interests in addition to the needs and interests of the other family members. Mothers living in relatively more disadvantaged contexts perceive a more external locus of control over their children's safety and they often perceive the barriers to safety to be beyond their influence or control. This results in them feeling less empowered to provide safety for their children. Young mothers have extreme views of unrealistic optimism and fatalism regarding protective strategies for children. They perceive more barriers to developing protective behaviours for their pre-school children and as a consequence of these perceptions they can be more dismissive of specific approaches to safety. Depending on the mothers' perceptions of the benefits and barriers to injury prevention, some mothers find adopting safety actions more rewarding or challenging, whilst others consider them arduous or unavailing.

## 10.5 Concluding on the value of health visitors for preventing childhood injury

The work of health professionals to promote safety needs to be directed to benefit the more disadvantaged families as they perceive most need for further information and their children are at increased risk of injury. Some health visitors are underestimating the needs of the most disadvantaged mothers, those most comfortable with the 'silent' way of knowing and who articulate least what they know and want to know about protecting their children. Mothers have different ways of knowing and these shape their perceptions of the contribution and value of health visiting for reducing accidents to pre-school children. Educational approaches to promote maternal motivation to protect pre-school children need to vary so as to respect the mothers' different ways of knowing and to value their different knowledge bases. The mothers' different ways of knowing affect how they value lay and professional or organisational support when protecting their pre-school children from accidents. The mothers' knowledge development and approaches to safety are more congruent with a psycho-social model of health as a process than a medical model of responding to the problem of accidents that is currently advocated by many injury prevention workers and researchers. The health visitors were reported to use a psycho-social approach primarily with disadvantaged mothers as they identified resources within the community beyond the family unit to support the well being and safety of the mother and pre-school child.

The study identifies how different types of organisational and professional support or lay support may be more appropriate for some mothers than others. How mothers are socially supported can be understood to influence their protective safety strategies with their children. Mothers who are particularly lacking in confidence and who have perceptions of low self efficacy for maintaining their children's safety often value professional and organisational support from health visitors to promote their confidence

to care for their children safely. The way that health visitors enact their role, means that both their professional and organisational qualities, are perceived by mothers to be equally, if not more important than the ostensible purpose of the mother and health visitor contact. Health visitors have the capacity to work with mothers of young children to promote their children's safety and are acceptable health professionals for undertaking sensitive and complex approaches to preventing accidents to pre-school children. A lack of acknowledgement for the value of developing social and psychological approaches to promoting safety both in theory and practice are hindering the evolution of approaches to the potential contribution of health visiting for reducing accidental injury to pre-school children.

The safety work of health visitors needs to be more strategic and the priorities relevant to the social and environmental circumstances of the family. An integral part of the development of strategic working for injury prevention should be the evaluation of the health visitor contribution to promoting safety. In an era when the client's evaluation of the perceived role of health professionals is given more credence, covert approaches to promoting safety may leave clients uncertain about the health visitor contribution. Over the long term this could be problematic if health visiting is to demonstrate its contribution to promoting safety.

## **10.6 In summary**

- Mothers were found to formulate their decisions about protective strategies in respect of their social context.
- Within the mothers social context, perceptions of the susceptibility and severity of accidental injury to their children are formulated.

- These perceptions are mediated as the mothers weigh up the perceived effectiveness or benefits of safety strategies and the barriers to safety actions in respect of their personal circumstances.
- The mothers' self efficacy, social support, locus of control and level of optimism also interact to influence their decisions about how to protect the pre-school child.
- The mothers consider and balance the needs of all the family members in relation to the specific safety needs of the individual pre-school child when deciding upon the safety strategies to adopt.
- Modification of the principles of accident prevention are required to accommodate the more psycho-social approaches to promoting children's safety.
- Endeavours to understand, explain or predict maternal safety actions should utilise models which consider social context issues and the competing demands of family members as central components in the decision making process.
- Health professionals can influence maternal perceptions and affect mothers' motivation to protect their children from injury.

## **10.7 Recommendations**

### **10.7.1 Introduction**

These recommendations are formed on the basis of the evidence analysed and the conclusions drawn from this thesis. They respond to the need for clinical developments in nursing to be evidence based to ultimately benefit patients and clients in the community (Department of Health 1993b, Traynor and Rafferty 1997). In the existing framework for community nursing, health visitors are the main group of practitioners with routine contact with young families. Future developments in health and social care



may lead to practitioners with different education and training working with similar remits as health visitors in community settings. These recommendations are therefore intended for any health professional working with mothers to prevent accidental childhood injury.

Health visitors need to make accident prevention and safety more of a priority for their work with young families, if they are to contribute to the public health role of reducing home accidents and encourage a culture of safety. Health visitors are considered by most mothers and many health professionals to be in an excellent position to work with families to improve the safety of pre-school children within the home environment. At present their work under utilises their privileged position for promoting the safety of pre-school children in and around the home environment. Health visitors should seize the opportunity to develop their work to offer a more structured and organised programme of accident prevention activities with families.

### 10.7.2 Health visiting and clinical practice

Professionals working with mothers should identify injury risks and relate them to the family's social context to promote the safety of children. It will be necessary for health professionals to contextualise the threat of injury and relate appropriate protective strategies to the mothers' circumstances, as accident data and safety strategies can seem abstract and irrelevant to clients. Informing mothers about injury risk within the home environment will help them to develop a more *realistic* view of their children's susceptibility to certain accidents. It is important for practitioners to encourage mothers to understand the *objective* risk of accidents, particularly in the home environment in conjunction with their own context-specific, subjective appraisal of risk. For example, promoting understanding of the risk of poisoning and effective strategies to prevent such accidents to pre-school children should be a priority within the study area. This is one

means towards fostering motivation to protect pre-school children from injuries. Once the threat of injury has been appraised, the mothers can then consider the effective safety strategies suggested by health visitors relevant to their families' circumstances.

Professionals with a remit to promoting the safety of children will need to recognise and respond to the mothers' different ways of knowing and their more or less proactive approaches to developing knowledge about accident hazards and safety strategies in order to meet the educational safety needs of mothers of pre-school children. The mothers' different ways of knowing require that education be delivered in different and responsive ways which respect and value the mothers' existing knowledge, so as to develop their confidence in promoting their children's safety. Professionals seeking to promote the safety of pre-school children should endeavour through education to ensure that lay sources of information encourage an understanding of injury risk perception that is accurate as this is a major source of inspiration for mothers endeavouring to protect their pre-school children. Educational approaches to promoting safety should endeavour to be more proactive to establish a dialogue and encourage interaction with mothers. This is particularly the case as mothers become more passive recipients of safety advice as their children become older and developmentally more mobile. For example, it will be important for health professionals working with mothers to encourage first aid training and stress the importance of regular refresher courses to maintain the mothers' confidence and competence in treating minor injuries. In addition, it will be necessary to develop more passive, environmental approaches to promoting the safety of children beyond one year of age, since many mothers become less proactive in developing their own knowledge about approaches to safety as their children develop.

The psycho-social approach of health visitors to promoting family health and safety should be encouraged further and be made more explicit within accident prevention work and theory. The work of health visitors which is aimed at empowering mothers, offering them emotional support or relief from physical and emotional demands is to be

encouraged as clients perceive these aspects of their health visitors' work as beneficial for promoting family health although its impact on promoting safety is poorly understood by mothers. Developing home visits to focus primarily on safety issues and not allowing other health issues to detract from the importance of child safety will be a complicated task for both mothers and health visitors who find many other issues competing for their time and attention. The role enactment of health visitors influences the mothers' acceptance of the health visiting service. Therefore communication theory and practice should be core components of the health visitor training course and post registration study days. Developing health visiting skills to discuss the prevention of injury before and after accidents to children requires greater attention within the health visitors' curricula and post-registration study days.

Providing parenting advice remains central to the health visitor role. This role could be developed further, particularly with lone and young mothers. Many of these mothers should benefit from intensive, positive home visiting, where emotional support and information can be made accessible and relevant to their circumstances. The more disadvantaged families should remain a priority for health visitor work in the future. Evidently the work of health visitors should be focused on families who would benefit most from the health visiting service and who have needs that can be addressed through their work. There is scope for the health visiting service to benefit clients in more advantageous circumstances, but when the rationing of services is necessary, establishing priorities will be essential.

