Why do children have accidents?

by

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Abbreviations

ADHD	Attention Deficit Hyperactivity Disorder
A&E	Accident and Emergency Department
CAPT	Child Accident Prevention Trust
CBCL	Child Behavior Checklist- Parent Form
CPRS-R(S)	Conners' Parent Rating Scale – Revised (Short form)
CPT	Continuous Performance Task
LREC	Local Research Ethics Committee

ODD	Oppositional Defiant Disorder
RoSPA	Royal Society for the Prevention of Accidents
SES	Socio-economic status

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Chapter 2:

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Declaration

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Summary

Accidental injuries are a major health problem for children in the United Kingdom. A number of factors interact to put children at risk for repeated accidents. Chapter one reviews research that has examined child accident risk factors, with particular focus on temperament and risk-taking. Such evidence can usefully inform the assessment and formulation of child clinical psychologists to enable them to identify those children at increased risk for repeated injury and advise on safety education appropriate to the individual's circumstances.

The aim of the first study (chapter two) was to examine the role of behavioural and emotional problems (e.g. Attention Deficit Hyperactivity Disorder, anxiety) in the process of accidental injury. Parents of children who had attended a local Accident and Emergency Department completed measures of behaviour and emotional problems and reported on their child's accidental injuries. The results indicated no statistically significant relationship between behaviour or emotional problems and rates of accidental injury. Surprisingly, higher levels of hyperactivity were associated with fewer accidents. The reason for this is unclear and requires further investigation.

Whilst children are able to identify risk, exploration of children's understanding of the process of accidental injury is lacking. Using a focus group discussion with 10-11 year old children, the second study explored children's understanding of the role of child-related factors in accidental injury. In relation to their own and others' accidental injuries, they could describe the role of behaviour and mood as well as the influence of peers and

adults. This illustrates the discrepancy between children's knowledge and their ability/willingness to act on that knowledge.

The final chapter describes some of the ethical and methodological considerations arising out of the two studies. It goes on to discuss some of the learning experiences encountered during the research process and some of the personal challenges faced by the researcher.

CHAPTER 1

Literature Review

Risk-taking and temperamental characteristics of children with accidental injuries

This paper has been prepared for submission to Clinical Psychology Review

(see Appendix B for notes to contributors)

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Abstract

Accidental injury is a significant cause of injury and death to children in the United Kingdom. An epidemiological model has highlighted that a combination of factors interact to put certain children at increased risk. These factors comprise of the environment, the injury causing stimuli and characteristics of the individual child. This review examines literature related to the child in terms of the influence of temperament and a propensity to take risks. Limitations of the studies (e.g. clarity of terminology, retrospective designs) are discussed. The clinical implications of the literature, in light of the limitations, are also considered.

1.0 Introduction

Accidents are the most common cause of death to children in the United Kingdom and a major cause of disability (Child Accident Prevention Trust, 2002 (CAPT); Department of Health, 1998; Royal Society for the Prevention of Accidents (RoSPA), 2001). Whilst the majority of children are likely to suffer some sort of accidental injury during their lifetime, it is those who have repeated accidents who are of concern because of the increased risk of death or disability. A combination of factors interact to put children at risk for accidental injury. This literature review discusses research that has examined some of these factors, with particular focus on those that relate to the child.

1.1 Prevalence

In 2002, in the United Kingdom, around 300 children under the age of 15 years died as a result of injury or poisoning (CAPT, 2003). Many more will have suffered permanent disablement or disfigurement (RoSPA, 2001). Every year around 2 million children will go to hospital because of an accident (CAPT, 2003). This equates to around one fifth of the child population, based on Census 2001 population figures (National Statistics Online, 2003). Many more will have been treated at home (CAPT, 2003; Purdon, 1998). Boys have more accidents resulting in hospital visits or consultations with doctors than girls (Purdon, 1998).

1.2 Nature of Accidents

1.2.1 In the Home

Around 40% of childhood accidental injuries occur in the home or garden (CAPT, 2004). Children under the age of 5 years are most at risk (CAPT, 2003). Falls account for the largest proportion of childhood accidental injury at home (CAPT, 2003, 2004). The second most common type of injury is collision with an object or person (CAPT, 2004). Burns or scalds (particularly hot drinks) and poisoning also cause a large number of accidental injuries to children (CAPT, 2003). Around 90% of suspected poisonings involve children under the age of 5 years (CAPT, 2004). The biggest cause of accidental death to children in the home is due to house fires (CAPT, 2003).

1.2.2 Outside of the Home

The risk for accidents away from home increases from about the age of 7 years onwards, when children begin to spend more time away from home (CAPT, 2003). Falls also account for the largest number of accidents outside the home, but road accidents cause the largest number of serious or fatal injuries (CAPT, 2003). As pedestrians, a child's small size, speed and lack of experience make it difficult for drivers to see them or to stop in time (Gratz, 1979). A large number of children also suffer injuries whilst playing sports or whilst on public playgrounds (CAPT, 2003).

1.3 Conceptualising Risk for Accidental Injury

The concept of *accident proneness* "... implies that some individuals have certain persistent traits ... that predispose them to have more accidents than others." (Manheimer & Mellinger, 1967, p. 491). However, Manheimer and Mellinger (1967) note that the concept is largely rejected; they too reject it as vague and ambiguous and adopt a concept of accident liability. They suggest that accident liability is a continuum and certain characteristics increase the probability that a child will have accidents, "... children who have few accidents differ in *degree* but not in *kind* from children who have many accidents or others who have none." (Manheimer & Mellinger, 1967, p. 512).

A number of authors have described an epidemiological model, as a way of formulating childhood injury causation and prevention (Gratz, 1979; Rivara & Mueller, 1987; Wazana, 1997). The model (as described by Rivara & Mueller, 1987) consists of three phases: the pre-event phase (antecedent events), the event itself and the post-event phase (consequences). During each of these phases, there is an interaction between host, agent and environment factors which determine whether an event leading to injury will take place, whether an injury will occur and the consequences of the injury (e.g. disability, cost) (Rivara & Mueller, 1987). Host factors are the individual characteristics of the child, an agent is "the injury-causing stimulus" (Peterson & Mori, 1985, p.586) and environmental factors comprise the physical and social setting in which the child exists (Gratz, 1979; Rivara & Mueller, 1987; Wazana, 1997).