### 10.7.3 Health Service Managers

The results have implications for the organisation of business plans in the primary care setting. Future plans for the health visiting service should consider specifying the health

visitor contribution to the public health role of reducing accidents. The plans need to recognise the potential for developing a structured and co-ordinated approach to reducing childhood injury based on accident data and local perceptions of hazards. Accident prevention needs to be a higher priority within the health service business plans and health visitors should be given education and training to respond to the increasing rates of home accidents. The opportunities for psycho-social support to reduce injury should be given more credence within the work of health visitors as a core approach which is supplementary to their recognised educational role. If attempts to reduce childhood injury are to feature prominently in the work of health visitors and be part of the agenda for improved health gain in pre-school children, increased home visiting may be necessary to enable more emphasis on preventing injury in young children. Health service managers will need to encourage health visitors to organise their professional activities to afford more emphasis on promoting the culture of safety with families and visit between developmental assessments to develop their role in safety.

#### 10.7.4 Policy Makers

Many mothers in the study did not recognise the potential environmental hazards which could cause injury to the pre-school child. Accidents are a major cause of death for pre-school children in the United Kingdom and require to be a more central consideration in the development of policies affecting the design of housing, home furnishings, toys and safety equipment. The development and enforcement of policies which improve the safety of housing would reduce the presence of hazards in the home. A reduction in home hazards would reduce present reliance on individuals having to change their individual behaviour, by adopting safety strategies. Behaviour change has been shown in this study to be a complex mechanism with many influences. More passive, environmental change through policy development promoting safer designs in manufacturing and technology is considered a more advantageous way of reducing the

numerous common hazards associated with the home environment. Therefore future action to improve safety and reduce injuries needs to be framed within health and social care policy that aims to improve the socio-economic context of the family and the wider community to redress the imbalance in social circumstances. For example, greater attention should be given to encouraging policies to improve housing, gardens and children's play facilities. These changes will lead to environments more conducive to safety and which can reduce mothers' anxiety about the seriousness of injuries.

### 10.7.5 Future Research

A review of the literature during this study has confirmed that there are relatively few studies to date that have looked at maternal motivation to reduce accidental injuries to pre-school children. There is further scope to investigate how accident experience may influence motivation to prevent injuries. Accident experience is of limited value as a safety motivator, if people are unable to generalise or transfer knowledge from specific accident experience to other potential hazards. This study revealed the difficulty for mothers of generalising from individual accident experiences, to understand related potential accidents and injuries. This implies that the process of mothers' hazard identification requires further investigation. A worthwhile topic for future research would be an investigation into the process and evaluation of the effects of accident prevention advice given by health visitors. Further work which examines the psycho-social contribution of health visiting for improving safety is also likely to reveal the strengths and limitations of this approach. Research into the process of how to best develop a culture of safety is now necessary to contribute to the development of knowledge for protecting pre-school children as environmental safety measures are not available or practical for every hazard encountered by young children.

## 10.7.6 In Conclusion

The health visitor has much to offer families when reducing childhood injury, but the development of a high priority, co-ordinated, structured programme for reducing accidents in local communities is essential if the health visitor is to contribute to reducing a major public health problem and positively motivate mothers to adopt safety strategies. At present the health visiting service is underestimating the need to help mothers to identify accident hazards and develop safety strategies. There is clearly a need for environmental and legislative approaches to safety, but many accidents to children within the home are not readily amenable to such approaches and the need for educational and psycho-social approaches remain important for achieving a desired culture of safety. There is an urgent need to develop a political infrastructure which includes environmental and social policies to encourage a culture of safety. In view of the morbidity and mortality rates associated with childhood injury, health visiting needs to specify its involvement in accident prevention work so as not to be seen to be ignoring or unable to respond to a major public health problem in a population it is recognised to serve. Drawing attention to psycho-social aspects in addition to educational, environmental and enforcement approaches to promoting safety is intended to better clarify the health visiting contribution.

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## Appendices



## Appendix 1

### Exploratory Study

Includes:  
Parents Topic Guide  
Informed Consent Form

## PARENTS TOPIC GUIDE

1. How did you gain your information about accident prevention and keeping your children safe?
2. Have you attended a first aid course?  
How long ago?
3. Would you go to a first aid course locally?
4. Have you received safety advice to use with your family from police, teachers, General Practitioners, playgroup leaders, own parents, health visitor, friends?
5. Which person did you get most information from?
6. Where did you get most information from?  
(catalogue, library, shops, health centre)
7. How did/do you get information about safety, accident prevention?
8. What were your most important sources of information?  
What was most useful?
9. How do you keep your children safe from accidents?
10. What helps children's safety?
11. How do you reduce risks/accidents in the home?
12. How do you keep your child safe?
13. What do you think is the most important issue in preventing accidents?
14. Why do accidents happen?
15. Why do accidents not happen?
16. Would you like to receive more information about preventing accidents to children?
17. Do you feel you need more information about preventing accidents/keeping your children safe?
18. Has your health visitor discussed safety/accident prevention with you either at home or in a clinic?  
On 12 or more occasions  
8 - 11  
4 - 7  
1 - 3  
Never

19. How long ago is it since your health visitor spoke to you about accident prevention?
- 1 year or over
  - Within the last 3 months
  - Within 4 - 7 months
  - 8 - 11 months
  - Never
20. Did the health visitor speak to you about safety and accident prevention when you were:
- At a home visit?
  - In the clinic?
  - In a group at the health centre?
  - In a group in the community?
21. Where did she speak to you mainly?
22. Where do you prefer to receive safety advice?
23. Which of the above combination is most suitable?
24. Who is an appropriate person to talk to you about preventing accidents to children?
25. Is the health visitor an appropriate person to talk to you about preventing accidents to children?
26. Are health visitors acceptable to you for talking about child safety?
- |                           |   |  |
|---------------------------|---|--|
| Are they knowledgeable    | ) | about child safety and preventing accidents? |
| Are they easy to see/meet | ) |  |
| Are they easy to talk to  | ) |  |
27. Did the health visitor talk to you about first aid for burns, scalds, choking, head injury, cuts, bruises?
28. Do you want information about first aid from your health visitor?
29. At what ages do you think health visitors should talk about safety, accident prevention for children?
30. Who else is important for safety and accident prevention work for children?
31. Who is the best person for accident prevention and child safety work with parents?
32. Do you use any of the following in your home:
- Safety gate
  - Safety catches on cupboards
  - Fireguard
  - Radiator guard
  - Smoke alarm/detector



48. Telephone interview, questionnaire, interviews, group discussion - which are acceptable?  
which is most acceptable?
49. Has your child had an accident that was treated:  
by you at home  
by a GP  
by casualty then go home  
by casualty then staying in hospital 1 night  
by hospital admission for a few days or more?
50. Do you ask about other people's safety experience and knowledge who care for your child?
51. What do you think is the most important way of preventing accidents to children?  
  
Show cards for ranking
52. Complete the sentence:  
The best way of reducing accidents to children would be to .....
53. Do you think the following has something to do with accidents:  
parents  
attitude  
housing  
area  
the children  
poverty  
lack of money  
other?
54. Which is the most possible reason for accidents happening?



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**INFORMED CONSENT FORM**

I Elaine Haycock-Stuart am a health visitor undertaking a research study at the University of Edinburgh. I am interested to find out parents' views and sources of information on child safety for pre school children (0-5 years).

I would like to interview a small number of parents with children in this age group. The information obtained will be used to help me design a questionnaire which I will send to a larger group of parents with pre school children. All information will be treated confidentially both during and after the study.

I would be happy to discuss any questions you might have and can be contacted at the above address and telephone number.

If you agree to take part in the study I would be grateful if you could complete the tear off slip below and return it to me.

Elaine Haycock-Stuart RGN, RM, Dip HV  
Health Services Research Training Fellow

.....

**Informed Consent Form:** A Study of Accident Prevention Education: The expectations of parents and health visitors and their sources of information.

This is to certify that I,.....(print name)  
AGREE/DO NOT AGREE (please delete as appropriate) to participate in the above named study and that I DO/DO NOT (please delete) give permission for information given in an interview to be recorded in tape and written form.

I understand that all material will be treated as highly confidential by the researcher. I have been given the opportunity to ask any questions and know that I am free to withdraw my consent at any time.

Signed .....

Date .....

## Appendix 2

### Main Survey

Includes:

Mothers' Questionnaire

Covering Letter

Thank You and Reminder Letter

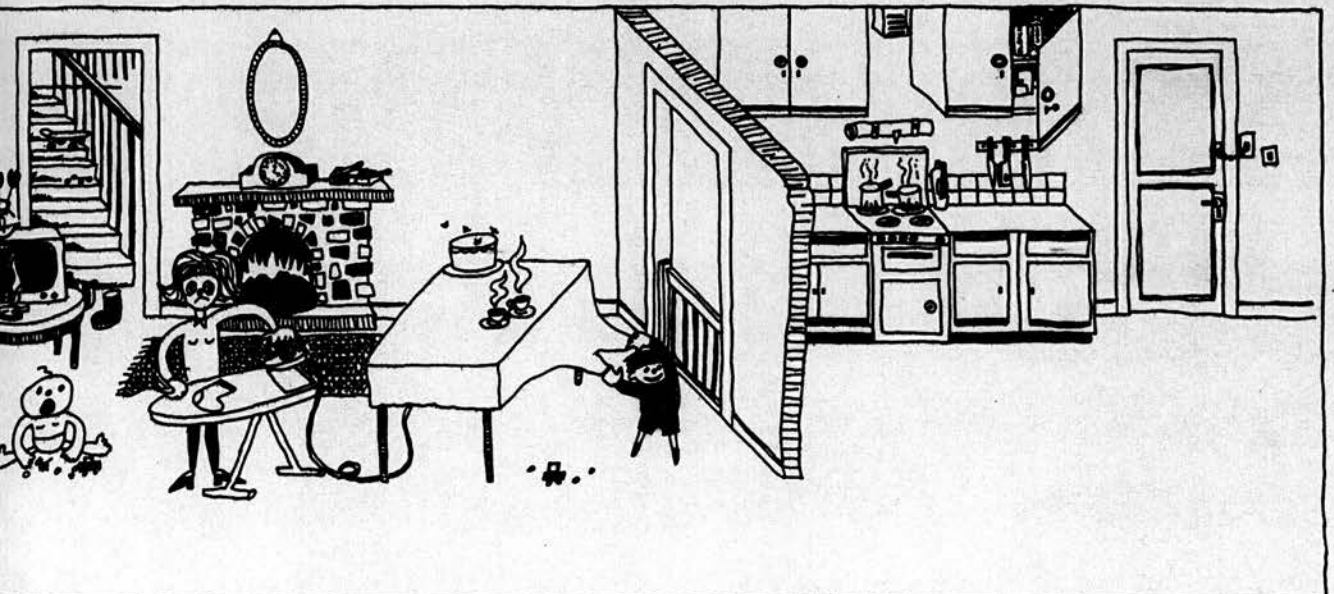
Follow Up Cover Letter



## CHILD SAFETY AND PREVENTING ACCIDENTS TO PRE-SCHOOL CHILDREN

### MOTHERS VIEWS

I am pleased that you are willing to take part in my study which aims to improve services to help prevent accidents to pre-school children. I know how busy parents are and have tried to make this questionnaire easy to complete.



I would be grateful if a **mother** would take the time to complete and return the questionnaire to me in the FREEPOST ENVELOPE provided. **Thank You.**

Elaine Stuart  
RGN, RM, Dip HV  
Health Service Research Training Fellow  
Forth Valley Health Board  
Department of Nursing Studies  
University of Edinburgh



on 1.

Section asks you **what general worries you have** about your child's safety and what things  
done to **help you** keep your child from getting hurt.

Please say how many children you have?

Please give the **age** and **sex** of each of your children.

	M	F	Age	
Child 1				<input type="checkbox"/> <input type="checkbox"/>
Child 2				<input type="checkbox"/> <input type="checkbox"/>
Child 3				<input type="checkbox"/> <input type="checkbox"/>
Child 4				<input type="checkbox"/> <input type="checkbox"/>
Child 5				<input type="checkbox"/> <input type="checkbox"/>
Child 6				<input type="checkbox"/> <input type="checkbox"/>
Child 7				<input type="checkbox"/> <input type="checkbox"/>
Child 8				<input type="checkbox"/> <input type="checkbox"/>
Child 9				<input type="checkbox"/> <input type="checkbox"/>
Child 10				<input type="checkbox"/> <input type="checkbox"/>

Please list the things that **you worry** might hurt your pre-school child **in the home**.

.....  
.....  
.....

Please list the things that **you worry** might hurt your pre-school child **outside the home**.

.....  
.....  
.....

Please tick the **two things** that worry you most.

Feel my child is at **most risk** of an accident due to:

- The house we live in
- The garden we have access to
- The traffic in our street
- The traffic in the local area
- My pre-school child's curiosity
- The local playground facilities
- Some of the people in this area
- OTHER, please specify .....

.....  
.....

Please tick the **3 most important** reasons.

It is **hard** for me to **stop** my child from getting **hurt** because:

- Safety equipment costs too much
- I am busy
- I have a lot of stress
- There are not enough safe play areas
- My house is badly designed
- My child needs a lot of watching
- Some areas of my home are not safe for children
- I do not know what all the dangers are
- I can't watch the children all the time
- Other, please specify.....
- .....

Children have many different accidents. Please tell me **which 2 types of accidents you think most** might happen to your pre-school child

.....

.....

Please tick one box.

If a child has an accident needing medical treatment, he or she is **more likely to have a second accident again** in the future than a child who has never had an accident.'

- TRUE
- FALSE
- NOT SURE

Please think about the accidents pre-school children often have. Please say what you think the chances are that a normal pre-school child (under 5 years of age) will experience the following accidents and injuries. Please think generally about the possibility of these accidents and injuries happening.

Please circle a number from 1 to 5 to show how likely it is that each injury could happen.

	1	2	3	4	5	
	least likely	less likely	likely	very likely	definitely likely	
all						<input type="checkbox"/>
Burn or Scald						<input type="checkbox"/>
Poisoning						<input type="checkbox"/>
Electric Shock						<input type="checkbox"/>
Head Injury						<input type="checkbox"/>
Choking or Suffocation						<input type="checkbox"/>
Drowning or Near Drowning						<input type="checkbox"/>
Cuts						<input type="checkbox"/>
Broken Bones						<input type="checkbox"/>

Please think about the accidents pre-school children often have. How **serious** do you think injuries are to a pre-school child (under 5 years of age) Please think **generally about the seriousness** of these accidents and injuries to pre-school children.

Circle a number from 1 to 5 to show **how serious each injury is** in your opinion.

	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... or Scald	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... oning	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... tric Shock	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... d Injury	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... king or Suffocation	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... wning or Near Drowning	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	
... en Bones	1	2	3	4	5	<input type="checkbox"/>
	Least serious	mildly serious	moderately serious	serious	Very serious	



## SAFETY EQUIPMENT.

How **useful** do you believe the following safety equipment is for protecting your pre-school child? Please circle a number from 1 to 5 to show **how useful you think the following items are.**

	0 Don't know what it is	1 not useful	2 mildly useful	3 moderately useful	4 useful	5 very useful	
Gate	0	1	2	3	4	5	<input type="checkbox"/>
Catches on cupboard	0	1	2	3	4	5	<input type="checkbox"/>
Stair guard	0	1	2	3	4	5	<input type="checkbox"/>
Smoke alarm	0	1	2	3	4	5	<input type="checkbox"/>
Socket covers	0	1	2	3	4	5	<input type="checkbox"/>
Shatter glass in doors	0	1	2	3	4	5	<input type="checkbox"/>
Shatter glass in windows	0	1	2	3	4	5	<input type="checkbox"/>
Stair guard	0	1	2	3	4	5	<input type="checkbox"/>
Stair guard	0	1	2	3	4	5	<input type="checkbox"/>
Short flex for kettle	0	1	2	3	4	5	<input type="checkbox"/>
Short flex for iron	0	1	2	3	4	5	<input type="checkbox"/>
Temperature control valve	0	1	2	3	4	5	<input type="checkbox"/>
Car safety seat	0	1	2	3	4	5	<input type="checkbox"/>
Highchairs for children	0	1	2	3	4	5	<input type="checkbox"/>
Washing machine with child safety locks	0	1	2	3	4	5	<input type="checkbox"/>
Blanket	0	1	2	3	4	5	<input type="checkbox"/>
Fire extinguisher in the house	0	1	2	3	4	5	<input type="checkbox"/>
Fire extinguisher in the car	0	1	2	3	4	5	<input type="checkbox"/>
Childproof covers for electrical outlets	0	1	2	3	4	5	<input type="checkbox"/>
Slip bath mat	0	1	2	3	4	5	<input type="checkbox"/>
Childproof harness	0	1	2	3	4	5	<input type="checkbox"/>
Residual current device (RCD) or safety circuit breaker	0	1	2	3	4	5	<input type="checkbox"/>
Childproof covers designed for the age of the child	0	1	2	3	4	5	<input type="checkbox"/>
Reflective outdoor clothing band	0	1	2	3	4	5	<input type="checkbox"/>
Childproof helmet	0	1	2	3	4	5	<input type="checkbox"/>

Please list any **safety equipment** for a pre-school child that you have which is **not mentioned** in the list above.