To complement the epidemiological model, Peterson, Farmer and Mori (1987) advocate a more detailed examination of the process of injury or near injury occurrence in order to identify links between the correlates of injury and actual injury occurrence. For example, weather conditions at the time of injury, cognitions and sensations of the child prior to and subsequent to injury (e.g. avoidance, excitement, fear) and response of caregivers prior to and subsequent to injury (e.g. level of supervision, sympathy). This would allow for a more specific target of intervention and would further our understanding of which interactions between which variables lead to greatest risk for accidental injury.

1.4 Focus of Current Review

This review is not intended to be a comprehensive review of the child accident literature, but a review of literature that has focused on potential antecedent (pre-event) characteristics of the accident host (i.e. the child), namely risk-taking and temperament. For the sake of completeness, a brief summary of some of the other factors is also included.

A search of the PsycINFO and Medline databases identified 19 articles that were relevant for the main focus of the review and a further nine were identified from the reference lists of these articles. Details of the search criteria are given in Appendix A. Additional information was obtained from the Child Accident Prevention Trust and Royal Society for the Prevention of Accidents internet sites and Department of Health publications.

2.0 Agent Factors

Rivara and Mueller (1987) describe an agent as the energy transferred from a stimulus to the host in such a way as to result in injury. For example, burns from clothing made of flammable materials or scalds from tap water (Rivara & Mueller, 1987). For a toddler, the corner of a table can be an agent of injury if they collide with it. Outside of the home, if a child fell from playground equipment and was hurt on a concrete floor, the floor would be the agent of injury. In the case of pedestrian injuries, a motor vehicle would be the agent.

Rivara and Mueller (1987) suggest that whilst injury may not always be prevented, modification of agents may reduce the severity of injuries sustained. For example, they suggest that reducing the thermostat temperature can prevent tap water scalds. However, using cars as an example, the interaction between agent, host and environment in relation to accident causation and prevention becomes more evident. Whilst the introduction of airbags and seat belts in rear seats of modern cars are likely to reduce the severity of injuries to child passengers, it is difficult to know how cars might usefully be modified (and remain functional), in such a way as to reduce pedestrian injury rates. In this case, modification of the environment might be more feasible than modification of the agent (e.g. speed bumps, restricted parking along roads to ensure children are more visible).

3.0 Environmental Factors

A child's environment consists of both physical (e.g. traffic density, playgrounds) and social factors (e.g. socio-economic status (SES), parental characteristics, peers), although the two are not mutually exclusive.

Accident rates are reported to be higher in areas characterised as deprived (Gratz, 1979) and by poor housing (Bagley, 1992). This may be related to closer proximity to dangerous roads and limited access to safe play areas (CAPT, 2003). Some studies have found that children from lower social classes (Avery & Jackson, 1993; Bagley, 1992; CAPT, 2002) and from single-parent and step-families are more likely to experience accidents (Bagley, 1992; O'Connor, Davies, Dunn, Golding, ALSPAC, 2000) than children from higher social classes or intact families. However, more recent research found that family type was not associated with accident history in the previous six months (Lalloo, Sheiham & Nazroo, 2003). This inconsistency highlights a need to explore this issue further to identify what factors might lead to such a discrepancy (e.g. period over which injury data was collected).

In relation to individual family member characteristics, Husband and Hinton (1972) found that in half of the families in their study of children with repeated accidents, there was also serious physical or psychiatric illness present in other family members. In children aged 1-3 years, parental characteristics such as a less active and less emotionally stable mother and a less sociable and more impulsive father are highly associated with injury liability (Matheny, 1986). However, by 6-9 years of age, child-

related factors (e.g. sleeping and eating pattern) are stronger predictors of injury liability (Matheny, 1987). This may reflect an increase in the amount of time they spend away from home.

Driver behaviour is important in the social environment of a child. Older drivers tend to detect the presence of children more often than younger drivers, although when children are detected, both groups reduce their speed (Oude Egberink, Lourens & Van der Molen, 1986). However, children do not always behave as drivers expect (CAPT, 2003) and their small size makes them difficult to see, particularly if cars are parked at the roadside.

One might expect that being accompanied by an adult would be a protective factor against accidental injury. However, whilst fewer accidents occur when children are accompanied, between one quarter and one third of child pedestrian accidents occur in the presence of an adult (Assailly, 1997). It may be that simply being present is not sufficient to prevent injury and that the supervisor also needs to interact with the child. In laboratory road-crossing tasks, children whose interactions with their parents are not focused on the task tend to be more reckless in their road-crossing behaviour than their more focused peers (Dunbar, Lewis & Hill, 1999). Moreover, when peers are present, pedestrian injury victims are more likely to have behaved impulsively (moved quickly into traffic) even in the presence of a supervisor (Wills et al., 1997).

Supervisor-child interaction may also be important in non-traffic-related accidents. Cataldo et al. (1992) found that in a simulated hazard setting, despite giving a similar

number of warnings to their child, parents of previously injured children interacted less frequently with their child than parents of uninjured children. Thus, because of the previous accident, the number of hazard warnings may have increased but without a corresponding increase in interaction compared with uninjured peers. Pre-injury interaction was not assessed. One might question whether there is a difference in attachment style between the injured and uninjured children, which might be reflected in the less frequent interactions.

Environmental factors are clearly relevant when considering potential risk factors for childhood accidental injury, but individual factors pertaining to the child (e.g. impulsive, risky behaviour) also interact with their environment to increase the risk. The focus of this review will now turn to host (child) related factors.

4.0 Child Factors

A number of temperamental/personality characteristics have been explored in relation to accidental injury risk, including exploring-independent, low self-control, active (Manheimer & Mellinger, 1967; Matheny, 1987) fidgety (Pless & Peckham, 1986) extroversion, low inhibitory control (Schwebel & Plumert, 1999) and risk-taking (Bijttebier, Vertommen & Florentie, 2003).

Whilst temperament and risk-taking behaviour have been associated with injury history, risk-taking behaviour has also been found to mediate the relationship between temperament and injury risk (Bijttebier et al., 2003). By way of background information, a

summary of findings regarding gender and age is outlined first. Where age and gender have also been examined in relation to risk-taking and temperament, they will be discussed further under those headings.

4.1 Gender

Boys are more likely to be involved in accidents than girls (CAPT, 2002; Sturms, Van der Sluis, Groothoff, ten Duis & Eisma, 2002; Vollrath, Landolt & Ribi, 2003). This pattern begins as early as one year old (Avery & Jackson, 1993; Matheny, 1987) and is generally seen in "... injuries involving a mechanical transfer of energy ... motor vehicle related injuries, play and sports injuries ..." (Rivara & Mueller, 1987, p.19). There appears to be little gender difference in rates of injury resulting from activities that do not require gross motor activity (e.g. poisoning and burns) (Rivara & Mueller, 1987).

The relationship between gender and severity of injury is less certain. Some researchers have found that boys suffer more serious injuries (Mori & Peterson, 1995; Sturms et al., 2002) and are more likely to die as a result of accidental injury (Department of Health, 2002), whereas others have found no relationship between gender and injury severity (Vollrath et al., 2003). These differences may reflect different methodologies or differences within the populations studied. They could also reflect a recent change in the activities that boys engage in to ones which do not put them at risk for injury (e.g. computer games as opposed to climbing trees).

4.2 Age

As children become more independent of their caregivers, they face different challenges. As one might expect, the nature of accidents changes with age (Avery & Jackson, 1993). Babies and toddlers are most at risk for accidents in the home but by school-age, children experience fewer accidents at home and more at school (CAPT, 2002; RoSPA, 2001). Younger children suffer more falls, burns, scalds and ingestion, whereas older children sustain injury through sporting and pedestrian accidents and suffer more cuts, fractures and head injuries (Assailly, 1997; Bijur, Golding & Haslum, 1988; RoSPA, 2001; Sturms et al., 2002).

4.3 Risk-Taking

Risk-taking behaviour is a multifaceted concept, involving cognitive ability and sensation-seeking (Kennedy & Lipsitt, 1998) and appears to be consistent across settings (Potts, Martinez & Dedmon, 1995). Furthermore, when parents and children are asked to describe a child's level of risk taking, their reports are consistent with one another (Kennedy & Lipsitt, 1998).

4.3.1 Socio-economic Status

Although a relationship between socio-economic status and accident risk has been reported (Bagley, 1992; CAPT, 2003), this may be due to environmental conditions more than host factors. Kennedy and Lipsitt (1998) found no effect of socio-economic status on

levels of sensation-seeking in infants nor on the number of parent reported risky behaviours that children engaged in.

4.3.2 Gender

The evidence regarding gender differences in levels of risky behaviour is inconclusive. In some studies parents have reported that boys engage in more risky behaviour (Bijttebier et al., 2003) and boys have been observed to adopt a more risk-taking style (i.e. impulsive) in simulated road crossing tasks than girls (Whitebread & Neilson, 1999). In contrast, when Kennedy and Lipsitt (1998) assessed risky behaviour using a self-report Sensation-Seeking Scale, they found no gender difference. However, such a method is further removed from an everyday situation than a simulated environment. This task uses photographs to assess children's preference for engaging in potentially unsafe activities or for behaving in a potentially unsafe way. By its very nature, there is no risk involved. Furthermore, there are problems inherent in self-report, such as social desirability.

Simulated environments and self-report measures are the most common assessment tools. However, these two methods of assessing risky behaviour are difficult to compare and may measure different concepts. Further support for the idea that risky behaviour and sensation-seeking may be different concepts comes from Potts et al. (1995) who found that injury history was significantly correlated with self-reported risk-taking, but not with sensation-seeking. These findings highlight a need for clarification of the parameters of the concepts of risk-taking and sensation seeking.

4.3.3 Identification of Danger

Much of the research on children's risk taking has focused on traffic situations. Some children appear to be quite cautious in their decisions about road safety. For example, when asked to identify danger in video sequences of pedestrians, children identify more sequences as dangerous than adults (Sheehy & Chapman, 1986). In a simulated road crossing task, Demetre, Lee, Pitcaim, Grieve, Thomson and Ampofo-Boateng (1992) found that children aged 4-6 years missed more safe opportunities than adults and chose larger gaps to cross in than adults. In contrast to this apparent caution, however, they made a similar number of decisions to adults, which would have resulted in them colliding with a car or having a narrow escape. Demetre et al. (1992) suggest that their results indicate that children are able to compensate, to some degree, for their deficiencies, but lapses of attention may account for their near-misses.

More recently, Hoffrage, Weber, Hertwig and Chase (2003) used naturalistic traffic contexts to identify children (aged 4-6 years) who were prone to making risky road-crossing decisions. They found that children characterised as risk-takers (on a gambling game) chose to cross the road more often, no matter how large the gap between vehicles, than children described as risk-avoiders. The risk-taking children also chose to cross in more small gaps than the risk avoiders. Not surprisingly, they also had a higher rate of hypothetical accidents. Furthermore, Hoffrage et al. (2003) found no relation between behaviour on the task and children's knowledge of how to behave near roads. Just because a child knows what safe behaviour is, does not mean they will necessarily put this into practice.

The differences found in the Demetre et al. (1992) and Hoffrage et al. (2003) studies may be accounted for by maturation, experience or estimation of one's ability. These factors are discussed below.

4.3.4 Maturation and Experience

The propensity to engage in risky behaviour may be influenced by maturation and development. Demetre (1997) relates Vygotsky's concept of the Zone of Proximal Development to children's road crossing ability. That is, an individual's ability to cross the road is constrained by maturational and developmental factors, but there are points in the child's development when guided learning will lead to changes in their ability to perform the task independently. In reviewing some of the literature in this area, Demetre (1997) notes that when choosing a place to cross the road, 8 and 10 year old children are more likely to choose a safe place, than from between two parked cars, whereas 6 year olds tend to be more random in their choices.