.....  
 .....  
 .....

Please think about the safety equipment listed above that **you do not use**. Please give your **main reasons** for not using safety equipment

.....  
 .....  
 .....

Please tick **one** box.

Do you look for the British Standard Kite Mark when purchasing safety equipment.

YES

NO

Do not know what it is

Please tick **one** box.

Would you use a safety equipment loan scheme in your area?

YES

NO

NOT SURE

Please use the table below to record **how many** accidents have happened to your pre-school child in each of the following places and **how serious** you feel each of the accidents were.

SEVERITY OF INJURY TO CHILD

PLACE

the house

garden

road

playgroup or nursery

playground

swimming

travelling

OTHER, please specify

.....

.....

Mild	Moderate	Severe


How many accidents have happened

ON 2

ction asks for your views on child safety and preventing accidents to children.

Circle a number from 1 to 5 to show if you strongly agree; agree; neither agree or disagree; disagree; strongly disagree with the following statements.

ing safety equipment is essential for pre-school child safety.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

ny accidents happen when adults are too busy to keep an eye on the children

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

ough having minor accidents children learn to avoid more serious injuries

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

ents need to teach children about how to avoid accidents and be safe.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

ents need to be more aware of the importance of watching their children to prevent accidents from happening.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

ny accidents are bound to happen.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	



**Many accidents just happen and there is little I can do to stop my child from getting hurt.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

**Many accidents happen to children when parents do not have enough money to buy safety equipment.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

**Many accidents happen to children because the area where we live has many dangers and is not safe for children.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

**Many accidents happen to children because parents do not have enough knowledge about how to keep their children safe from accidents.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

**Many accidents happen to children because parents are not aware of the different dangers as their child grows older.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

**Many accidents happen to children because parents expect too much of their child's abilities to do things**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Many accidents are preventable and I feel I can stop my child from getting hurt most of the time.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Many accidents happen to children because our home is not safe enough.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Many accidents happen to children because there are not enough safe places where children can play.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Feel making regulations and laws are good ways to reduce accidents. (For example, laws about wearing seat belts)

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Think that having smoke alarms in all houses should be made a law.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Educating children about their own safety is essential for preventing accidents to preschool children.

1	2	3	4	5	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Please complete the sentence below.

Best way of preventing accidents to children is

.....  
 .....  
 .....

SECTION 3

This section of the questionnaire looks at **how parents get information** on child safety and **how information services can be improved**

Please tick **one** box.

Do you remember how you learnt to do the things you do to keep your pre-school child safe?

YES

NO

IF YES

Please say **how you learnt to do** the routine safety things you do every day to keep your pre-school child safe.

.....  
.....  
.....  
.....

Please **circle one number** to show how strongly you feel about this statement.  
**Child safety is mainly common sense knowledge.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
strongly agree	agree	neither agree nor disagree	disagree	strongly disagree	

Please tick **three boxes**

Which of the following do you feel are most important for child safety information.

- Child care books
- Safety leaflets
- Parenting magazines
- Common sense knowledge
- Television programmes
- Safety classes
- Other, please specify

.....  
.....  
.....

Write here your **most useful source of information** on child safety and the prevention of accidents.

Most useful source.....

Use tick **all that apply**.

Experiences gained experience at keeping my child from getting hurt through:-

Own experiences as a child at home.



Own experiences at school.



Work.



Experiences for my own children.



Experiences for other people's children.



Attended a first aid course to treat injuries.



Other, please specify



.....  
 .....

Use **circle** a number from 1 to 5 to show **how important** you think the following people are in giving you **information** about child safety

**My own parents**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**My friends**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**My midwife**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**The health visitor**

1	2	3	4	5	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**The mother and toddler group**

1	2	3	4	5	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**The nursery or playgroup leaders**

1	2	3	4	5	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

**The doctor**

1	2	3	4	5	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	

Please write here any **other people or places** that you feel are **important** for **improving the safety** of pre-school children.

.....

.....

.....

Please tick **one** box.

Have you ever attended a first aid course?

YES

NO

If answer to 7a is NO go to question 7c

Please fill in the box.

How many years is it since your last first aid course?

Please tick **one** box.

Do you feel you need to go to a first aid course to help with child safety?

- YES   
 NO   
 NOT SURE

Please tick **one** box.

If you go to a first aid course in your local area, within 15 minutes walk from your home?

- YES   
 NO   
 NOT SURE

Please tick **all appropriate** boxes.

Do you believe you have first aid knowledge for the treatment of the following injuries?

YES NO NOT SURE

	YES	NO	NOT SURE
Scald			
ing			
Shock			
Injury			
g			
ing			
Bones			


Please say here **how many** of the PLAY IT SAFE programmes with Anneka Rice you have seen watching on television?

NUMBER OF PROGRAMMES

Please tick one box.

Do you feel you need **more information** about keeping your children safe from accidents?

- YES  go to question 11  
 NO  .....

NOT SURE  go to question 11

Please tick **all** the boxes that say why you feel you **do not need** more information on child safety.

- I have a good enough level of safety knowledge
- I have all the information I need
- I have many other important things to do
- I do not like to be told what to do
- I do not have time to get more information
- For other reasons, please say here.....

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Please tick **3 boxes** only.

Please select the **three best ways** for you to receive **more safety information** from the list below

- Television programmes on safety
- Newspaper articles on safety
- Radio programmes on safety
- Books
- Safety leaflets
- Parenting magazines
- A book for children up to five years booklet
- Classes on Child Safety
- Videos on safety
- Other, please specify .....

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Please tick YES or NO for all boxes.

Did you go to these people for information on preventing accidents to your pre-school

YES NO DON'T KNOW

	YES	NO	DON'T KNOW
Fire brigade			
Police services			
Health department staff			
Day care or play group leaders			
Child worker			
Health visitor			
Health councillor			
Other, please specify.....			

Please say here if you feel help with child safety has been poor.  
 What more can be done to help you keep your child safe?

.....  
 .....  
 .....

**SECTION 4**

This section asks about **your views** and experiences of the health visiting service and how this can be **improved** when trying to help stop your child from getting hurt

Please fill in the box.

How many months is it since you last spoke to a health visitor.

Number of months



Please tick one box.

How often have you **talked** with a health visitor?

Never

Rarely

Regular visits

Often

Very often

Other, please specify .....

.....

Has the Health Visitor **ever spoken** to you about ways **to help prevent accidents** to your pre-school child?

Yes

No

DON'T KNOW

Please say how many **times** the Health Visitor has raised with you the topic of child safety and how to prevent accidents.

.....

.....

Have **you** ever asked the health visitor for information on child safety?

Yes

No

DON'T KNOW

Please say how many **times** you think you have raised the topic of child safety and how to prevent accidents with the health visitor.

.....

.....

Please tick **all appropriate** boxes.

Where were you when you spoke to the health visitor about preventing accidents and child safety?

- at home
- in the clinic
- in a group talk at the health centre
- in a group talk in the community
- on the telephone
- Never discussed safety with the health visitor
- Not sure
- Other, please specify.....
- .....