Moreover, experience appears to be important in whether a child will engage in risky behaviour. Eight year olds without experience of crossing roads unsupervised are less likely to choose a safe crossing place than their same-age peers who do have experience of crossing roads unsupervised (Demetre, 1997). Further support for the role of developmental and experiential factors comes from Assailly (1997) who notes that there is a peak in child pedestrian injury rates between the ages of 5-9 years, followed by a decline at a time when there is also an increase in traffic exposure as children become more independent (CAPT, 2003).

Over time, a child is likely to experience success and failure, which are important sources of learning. Errors are likely to result if the child does not take into consideration past experience and the present situation (Plumert, 1995). Again, maturation seems relevant in this process. By 8 years of age, children seem able to learn from their experiences of success and failure on laboratory tasks and apply this accurately when making judgments about their ability to perform those tasks at a more difficult level (Plumert, 1995). Another way of judging whether one can complete a task is to compare oneself with peers. Children are more accurate at judging their own ability when they have observed a peer fail the task than when the peer has succeeded (Plumert & Schwebel, 1997). This is important when one considers the impact of peers on impulsivity in road crossing situations discussed earlier.

4.3.5 Estimation of Ability

The level of risk in a particular situation is likely to be partly influenced by a child's ability to successfully complete the task. Therefore, children need to be able to accurately gauge their ability in relation to that situation; errors in this process may contribute to accident risk (Plumert & Schwebel, 1997). When children make errors about their performance, it tends to be an overestimation of their ability (Schwebel & Plumert, 1999). The concept of the Zone of Proximal development (cited by Demetre, 1997) with its emphasis on experience and learning at the optimum time would seem to be important here as there appears to be a maturational shift in children's judgements of their ability on tasks. Eight year olds are more accurate than 6 year olds at judging their ability on tasks

beyond their reach (Plumert & Schwebel, 1997). However, there is no clear relationship between ability estimation and accident history (Plumert, 1995; Plumert & Schwebel, 1997; Schwebel & Plumert, 1999). Overestimation of ability may be due to the nature of the experimental task. There are no aversive consequences if they fail and children's desire to win points may be a stronger influence on their judgements than doubts about their ability (Plumert, 1995).

As noted above, risk-taking behaviour has been found to be a mediating factor between injury history and temperament (Bijttebier et al., 2003). The focus of the review now turns to temperamental factors.

4.4 Temperament

It has been argued that temperament and personality discriminate between those who are exposed to accidents and those who are not (Vollrath et al., 2003). "Temperament is defined as a set of individual differences expressed as generally stable behavioural tendencies throughout infancy and childhood and into adulthood." (Schwebel & Plumert, 1999, p.700).

No one temperament or personality type describes children who present with repeated accidents. Husband and Hinton (1972) found that children who presented to hospital with repeated accidents were described by their parents as "... determined, daring, fearless and showing hyperactive behaviour." (p.399). However, such comments are subjective and the researchers did not examine these characteristics using

standardised measures. In addition, risk for road traffic injury has been linked to parent and teacher reported social interaction skills and behaviour difficulties (Pless & Peckham, 1986) and problem behaviour, as reported by parents, teachers and self-report (West, Train, Junger, West & Pickering, 1999).

4.4.1 Activity Level

Children with higher numbers of accidents appear to have consistently high levels of activity across situations (Langley, McGee, Silva & Williams, 1983), thus potentially placing them at greater risk for accidental injury than their less active peers. Activity level, attention span, sociability (Langley et al., 1983) and low inhibitory control (Schwebel & Plumert, 1999) in preschool aged children have been associated with a higher rate of accidental injury at ages 6-7. This suggests that such behaviour may be predictive of accident liability.

The relationship between impulsivity and accidental injuries is inconclusive. Pless, Taylor and Arsenault (1995) found that children who had been injured in traffic accidents as cyclists or pedestrians were less attentive and more impulsive on computerised measures of attention, motor control and impulsivity. Parents and teachers also rated these children as more hyperactive than their peers. However, the assessments were conducted after the children had had their accidents and it is therefore not known whether the effects were as a result of the accident. More recently, Kennedy and Lipsitt (1998) found no relationship between injury history and impulsivity.

Mori and Peterson (1995) argue that there is a general assumption that children who are highly active and impulsive are at risk of injury because they struggle to perceive and avoid danger. However, they found that highly active, impulsive boys are comparable in their ability to identify safe and unsafe situations in photographs and to suggest strategies to avoid injury, when compared with their less active and less impulsive peers. It may be, therefore, that such children are inaccurate when estimating their own ability to succeed at a task. School-age children who are rated by their mothers as extrovert, tend to overestimate their ability on laboratory tasks, whereas underestimation of ability is associated with low ratings of extroversion (Schwebel & Plumert, 1999). Furthermore, developmental maturity appears to impact on children's ability to judge their skill at tasks. Six year old, active, impulsive children overestimate their ability, but by 8 years of age, these factors are no longer significantly related to accuracy of judgements (Plumert & Schwebel, 1997).

4.4.2 Distractibility

Children described by parents as distractible or irregular in their sleeping and eating habits have been found to be more liable to accidents than peers who are less distractible or more regular in such habits (Matheny, 1987). Furthermore, higher injury liability in this sample was associated with disorganised family situations; this disorganisation might also account for these behaviours (Matheny, 1987). Also, one could conclude that lack of sleep or poor eating habits might lead to a child being easily distracted. However, Nyman (1987) found no difference in average distractibility of a group of child accident victims, compared with other hospitalised children. One could argue that being in

hospital, for whatever reason, is likely to make a child feel anxious, which in turn, might impact on their level of attentiveness/distractibility.

4.4.3 Oppositional Behaviour

In addition to active, impulsive or distractible behaviour, antisocial/oppositional behaviour has also been associated with rates of accidental injury. However, this relationship is not conclusive. Jacques and Finney (1994) found that parent-reported oppositional behaviour was predictive of injury in children one year later. However, their sample was drawn from economically underprivileged families and the authors note that such children are at increased risk for behaviour problems and injury. Furthermore, whilst not the focus of this review, it is interesting to note that Junger and Tremblay (1999) found that delinquent children have lower levels of self-control than nondelinquent children. However, social disadvantage and delinquency were stronger predictors of accident involvement in this group of children than self-control. More recently, Vollrath et al. (2003) found no relationship between benevolence (i.e. irritability, rebelliousness or anger) and accidental injury rates.