Please tick **2 boxes**

Where would you most like to talk with the health visitor about child safety. I would most like to speak to the health visitor about child safety at:

- at home
- in the clinic
- in a group talk or class
- No preference
- Do not want to speak to a health visitor
- Other, please specify.....
- .....

Please tick **one box**

Do you see accident prevention as part of your health visitors work with you **at present**?

- 
- 
- 

DO NOT KNOW

Please tick **one box**

Do you feel accident prevention is a job that health visitors **should do** with parents of school children?

- 
- 
- 

DO NOT KNOW

Please suggest the people who you feel are most able to help parents prevent accidents to  
-school children:-

.....  
.....

Please tick **one** box.

Do you feel you need **more contact with your health visitor** to help you stop your child from  
being hurt?

YES   
NO   
NOT SURE

Please tick **one** box.

Have you **asked** your health visitor about ways of protecting your child or the use of safety  
equipment?

YES   
NO   
NOT SURE

Please tick **one** box only.

Is it better if the **mother brings up the topic of child safety** with health visitors

Is it better if the **health visitor brings up the topic** of child safety with parents

Please tick **3** boxes only.

Please tick the **3 most important times** when you feel the health visitors should **do more child  
safety and accident prevention work:**

Before the baby is born

When the child is 0 to 6 months

When the child is 7 to 18 months

When the child is 19 to 36 months

When the child is over 3 years

At all ages

Never

Please tick **two** boxes.  
 Any advice is **most important** for

Time parents

Parents with 2 or 3 children

Parents with 4 or more children

Parents

Any advice is not important

If you have any other advice, please specify.....



Please tick **3 boxes** only.

Which types of information would you like to receive to help you with child safety?

Information to **prevent** specific injuries

Information to **treat** specific injuries

Information about different types of safety equipment

Information about safety practices and things to do to keep your child safe generally

Information on how to campaign for a safer environment

If you have any other information, please say here



Please tick **one** box.

Do you think health visitors **do not** give enough **practical advice** to parents on child safety and preventing accidents

AGREE

DISAGREE

DON'T KNOW

b) Please circle a number from 1 to 5 to show how **easy or difficult** you think it is to see a health visitor to **talk about child safety and preventing accidents** to children.

1	2	3	4	5	6	<input type="checkbox"/>
very difficult	difficult	moderately easy	easy	very easy	don't know	

c) Please circle a number from 1 to 5 to show how **knowledgeable** you think health visitors **about child safety and preventing accidents**.

1	2	3	4	5	6	<input type="checkbox"/>
not knowledgeable	mildly knowledgeable	moderately knowledgeable	knowledgeable	very knowledgeable	don't know	

d) Please circle a number from 1 to 5 to show how **important** you think a **good relationship** for talking with your health visitor about child safety and preventing accidents

1	2	3	4	5	6	<input type="checkbox"/>
not important	mildly important	moderately important	important	very important	don't know	

e) Please circle a number from 1 to 5 to show how **useful** you think the work of health visitors for preventing accidents to pre-school children

1	2	3	4	5	6	<input type="checkbox"/>
not useful	mildly useful	moderately useful	useful	very useful	don't know	

f) Please circle a number from 1 to 5 to show how **useful** you have found health visitors for helping you with child safety.

1	2	3	4	5	6	<input type="checkbox"/>
not useful	mildly useful	moderately useful	useful	very useful	don't know	

g) Please write here any **comments** you would like to make **about the health visiting service**

.....  
 .....  
 .....

Please tick **one** box only.

Do you feel health visitors should discuss safety with **you** as a parent?

Health visitors should **just slip safety advice in** to conversations with **you**.

Health visitors should **be direct and make a point** of discussing safety with **you**

Please specify.....

Please tick **all** boxes that apply.

Has the health visitor **spoken to you** about what to do if your child has any of the following injuries?

YES

NO

NOT SURE

Burn or Scald

Choking

Electric shock

Fracture or injury

Head injury

Staying in a car

Broken Bones

	YES	NO	NOT SURE
Burn or Scald			
Choking			
Electric shock			
Fracture or injury			
Head injury			
Staying in a car			
Broken Bones			

Please tick **one** box.

Has the health visitor talk to **you** about fist aid and **what to do if** your child has any of the following injuries?

Other

What can health visitors do to help parents to keep their children safe?

.....  
.....  
.....

Please tick one box.  
Does the health visitor come to you at home following an accident to one of your pre-school children needing medical treatment?

- S
- { go to question 27}
- NOT SURE { go to question 27}
- NEVER HAD AN ACCIDENT NEEDING MEDICAL TREATMENT.
- { go to question 27}

Please tick one box.  
Does the health visitor help you following the accident?

- S
- 
- NOT SURE

What do you feel health visitors should do to help parents following an accident to a child needing medical attention?

.....  
.....  
.....

Please continue to the last section.

SECTION 5

This section asks you for some personal details.  
The information will be treated confidentially and not given to any other person.

Please fill in the boxes.

How old are you in years?

Please tick **one** box

Do you feel your home is over crowded with people?

ENSURE

Please say how many adults live in your home?

Please tick **one** box most LIKE your situation.

Are you:

Married

Living with partner

Living without partner

Unemployed living alone

Unemployed living with partner

Employed living alone

Employed living with partner

Other

If other, please state.....

Please state the head of your household's work or last job if not working

.....



Please tick **one** box.

Kind of household works in

Part time paid employment

Full time paid employment

Self employed

On long term sickness

Unemployed

On training scheme

Other, please state.....

Please insert your **full post code** in the boxes

Please tick **all** that apply.

Who are the **main carers** for your child during the day?

Mother

Father

Grandparent

Other

Any

And

Nursery

Other, please specify.....

Please tick **one** box.

What house we live in is

Privately Owned

Privately Rented

Council Local Authority Housing

Council Scottish Special Housing

Other Housing

Other, please specify .....

Please tick one box.

Do you have an **outside area** where your child can play?

Fenced garden or yard

Unfenced garden or yard

Shared garden or yard

Other garden or yard

If other, please specify .....

If you would like to give **any information** that you feel will **help to improve child safety** that has not been asked for in this questionnaire, please do so here:-

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**THANK YOU**

FOR COMPLETING THE QUESTIONNAIRE

PLEASE RETURN THE COMPLETED QUESTIONNAIRE IN THE

**FREEPOST ENVELOPE PROVIDED**

Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 0LH

Date

Dear Parent,

### **MOTHERS VIEWS ON PRE-SCHOOL CHILD SAFETY**

I am writing to ask for **your help** by filling in this form on **mothers' views of pre-school child safety**.

I am a health visitor doing postgraduate research at the University of Edinburgh. I have a grant from the Scottish Office Home and Health Department to study **mothers' views on child safety**.

**Accident prevention** and child safety are **important** issues for parents and the National Health Service in Scotland. This questionnaire is part of a study **looking to improve pre-school child safety** services in the Stirling area. **Please help** by **returning the completed form**. The more replies I get the more I will be sure to **show the views of mothers** in the (*INSERT TOWN*) area.

Your name and address was picked from a Health Board list as a family with a pre-school child in the Stirling district. **These are the only details given to me**. All the information you give to me in the completed questionnaire I will **treat confidentially** and use **only** for this research project. **No person** will be identified individually in my research report.

**YOUR VIEWS ARE IMPORTANT**. This is your chance to **say what you think about child safety** in your local area. The Scottish Office and (*INSERT NAME of NHS TRUST*) will consider the results of the survey. Please spare about 30 minutes to fill in the questionnaire and return it to me in the FREEPOST envelope I have provided, by (*INSERT DATE*). It is important that I get your reply by this date to reflect your views in the report findings.

If you would like more information or wish to discuss any aspect of the survey, please telephone me on 031 650 8443 or at the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 0LH

*DATE*

Dear Parent,

### **MOTHERS VIEWS ON PRE-SCHOOL CHILD SAFETY**

I am writing to thank the mothers who helped me by filling in the form on **mothers' views of pre-school child safety. Thank You.** I would like to ask the mothers who have not yet been able to complete the form to **please** fill in and return the form to me. I understand how busy mothers are and would be most grateful for your help.