There appears to be a gender difference in some of the behavioural problems associated with accident liability. Peer group aggressiveness and a need to show off are related to accident liability for both boys and girls (Manheimer & Mellinger, 1967). In addition, accident liability has been associated with ratings of discipline (Manheimer & Mellinger, 1967) and antisocial behaviour (Langley et al., 1983) in boys and attention seeking (Manheimer & Mellinger, 1967) and neurotic behaviour (Langley et al., 1983) in

girls. However, this might reflect a semantic difference or a bias on the part of the raters (teachers and parents) in that issues of discipline and antisocial behaviour might be alternative means of seeking attention.

4.4.4 Accident Reporting Rates

Temperament may impact on accident reporting rates, rather than accident liability rates per se. The temperament of a child "... gives weight to her symptoms caused by an injury or an illness." (Nyman, 1987, p.403). Nyman found that children hospitalised during the first 5 years of life because of accidents had been rated by their mothers (at 6-8 months) as more intensive in their responses, displaying more negative mood, more negative initial reactions to new situations and were more persistent than peers not subsequently hospitalised. Such characteristics were also related to a higher probability of hospitalisation for medical reasons (Nyman, 1987). Nyman suggests that the responses may reflect a higher susceptibility to hospitalisation rather than accidents per se.

4.4.5 Positive Characteristics

Some characteristics that have been associated with accidental injury may be considered as positive characteristics. Vollrath et al. (2003) found that higher scores on extroversion, energy, optimism and lower scores on shyness, concentration and achievement striving were associated with the presence of accident-related injuries. They note that *energy* is a measure of liveliness not overactivity and so high scores on energy,

optimism and non-shyness are all desirable qualities and it may be that low concentration combined with high energy and optimism leads to greater frequency of accidents (Vollrath et al., 2003).

5.0 Summary

Accidents are a major cause of death and injury to children in the United Kingdom (Department of Health, 1998; RoSPA, 2001). An epidemiological model (Gratz, 1979; Rivara & Mueller, 1987; Wazana, 1997) and a process analytic model (Peterson & Mori, 1985) have been proposed as useful ways to formulate child accident risk by encouraging consideration of factors related to the child, the agent of injury (e.g. car) and the social and physical environment that the child exists in. It appears that a combination of factors from each of these elements interact to put children at risk for accidental injury and are therefore important considerations when planning interventions.

Risk-taking behaviour appears to be consistent across settings (Potts et al., 1995). However, the relationship with gender and socio-economic status (SES) is inconclusive. Furthermore, the relationship between risk-taking and injury history seems to be different to that between sensation-seeking and injury history, suggesting that the two concepts may represent different behaviours (Potts et al., 1995). This distinction has not been clearly made within the literature reviewed here.

A number of characteristics have been associated with higher rates of accidental injury including extroversion, discipline, attention seeking (Manheimer & Mellinger, 1967),

activity level (Langley et al., 1983; Manheimer & Mellinger, 1967; Matheny, 1987), antisocial behaviour, neurotic behaviour (Langley et al., 1983) and problem behaviour (West et al., 1999). However, the relationship with impulsivity (Kennedy & Lipsitt, 1998; Pless et al., 1995; Schwebel & Plumert, 1999) and distractibility (Nyman, 1987) is less clear. Nyman (1987) notes that temperament may impact on accident reporting rates rather than accident liability per se. This suggests that there could be an over-representation of children with these characteristics in accident statistics.

Children who are described as active and impulsive are able to recognise the potential for danger (Mori & Peterson, 1995). It appears that maturation and experience seem to be important in whether children can accurately gauge their ability to complete tasks (Plumert & Schwebel, 1997). This has implications for unsupervised children who may recognise a potentially risky situation but believe that they have the skills to successfully deal with it (e.g. crossing the road in a small gap).

Finally, Vollrath et al. (2003) make the important point that not all of these characteristics necessarily have to be perceived as negative attributes.

6.0 Limitations to Studies

Whilst the research outlined above offers suggestions for why certain children may be more likely to suffer accidental injury, many of the studies are experimental in nature. This makes it difficult to translate their findings to the real-world. Although some studies use simulated situations (e.g. road crossing), the dangers are not real, and consequently

neither is the risk of injury. It is difficult to know to what extent this influences participants responses. Furthermore, the different methodologies used within different studies (e.g. questionnaires, interviews, hospitalisation for injury vs. self/parental report of injury), makes it difficult to compare findings from one study to another.

A number of the studies are retrospective in nature. This presents challenges in terms of potentially confounding factors. For example, ratings of behaviour are often made after the accident and it is not clear whether the behaviours reported were present prior to the accident or are a result of any injuries. Furthermore, retrospective studies are subject to bias in terms of accuracy of participants' memory (Pless & Peckham, 1986) or a belief that the child must have behaved in a certain way (Pless, et al., 1995) for the accident to have happened.

Some of the studies rely on self or parent-reported levels of accidental injury. This also presents challenges, such as social desirability (e.g. not wanting to appear to be bad parents). In addition, parents may differ in what they perceive as a relevant accident (Plumert, 1995). This may mean they provide only limited information, which could lead to a skewed picture of the number of accidental injuries sustained by children. Accidents requiring any sort of medical attention, rather than just hospitalisation, may be more accurate at differentiating high from low liability children (Plumert, 1995). However, this still does not take account of minor injuries that could occur on a daily basis, which may be a more accurate discriminating factor.

The literature discussed above is based on research with western populations (e.g. American, British, European, Australian). The impact of culture was not explored, other than socio-economic status. However, Tower (1976) cites a study by Kurokawa, which found that black and white children had more accidents than oriental children from the same American community. If children from certain cultures have a lower rate of accidental injury, exploration of the reasons behind this would possibly highlight important areas for safety education.

Vollrath et al. (2003) highlight a number of potential problems with studies of the relationship between personality/temperament and accidents. For example, the heterogeneous nature of measures used which do not cover the whole spectrum of personality or temperament or are perhaps biased towards the more negative or dysfunctional characteristics. Furthermore, it is unclear from studies whether behaviours rated are of clinical concern or just at the higher end of the normal range.

7.0 Clinical Implications

When considering the clinical implications, it is important to remember the limitations of the studies discussed. Many use experimental methodologies, which may limit their generalisability. Nevertheless, the research offers some important points for consideration regarding appropriate targets for intervention.

No single factor has been identified as the primary cause of childhood accidental injury. Therefore, it is difficult to identify precisely those children who would be at greatest

risk. It is possibly in relation to concerns about behaviours such as those outlined in this review that a Clinical Psychologist would first become involved with a family, rather than because of repeated accidents. With skills in assessment and formulation, a Psychologist is well-placed to identify any potential accident risk factors (environmental or child-related) for a particular child and thus advise on appropriate accident prevention measures. Both the epidemiological model and process analytic models offer useful ways to formulate the potential risks for children. The systemic nature of such a formulation would indicate that intervention would also need to be systemic in nature. As Rivara and Mueller (1987) note, injury may not be prevented, but severity might be reduced by modifying certain agents.

It is important to note the role of development in children's risk for injury. As children grow older, the nature of their risks change as they explore different environments. Moreover, experience is important in helping children develop safety skills. However, if a child is not at a developmental stage where they are cognitively ready to learn from experience or from being taught safety skills, it is unlikely that such interventions would be successful. Interventions, therefore, need to be targeted to children at the appropriate time. They might be encouraged to learn sooner if they gain experience in settings where they can try out skills without risking harm to themselves.

Even children who are active and impulsive can recognise when dangers are present. However, some children overestimate their abilities, although this is less pronounced as they get older. This is particularly important when considering such

situations as road crossing where they may think they can reach the other side of the road when there is only a small gap. Interventions might therefore be best targeted towards teaching these children how to manage risky situations to reduce the likelihood of injury.

Experience is important in helping children judge whether they can complete a task. The influence of peers is also relevant. Not only do they serve as a distraction, but, they are also models for success and failure. Children are more accurate at judging their own capabilities when they have observed a peer fail than when the peer succeeds. Furthermore, the research discussed did not examine the role of peer pressure, but that too may be an influence on children's willingness to take risks. Teaching children to be aware of their individual differences and encouraging them to be confident to say 'no' to peers may be a useful way of reducing the risks they face. In addition education materials should not be wholly focused on successes, but should also allow children to observe others failing in order to encourage them to consider carefully their own capabilities.

Furthermore, certain behaviours may not be amenable to change (e.g. impulsivity, overactivity, distractibility). Therefore physical and social environment factors may need to be the focus of attention. Intervention might focus on advising parents which of their child's behaviours put them at risk for accidental injury (e.g. the tendency to take risks) or what modifications they can make to the home environment (e.g. furniture without sharp corners). It would also be important to educate parents about the importance of active engagement with the child when supervising them in order to reduce their distractibility. Intervention might also focus on the broader environment and target road safety such as

warning signs, road humps, more crossings.

If Nyman (1987) is correct and temperament is related to hospitalisation per se, Clinical Psychologists also have a role in supporting families to manage the impact of temperament on health behaviour so that families feel more confident at dealing with minor ailments and injuries without recourse to medical practitioners.

8.0 Considerations for Future Research

The concepts of risk-taking and sensation-seeking are unclear. These concepts need to be further clarified in order that their impact on children's levels of risk can be more clearly elucidated.

Although children described as active and impulsive can recognise potentially risky situations in photographs and suggest strategies to avoid injury, further research would usefully focus on whether children, impulsive or otherwise, can identify factors which might put them at risk for accidental injury without pictorial prompts. If such knowledge is lacking, intervention would need to be targeted at education, whereas if children possess such knowledge, intervention could focus on helping children to put that knowledge in to practice to manage their own risk effectively. In line with this, it would be useful for future psychological research to examine what makes it more or less likely that a child will put their safety knowledge into practice.

Whilst a number of characteristics have been explored in relation to accidental injury, it is not clear whether these are of a level to cause clinical concern. Future research would usefully explore whether children who seek medical attention for repeated accidents would usefully be supported by psychological services.

Whilst experimental methods provide useful information, their results have limited generalisability. Future research should perhaps employ more naturalistic observation methods to explore the relationship between children's behaviour or temperamental characteristics and their accident liability; for example, in the school playground or through the use of diary records.

Finally, the research has tended to focus on observation or measurement of behaviour and knowledge, but as the focus of enquiry, it would also be useful to ask the children themselves for their thoughts about childhood accidents.

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CHAPTER 2

Empirical Research Paper 1:

Behavioural and emotional risk factors for childhood accidental injury

This paper has been prepared for submission to

The Journal of Child Psychology and Psychiatry

(see Appendix B for notes to contributors)

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Abstract

Background: Research regarding the relationship between behavioural problems such as Attention Deficit Hyperactivity Disorder and childhood accidental injury is inconsistent. Furthermore, there is limited literature regarding the relationship between emotional problems such as anxiety or depression and childhood accidents.

Method: Using a retrospective design, the current study explored further the relationship between emotional and behavioural problems and accidental injury in children aged 6-12 years old. Parents reported on accidental injuries for which they had sought medical attention over the past two years.

Results: A negative relationship was found between hyperactivity and number of accidental injuries. The findings support previous research that has suggested that the presence of ADHD symptomatology does not increase a child's risk for accidental injury, but casts doubt on previous findings that aggressive behaviour is associated with accidental injury.

Conclusions: Limitations of the study (e.g. response rate, respondents' memory) are discussed. The study highlights areas for future research (e.g. influence of peer's behavioural characteristics on injury frequency).

1.0 Introduction

Accidents are the leading cause of death to children in the United Kingdom (Department of Health, 1998; Royal Society for the Prevention of Accidents (RoSPA), 2001) and a major source of disability (Department of Health, 2002). With continuing advances in medical treatments, the number of children surviving more serious accidental injury is likely to increase and so too is the number of children with long-term or permanent disability or psychological impairment (Sturms, van der Sluis, Groothoff, ten Duis & Eisma, 2002). Those who have repeated accidents are likely to be at increased risk. This has resource implications for the National Health Service and other agencies that provide support and rehabilitation (McDonald & Davey, 1996; Sturms et al., 2002; Wazana, 1997). Thus, there is a need to understand what puts some children at increased risk for accidental injury in order to implement effective prevention strategies.