**YOUR VIEWS ARE IMPORTANT.** This is your chance to **say what you think about child safety** in the (*INSERT NAME of TOWN*) area. The Scottish Office and (*INSERT NAME of NHS TRUST*) will consider the results of the survey. Please spare about 30 minutes to fill in the form and return it to me in the FREEPOST envelope I have provided, by (*INSERT DATE*). It is important that I get your reply by this date so that everyone's views are reflected in the final report.

This questionnaire is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) area. **Please help by returning the completed form.** The more replies I get the more I will be sure to **show the views of mothers** in the (*INSERT NAME of TOWN*) area.

All the information you give to me in the completed questionnaire I will **treat confidentially** and use **only** for this research project. **No person** will be identified individually in my report.

If you require another form to complete the study or you would like more information on the survey, please telephone me on 031 650 8443 or write to the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 0LH

*DATE*

Dear Parent,

### **MOTHERS VIEWS ON PRE-SCHOOL CHILD SAFETY**

I recently wrote to you to ask for **your help** by filling in a form on **mothers' views of pre-school child safety**. Unfortunately I have not yet received the completed form from some of the families I wrote to. I understand how busy mothers are, but need to ask you to **please complete and return this form** to help make my research relevant to the (*INSERT NAME of TOWN*) area.

**Accident prevention** and child safety are **important** issues for parents and the National Health Service in Scotland. This questionnaire is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) area. **Please help** by **returning the completed form**. I need more replies to reflect **the views of mothers** in the (*INSERT NAME of TOWN*) area.

Your name and address were picked from a Health Board list as a family with a pre-school child in the (*INSERT NAME of TOWN*) district. **These are the only details given to me**. All the information you give to me in the completed questionnaire I will **treat confidentially** and use **only** for this research project. **No person** will be identified individually in my research report.

**YOUR VIEWS ARE IMPORTANT**. This is your chance to **say what you think about child safety** in your local area. The Scottish Office and (*INSERT NAME of NHS TRUST*) will consider the results of the survey. Please spare about 30 minutes to fill in the questionnaire and return it to me in the FREEPOST envelope I have provided, by (*INSERT DATE*). It is important that I get your reply by this date to reflect your views in the report findings.

If you would like more information or wish to discuss any aspect of the survey, please telephone me on 031 650 8443 or write to me at the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

## Appendix 3

### Main Qualitative Interview

**Includes:**

Covering Letter

Information Sheet and Consent Form

Appointment Letter

Follow Up Cover Letter

Interview Schedule

Face Sheet and Post Interview Comment Sheet

Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 9LW

Tel 0131 650 8443  
DATE

Dear Mother,

### **MOTHERS' VIEWS ON PRE-SCHOOL CHILD SAFETY**

You may remember, I wrote to you last year and asked for your help in researching pre-school child safety and you helped me by returning a completed form on **mothers' views of pre-school child safety**. I am now writing to ask if you would help me with the last stage of this research by agreeing to have an interview with me to discuss child safety issues.

You might remember that I am a health visitor doing postgraduate research at the University of Edinburgh. I have a grant from the Scottish Office Home and Health Department to study **mothers' views on pre-school child safety**.

**Accident prevention** and child safety are **important** issues for mothers and the National Health Service in Scotland. The interview is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) District. The interview will take about 30 minutes and you can be interviewed at home or in a different place if it suits you better. I will be the only interviewer present and anything you discuss with me I will **treat confidentially**. I will need to tape record the interview so I can study your views, but **no person** will be identified individually in my report. **Please help** by agreeing to the interview so I will be sure to **show the views of mothers** in the (*INSERT NAME of TOWN*) area in the study.

Your name and address were picked because you helped with the research last year and returned a completed form. All the information you give to me in the interview I will **treat confidentially** and use **only** for this research project. **No person** will be identified individually in my research report.

**YOUR VIEWS ARE IMPORTANT.** This is your chance to **say what you think about child safety** issues. The Scottish Office and (*INSERT NAME of NHS TRUST*) will consider the results of the survey. Please spare about 3 minutes to fill in the form to arrange the interview and return it to me in the stamped addressed envelope I have provided, by **INSERT DATE**. It is important that I get your reply by this date so I can arrange the interview and reflect your views in my report.

If you would like more information or wish to discuss any aspect of the interview, please telephone me on 0131 650 8443 or write to the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

Information Sheet and Consent Form

**MOTHERS' VIEWS ON PRE-SCHOOL CHILD SAFETY**

I am writing to ask if you would help me by agreeing to have an interview with me, Elaine Stuart to discuss child safety issues. I am a health visitor doing postgraduate research at the University of Edinburgh. I have a grant from the Scottish Office Home and Health Department to study **mothers' views on pre-school child safety**.

The interview is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) District. The interview will take about 30 minutes and you can be interviewed at home or in a different place if it suits you better. I will be the only interviewer present and anything you discuss with me I will **treat confidentially**. I will need to tape record the interview so I can study your views, but **no person** will be identified individually in my report. You can ask me to explain the questions I ask or choose not to answer questions. You are free to stop the interview at any time and withdraw from the study.

Please sign the bottom of this form and return it to me so I can contact you to arrange a convenient time for the interview. Returning the form does not prevent you from withdrawing from the study at any time.



Name.....

Address.....

.....

.....

Telephone Number.....

**I .....**agree to be interviewed by Elaine Stuart to help with her study of **mothers' views on pre-school child safety**.

Please tick one box.

Elaine Stuart can telephone me to arrange a date and time for the interview.....

Elaine Stuart can write to me to arrange a date and time for the interview .....

**I .....**do not agree to be interviewed by Elaine Stuart to help with her study of **mothers' views on pre-school child safety**.

**Please return this form in the stamp addressed envelope provided by (*Insert Date*).**



Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 9LW

Dear

**MOTHERS VIEWS ON PRE-SCHOOL CHILD SAFETY**

Thank you for agreeing to help me with my study of mothers views' on pre-school child safety. I would like to interview you at home on

Please telephone if this date or time are not convenient. Please is it possible for you to arrange for the children to be looked after for the 30 minutes during the interview. If this is not possible please do not worry. I look forward to seeing you. Thank you once again for helping with this research.

If you would like more information or wish to discuss any aspect of the interview, please telephone me on 0131 650 8443 or write to the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

Department of Nursing Studies,  
The University of Edinburgh,  
2nd Floor,  
12 Buccleuch Place,  
Edinburgh.  
EH8 9LW

Tel 0131 650 8443  
DATE

Dear Mother,

### MOTHERS' VIEWS ON PRE-SCHOOL CHILD SAFETY

I recently wrote to you to ask for **your help** by filling in a form to arrange an interview to discuss child safety issues. Unfortunately I have not yet received the completed form from some of the families I wrote to. I understand how busy mothers are, but need to ask you to **please complete and return this form** to help make my research relevant to the (*INSERT NAME of TOWN*) area.

I am now writing to ask if you would help me with the last stage of this research by agreeing to have an interview with me to discuss child safety issues. The interviews are planned to take place from the **middle of INSERT MONTH to the middle of INSERT MONTH**.

You might remember that I am a health visitor doing postgraduate research at the University of Edinburgh. I have a grant from the Scottish Office Home and Health Department to study **mothers' views on pre-school child safety**.

**Accident prevention** and child safety are **important** issues for mothers and the National Health Service in Scotland. The interview is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) District. The interview will take about 30 minutes and you can be interviewed at home or in a different place if it suits you better. I will be the only interviewer present and anything you discuss with me I will **treat confidentially**. I will need to tape record the interview so I can study your views, but **no person** will be identified individually in my report. **Please help** by agreeing to the interview so I will be sure to **show the views of mothers** in the (*INSERT NAME of TOWN*) area in the study.

Your name and address were picked because you helped with the research last year and returned a completed form. All the information you give to me in the interview I will **treat confidentially** and use **only** for this research project. **No person** will be identified individually in my research report.

**YOUR VIEWS ARE IMPORTANT**. This is your chance to **say what you think about child safety** issues. The Scottish Office and (*INSERT NAME of NHS TRUST*) will consider the results of the survey. Please spare about 3 minutes to fill in the form to arrange the interview and return it to me in the stamp addressed envelope I have provided, by **INSERT DATE**. It is important that I get your reply by this date so I can arrange the interview and reflect your views in my report.