Furthermore, certain behavioural problems have been associated with increased risk for accidental injury. This raises the question of whether there is a group of children who attend medical services for repeated accidental injury who could be usefully supported by psychological services.

1.1 The Nature of Accidents

The nature of accidents varies with gender and age. Boys have more accidents than girls (Avery & Jackson, 1993; Purdon, 1998; Rivara & Mueller, 1987; Sturms et al., 2002) and tend to have more vehicle-related, play and sports injuries (Rivara & Mueller,

1987), whereas girls have more clothing-related burns and horse-riding accidents (Avery & Jackson, 1993). Up to the age of 5 years, the majority of accidents occur in the home environment, but as children become more independent, they have more pedestrian accidents or accidents at school (Avery & Jackson, 1993; Child Accident Prevention Trust (CAPT), 2002; Sturms et al., 2002).

1.2 Causes of Childhood Accidental Injury

Clearly there are multiple causes of children's accidental injury (Cataldo et al., 1992; Husband & Hinton, 1972; Rivara & Mueller, 1987; Wazana, 1997), but certain factors relating to child behaviour and temperament have been associated with increased risk for injury, including extroversion, showing-off, aggressiveness, competitiveness, attention-seeking, inattentiveness (Manheimer & Mellinger, 1967), motor activity, antisocial behaviour, discipline (Langley, McGee, Silva & Williams, 1983), hyperactivity (Hartshough & Lambert, 1985; Stewart, Thach & Freidin, 1970) and mental health problems (Meltzer, Gatwood, Goodman & Ford, 2000). The more overt/active behaviours, such as aggressiveness and hyperactivity can be described as externalising behaviours, whilst less active behaviours (e.g. inattentiveness) or mental health problems such as anxiety and depression can be classified as internalising behaviours.

1.3 Relationship between Mental Health and Childhood Accidents

Research regarding the relationship between mental health problems such as mood and anxiety disorders and childhood injury appears to have focused mainly on the

psychological consequences of injuries, in terms of post-traumatic stress disorder symptoms (e.g. Keppel-Benson, Ollendick & Benson, 2002; Landolt, Vollrath, Ribi, Gnehm & Sennhauser, 2003). However, Davidson, Hughes and O'Connor (1988) found that boys who were rated as fearful on a Behaviour Screening Questionnaire had a higher rate of subsequent injury than nonfearful peers. Furthermore, it has more recently been reported that children with mental health problems, such as emotional disorders (e.g. anxiety, depression), conduct disorder and hyperkinetic disorder were more likely to have experienced one of four types of accident or injury (head injury, broken bone, burn, poisoning) than children without such disorders; overall children with conduct disorder had a higher prevalence rate amongst all four injuries than children with hyperkinetic or emotional disorders (Meltzer et al., 2000).

1.4 Relationship between Hyperactivity and Childhood Accidents

It has been suggested that behaviours characteristic of Attention Deficit Hyperactivity Disorder (ADHD) might lead to accidental injury (Tinline, personal communication, July 2002) through exposure to hazards, impulsive responding and lack of attention to relevant environmental factors (Farmer & Peterson, 1995). However, the majority of studies have focused on the relationship between ratings of hyperactivity and accidental injury or accident proneness and the evidence is inconclusive (e.g. Davidson, 1987; Gayton, Bailey, Wagner & Hardesty, 1986; Wazana, 1997). Davidson (1987) notes that the distinction between ADHD and hyperactivity is not drawn in the literature and that when an association between hyperactivity and injury is not found, it could reflect a risk that is limited to a more strictly defined group of children (i.e. those with ADHD) and also,

perhaps, the inattentive aspect of ADHD rather than the overactive element.

Furthermore, the concept of Hyperkinetic Disorder appears to have been neglected in the accidental injury literature. This may be a reflection on the assessment measures that are available.

ADHD is characterised by inattention, impulsivity and overactivity (Harris, 1995). Although it has been reported that children with ADHD are more likely to have accidents than their non-ADHD peers (Barkley, 2001), ADHD-type behaviours are also correlated with "... child injury in the general population." (Farmer & Peterson, 1995, p. 325). In light of the fact that ADHD appears to be more prevalent in boys than girls (Carr, 1999) a potential link with injury risk would be corroborated by the higher accident rate found among males.

Gerring et al. (1998) found that a disproportionate number of children with head injury qualified for a premorbid diagnosis of ADHD (19/95 children). However, parents were asked to rate pre-injury behaviour after the accident. Consequently, ratings may have been biased by memory or a belief that the child must have behaved in a certain way for the accident to occur. However, since all the children in the sample were head injury victims, one might expect a larger proportion to score highly on ratings of ADHD if such biases were present. More recently, Byrne, Bawden, Beattie, and DeWolfe (2003) found that preschool children with ADHD were significantly more likely to be rated by parents as engaging in behaviours which put them at risk for injury than non-ADHD controls, but were no more likely to present to emergency services for injury or other

reasons. Again this highlights the potential for discrepancy between parental report and other sources of information. The authors do note that children with ADHD may sustain more minor injuries, which do not warrant a visit to the Emergency Department.

One might expect the risk of accidental injury to be higher in children with comorbid ADHD and epilepsy. However, in a small study by Kirsch and Wirrell (2001), children with ADHD had a significantly higher rate of injury than those without the disorder whether they had epilepsy or not. The study was retrospective in nature and therefore criticisms regarding bias can be levelled at it. However, it is not clear why there would be a difference between accident reporting rates of parents of children with ADHD and parents of children with epilepsy, although levels of supervision may differ between the two groups.

ADHD and individual characteristics of the disorder (i.e. inattention, impulsivity, over-activity) are often comorbid with other disorders, such as pervasive developmental disorders, Conduct Disorder and Oppositional Defiant Disorder (ODD) (Hill & Cameron, 1999; Spreen, Risser & Edgell, 1995). It is, therefore, important to consider the possible influence of comorbid disorders when examining the relationship between ADHD and injuries (Byrne et al., 2003). Barkley (2001) suggests that children who experience accidents "... are more likely to be discipline problems; hyperactive, impulsive, defiant and risk-takers ..." (pp. 67-68). He found that hyperactive-aggressive children had four-times as many accidents related to impulsive behaviour than a control group.