If you would like more information or wish to discuss any aspect of the interview, please telephone me on 0131 650 8443 or write to the address at the top of this letter.

Thank You!  
Yours faithfully,

Elaine Stuart

Information Sheet and Consent Form

**MOTHERS' VIEWS ON PRE-SCHOOL CHILD SAFETY**

I am writing to ask if you would help me by agreeing to have an interview with me, Elaine Stuart to discuss child safety issues. I am a health visitor doing postgraduate research at the University of Edinburgh. I have a grant from the Scottish Office Home and Health Department to study **mothers' views on pre-school child safety**.

The interview is part of a study **looking to improve pre-school child safety** services in the (*INSERT NAME of TOWN*) District. The interview will take about 30 minutes and you can be interviewed at home or in a different place if it suits you better. I will be the only interviewer present and anything you discuss with me I will **treat confidentially**. I will need to tape record the interview so I can study your views, but **no person** will be identified individually in my report. You can ask me to explain the questions I ask or choose not to answer questions. You are free to stop the interview at any time and withdraw from the study.

Please sign the bottom of this form and return it to me so I can contact you to arrange a convenient time for the interview. Returning the form does not prevent you from withdrawing from the study at any time.



Name.....

Address.....

.....

.....

Telephone Number.....

**I .....**agree to be interviewed by Elaine Stuart to help with her study of **mothers' views on pre-school child safety**.

Please tick one box.

Elaine Stuart can telephone me to arrange a date and time for the interview.....

Elaine Stuart can write to me to arrange a date and time for the interview .....

**I .....**do not agree to be interviewed by Elaine Stuart to help with her study of **mothers' views on pre-school child safety**.

**Please return this form in the stamp addressed envelope provided by (*Insert Date*).**



## Interview Schedule

1. **Please tell me about the things you do to help keep your pre-school child safe from accidents.**
2. **Why do you do the things you mentioned to keep your pre-school child safe from accidents?**
3. **Thinking about the things you mentioned you are able to do, what makes it possible for you to do these things?**

*Interviewer selects a safety practice the mother said she felt able to do e.g. lock away medicine or solvents etc).*

4. **You mentioned that you ..lock away medicine..., why do you personally lock away medicine?**

(PROMPT QUESTIONS IF REQUIRED)

5. Can you tell me a bit more about your decision to *lock away medicine*?
6. How did you know to do it?
7. Was there anything difficult about doing it?
8. Did anything make it easy for you to do it?
9. Were you encouraged to do it?
10. What finally made you decide to *lock away medicine*?
11. Is there anything about doing it that bothers you?

12. **Why do you feel you should do these safety practices that you mentioned?**

13. **Are there any other things you would like to do to help keep your pre-school child safe, but for one reason or another can't?**

14. **What things make it difficult for you to do the things you mentioned?**

*Interviewer selects a safety practice the mother said she would like to do e.g. use a fireguard.*

15. **You mentioned that you do not....use a fireguard ..., why do you personally not use a fireguard?**

(PROMPT QUESTIONS IF REQUIRED)

16. Can you tell me a bit more why you do not to *use a fireguard*?
17. How did you know to use one?
18. Is there anything you feel makes it difficult for you to use it?
19. Can anything make it easier for you to use it?
20. Were you encouraged to use it?
21. What finally made you decide not to *use a fireguard*?
22. Is there anything about not using it that bothers you?



**23. What things do you consider when you are deciding what things to do and not do?**

(PROMPT QUESTIONS IF REQUIRED)

24. Do you feel some things are more important to do than others?

25. Do you feel some things are more practical or useful to do?

26. Why do you think you do some things, but not other things?

**27. Can you tell me who are the people that you feel have helped you with pre-school child safety?**

**28. Do you feel health visitors have played a role in child safety for you personally and also for the local community?**

**29. What role do you feel health visitors should play in child safety for you personally and also for the local community?**

**30. What is the best way of handling the problems of child safety for you personally?**

**31. What is the best way of handling the problems of child safety for the local community?**



Face sheet and Post Interview Comment Sheet.

Respondent number

Date of Interview

Place of Interview

Age

Number of pre-school children

Number of children over 5 years

Occupation

Main Carer for p/s child

## Appendix 4

### Results from the Pilot Study of the Reliability of the Scales developed for the Study

## Appendix 4

Scales developed as research tools for the mothers questionnaires.  
Results of the reliability of the scales based on the pilot work.

<b>Susceptibility to injury scale</b>  9 item likert scale of 1 to 5 Measures perceived likelihood of injury. Page 3	<b>SIS 1</b>	<b>Reliability</b> Cronbach's alpha = .76
<b>Severity of injury scale</b>  9 item likert scale of 1 to 5 Measures perceived severity of injury. Page 4	<b>SIS 2</b>	<b>Reliability</b> Cronbach's alpha = .73
<b>Kinship and organisation networks scale</b>  7 item likert scale of 1 to 5 Measures perceived networks for injury prevention. Page 12 questions 6a to 6g inclusive.	<b>KONS</b>	<b>Reliability</b> Cronbach's alpha = .83
<b>Equipment benefit / efficacy scale</b>  26 item likert scale of 1 to 5 Measures perceived usefulness of equipment. Page 5	<b>EBES</b>	<b>Reliability</b> Cronbach's alpha = .95
<b>Benefits to injury prevention scale</b>  7 item likert scale of 1 to 5 Measures perceived benefits of injury prevention. Section 2 questions 1a, 1d, 1e, 2c, 2f, 2g, 2h.	<b>BIPS 1</b>	<b>Reliability</b> Cronbach's alpha = .55



<p><b>Barriers to injury prevention scale</b></p> <p>8 item likert scale of 1 to 5 Measures perceived barriers to injury prevention. Section 2 questions 1b, 1h, 1i, 1j, 2a, 2b, 2d, 2e.</p>	<p><b>BIPS 2</b></p>	<p><b>Reliability</b> Cronbach's alpha = .57</p>
<p><b>Locus to injury prevention control scale</b></p> <p>2 item likert scale of 1 to 5 Measures locus of control to injury prevention. Section 2 questions 1f, 1g.</p>	<p><b>LIPCS</b></p>	<p><b>Reliability</b> Cronbach's alpha = .57</p>
<p><b>Benefits and barriers scale to injury prevention scale</b></p> <p>18 item likert scale of 1 to 5 Measures perceived benefits and barriers to injury prevention. Section 2 questions 1a to 2h inclusive.</p>	<p><b>BBS</b></p>	<p><b>Reliability</b> Cronbach's alpha = .56</p>
<p><b>Health visitor safety scale</b></p> <p>5 item likert scale of 1 to 5 Measures perceived health visitor role in injury prevention. Page 21 questions 19a to 19e.</p>	<p><b>HVS</b></p>	<p><b>Reliability</b> Cronbach's alpha = .66</p>

## Appendix 5

### Profile of the Key Informants for the Qualitative Study

## Appendix 5

### Profile of the key informants for the qualitative study

Case	Maternal Age	Number of Children	Number of Adults	Marital Status	Social Class	Employment Head of House	Housing
1	31	2	2	Married	4	Full Time	Private Owned
2	19	1	1	Single Unsupported	4	Unemployed	Local Authority
3	36	5	1	Single Unsupported	5	Unemployed	Local Authority
4	36	2	2	Married	1	Full Time	Tied
5	29	2	2	Married	2	Full Time	Private Owned
6	33	2	1	Divorced	5	Unemployed	Scottish Special
7	29	3	1	Divorced	3nm	Part Time	Local Authority
8	27	2	2	Married	3m	Self Employed	Private Owned
9	23	2	2	Married	3m	Full Time	Private Owned
10	30	1	2	Married	4	Full Time	Private Owned
11	27	2	2	Married	4	Full Time	Private Owned
12	28	2	2	Married	3m	Full Time	Private Owned
13	22	2	1	Single Unsupported	4	Unemployed	Local Authority
14	22	1	2	Single Supported	3m	Full Time	Scottish Special
15	30	2	2	Married	3nm	Unemployed	Local Authority
16	27	4	2	Married	1	Full Time	Tied
17	37	2	2	Married	4	Full Time	Private Owned
18	28	4	2	Married	4	Full Time	Local Authority
19	39	3	1	Single Unsupported	2	Full Time	Private Owned
20	29	1	1	Single Unsupported	5	Unemployed	Local Authority
21	34	3	1	Separated	3m	Unemployed	Local Authority
22	37	1	1	Widowed	5	Unemployed	Local Authority
23	28	2	2	Married	3m	Full Time	Local Authority
24	32	3	2	Married	4	Full Time	Private Owned
25	29	1	2	Single Supported	1	Unemployed	Private Owned
26	25	1	1	Single Unsupported	3nm	Unemployed	Local Authority
27	39	1	2	Married	2	Full Time	Private Owned
28	36	1	1	Single Unsupported	2	Unemployed	Local Authority
29	28	2	2	Married	3m	Self Employed	Private Owned
30	34	1	1	Single Unsupported	4	Unemployed	Local Authority
31	24	3	1	Single Unsupported	5	Sick Leave	Local Authority
32	27	1	2	Married	3nm	Full Time	Private Owned
33	24	2	1	Separated	4	Unemployed	Scottish Special
34	32	1	2	Married	2	Full Time	Private Owned
35	30	2	1	Divorced	3m	Unemployed	Local Authority
36	35	1	2	Married	4	Full Time	Local Authority
37	30	4	2	Married	4	Full Time	Local Authority
38	24	3	1	Separated		Unemployed	Local Authority
39	37	3	2	Married	2	Full Time	Private Owned
40	28	2	2	Single Supported	4	Full Time	Private Owned

## Appendix 6

Raw data to illustrate how the themes from the exploratory interviews were developed

## Data illustrating the development of themes from the exploratory interviews with mothers

The mothers' perceptions of safety referred to:

Common sense knowledge.

*Mrs PL: Really an awful lot of it I found is common sense and experience and being a mother of two children you learn through your own experiences and it is common sense..... the way you have been taught as a child and what your parents have instigated to you and routine perhaps, habits.*

*Mrs F: Just common sense really, putting a fireguard there or taking small objects away that they might chew or something, putting things in cupboards they can't get at.*

*Mrs CL: At that stage you think it is a long time ahead and even though you have reasonable common sense there is an awful lot you don't think about. I think some information before they are mobile would be a good idea.*

*EHS: Where would you say you got most of your information regarding the safety of your children.*

*Mrs CL: Well really I would say just from common sense and family. Probably I suppose a Health Visitor when I first started going but I would not say there was anything in particular.*

The importance of role enactment, particularly the health visitor's relationship with the mother for influencing the acceptability of the health visiting service.

*EHS: Do you think Health Visitors are quite knowledgeable about accident prevention or have you really nothing to influence you since you've not had much to do with them.*

*Mrs CL: I haven't really but sometimes you think if somebody came along and started telling me what I should do I would think well I've done it and been through it and sometimes there tends to be a bit of preaching. The last one we had, she has been very nice but when I had Sarah I felt a bit like teacher and pupil which sometimes put you off.*

*Mrs F Yes because they may feel they are being picked on. I know it is difficult but sometimes you do resent the intrusion because you think you are doing OK and then, especially I suffered a lot from depression when Lucy was born and if somebody said something to me I took it as a deep criticism, completely out of context and I think a lot of people would do that. People have got to be a bit subtle. Maybe if they think you have come along to give them a lesson on safety they are going to back off and not want to know, whereas if it is routine and saying something like, "have you thought of this" or whatever, just in general conversation and show leaflets or you might say "in a couple of months your child is going to start crawling have you thought about safety, like a fireguard or stair rail," that sort of thing.*

*Mrs R Well some people don't have a clue, they don't think or maybe they don't care, and I think it should be brought up. It is difficult because if you put too much pressure on parents they will back off. I know quite a few people build up a resentment to people interfering, who they feel are interfering, I mean they probably are not and I think it would be useful even to hand out some leaflets; they may read them and take them away*

*Mrs C If I have any problems I usually discuss it with the Doctor. I have built up a good relationship with the Doctor. Unfortunately not with the Health Visitor....I did have a succession of Health Visitors at one time, with Johnny, the first one, every few months, I think I had about three different ones (health visitors). I didn't get a chance to build up a relationship with them at all. It was a bit unfortunate really, I think looking back I would have liked a Health Visitor, somebody who I could have turned to, and somebody I could have a relationship with but it is very difficult when in the early months you are changing your*

*Health Visitor like once a month, and it got to the stage where I had three Health Visitors in six months, which is no good at all to build up a relationship, and so I found I have friends who I am closer to who I just ask because they have gone through the same things.*

The efficacy of safety strategies within the context of personal circumstances rather than in the wider social context.

*Mrs PL If I need to get safety equipment I can go and get it whereas I know a lot of people do not have the resources and that is why I think it is important that parents should be encouraged to say just how accidents can happen.*

First aid was considered as supplemental and peripheral to the routine safety behaviours which were perceived as intrinsic for safety.

*EHS If there was a programme on safety, what do you think it should have, like if the Health Visitor was to come to you at home, what kind of information would you like.*

*Mrs N When he was younger, because you gain a lot of experience in time, but earlier on, probably like six weeks to three months and then when they get more mobile, like nine months to a year, like car safety, how to cope with choking and do things like temperature of baths, temperature of the room, things like that. I think a lot of the things, like sockets are really common sense.*

*Mrs F I think it is quite essential to know the immediate things to do, like if one of the children was choking I would be pretty confident. Lucy choked on a piece of sausage, she was 2 and a half to 3 years old and it was extremely frightening because up until then I was able to just bang them once and it would come out, whatever was stuck, but this time it didn't and it got to the stage where I was shaking and was very distressed and I tipped her upside down and gave her one last bang and it came up. We then collapsed in a heap, just shaking and crying because it*

*was very frightening and if I didn't know what to do I would be running around like a headless chicken. I was so scared, and living out here, it would take 20 minutes for an ambulance to get here, so you have really got to know what to do in these circumstances.*

*EHS: Did she (the health visitor) talk to you about First Aid at all or had you done any First Aid.*

*Mrs CL: No that is something that nobody ever really said. For the first few weeks when you've got your baby there they help but they don't really say what to do if there is an accident. I suppose you don't learn about that until something happens...The First Aid thing that would be good to bring that into it for little accidents and in what situation you should straight away go to your Doctor; like with burns and scalds and things you get a little bit of information but not enough*

*Mrs R Well I would like to know more about First Aid just in case there was an accident. If they could run courses or something. I would be a lot happier, but the general basic things, personally I feel quite confident.*

Expectations of support from the health visitor which varied in relation to the children's developmental stage.

*Mrs J As the child grows older you become aware anyway you learn the things that can happen when they get older, you know they seem to crop up, but certainly those first two or three years when they are exploring everything and they are still young they are too young to be independent. Certainly in those two or three years there needs to be something.*

*EHS Did your Health Visitor mention anything when she came to your home after you had your baby to help you with*



*various stages, like when the baby started crawling for example and when they were getting even more mobile?.*

*Mrs N No nothing at all. I do remember about feeding and weight but not about safety.*

*EHS Does your Health Visitor ever mention anything about safety with you.*

*Mrs F Well unfortunately I haven't really had much contact with Health Visitors. I did when my daughter was young until she was about six months old and they have done regular checks but I don't know who my Health Visitor is and I never see her...*

*Mrs S You have a bit of trust in your Health Visitor. I mean we see ours quite a lot, she is always around somewhere like up at the Surgery and you build up quite a good relationship with her.*

The physical environment outside the home as a major concern as opposed to the home environment where statistically most accidents to pre-school children occur.

Concern about rare causes of death and morbidity which were dramatic rather than common, less sensational causes of death and morbidity.

*Mrs J I mean Mark would run all over the road, jump off top stairs if I let him, you know, he climbs about, but also I think it is a lot to do with parents. Parents need to teach the children and instil into them that they must think before they do something. Some parents don't bother. I have tried to teach him you have to stop at the edge of a road and that he musn't climb on the table or you know climb along walls, because you know it is a natural thing for them to do but they have to be taught to think about what they are doing first.*

These findings were considered alongside the literature reviewed and the researcher's practice based experience for developing the research hypotheses, main study survey questionnaires and the sub questions for the qualitative interviews in the main study.