1.5 Relationship Between Antisocial/Conduct Problems and Childhood Accidents

Bijur, Golding, Haslum and Kurzon (1988) found that overactivity and aggression rated at age 5 years was associated with injury frequency in the subsequent 5 years, but the magnitude of the relationship was less than that with aggression. Furthermore, when aggressive behaviour was controlled for, overactivity was no longer significantly associated with accidental injury (Bijur et al., 1988). In another prospective study, Davidson, Taylor, Sandberg and Thorley, (1992) found that parental reports of conduct disorder in boys, but not hyperactivity, were associated with a greater risk for injury compared with a control group drawn from the same cohort.

In a sample of underprivileged children, Jacques and Finney (1994) found that parent-reported oppositional behaviour was a better predictor of injury than aggression and hyperactivity. However, such behaviour problems are reported to be more common in families from lower social classes and who are in receipt of state benefits (Lalloo, Sheiham & Nazroo, 2003). In a prospective study of boys with and without behaviour problems, Schwebel, Speltz, Jones and Bardina (2002) found that boys diagnosed with ODD had a higher rate of injury than the control group. However, there was little difference in the rate of injuries between those with ODD and comorbid ADHD and those without comorbid ADHD, suggesting that the presence of ADHD has little independent effect on risk for injury. The authors note, however, that the study was limited because the sample did not include boys with ADHD without ODD and included only boys.

1.6 Aims

The aims of the current study are to examine the relationship between mental health problems, such as anxiety and depression, and the occurrence of childhood accidental injury. Furthermore, it is hoped that results from the current study will provide some clarity regarding the relationship between externalising behaviours, particularly ADHD, and accidental injury.

1.7 Hypotheses

1.0 It is hypothesised that there will be a difference in the level of internalising and externalising behaviours of children who have sought medical help for two or more accidents in the past two years compared with those who have sought medical help for one or fewer accidents.

2.0 It is further hypothesised that there will be a relationship between behavioural characteristics and frequency of accidents.

3.0 It is hypothesised that there will be a difference in the frequency of accidental injury between children whose parents rate them highly on a measure of Attention Deficit Hyperactivity Disorder and their non-ADHD peers.

2.0 Method

2.1 Design

This retrospective study examines the association between behavioural profile of children and their frequency of presentation to medical services for accidental injury.

2.2 Participants

Participants were parents/carers of children who were aged 6-11 when they attended the Accident and Emergency Department (A&E) of a local hospital, for any reason, during the 12 months prior to the start of the study. The first 300 families to have attended A&E during this period were invited to take part. When only 65 agreed, a further 200 families were contacted. A total of 92 families agreed to take part (18.4% return rate). One respondent indicated that their child was on the Child Protection register. Due to the possibility that this could have been related to non-accidental injury, this child's data were removed from all analyses. The sample consisted of 44 boys and 47 girls whose ages ranged from 6-12 years at the time of data collection (mean age of 9.93 years).

2.3 Procedure

Ethical approval was obtained from Hereford and Worcester Local Research Ethics Committee, the Research and Development Manager of Worcestershire Acute Hospitals NHS Trust and Coventry University School Ethics Committee (see Appendix C).

Families were sent an invitation letter from the consultant of the A&E department along with a participant information sheet (Appendix D) and questionnaire pack (see Appendix E). They were asked to return uncompleted questionnaires if they did not wish to take part so that additional families could be invited. A stamped addressed envelope (SAE) was included for ease of return and contact details for the researchers were provided in case of questions or queries.

A further letter was sent out (Appendix F), 6-8 weeks after the invitation letter asking families to complete the questionnaires, if they had not done so already, or to return uncompleted questionnaires. Data collection was closed 1 month after these letters were posted to the second group of participants.

All questionnaires were numbered. The primary caregiver (parent/carer who spends most time with the child) was asked to complete all questionnaires. Participants were asked to complete two behavioural/emotional problem measures and to provide biographical information.

2..4 Measures

2.4.1 Conners' Parent Rating Scale – Revised (Short form) (CPRS-R(S)) (Conners, 1997) (Appendix E)

The CPRS-R(S) is a measure of problem behaviours in children and adolescents. Parents indicate on a checklist of problem behaviours the frequency with which each

behaviour has occurred in the previous month (Never/seldom, Occasionally, Often, Very often). Raw scores are converted to T-scores. Separate norms are available for boys and girls aged 3-17 years. The scale consists of four subscales: Oppositional, Cognitive Problems/Inattention, Hyperactivity and ADHD Index and takes approximately 10 minutes to complete. The scale is reported to have good test-retest reliability over a period of 6-8 weeks with reliability coefficients of 0.62-0.85 for the four subscales (Conners, 1997). There is strong construct validity demonstrated by strong correlations between the short and long versions of the scale and the scale is reported to be able to distinguish between children with ADHD, non-clinical individuals and individuals with emotional problems (Conners, 1997).

2.4.2 *Child Behavior Checklist- Parent Form (CBCL) (Achenbach, 1991)* (Appendix E)

The CBCL assesses emotional and behavioural problems, and competency, of individuals aged 4-18 years (subscale titles given in Appendix E). Parents/carers indicate on a 3-point scale how true different descriptors are of the individual child during the previous 6 months (Not true, Sometimes true, Often true). Raw scores are converted into T-scores and separate norms are available for males and females aged 4-18 years. This scale is reported to have high test re-test reliability over a 7 day period (mean r=.87 for competence items and mean r=.89 for all problem scales) (Achenbach, 1991). Concurrent validity was demonstrated by comparison with similar scales (i.e. Conners' (1973) Parent Questionnaire and Quay-Peterson (1983) Revised Behaviour Problem Checklist) which yielded coefficients ranging from r=.59-.86 and .59-.88 respectively for

correlations between the syndrome scales (Achenbach, 1991). The checklist takes approximately 15 minutes to complete.

For both the CBCL and CPRS-R(S), where parents selected two responses, an arbitrary decision was made to use the higher of the two ratings when calculating the T-scores.

2.4.3 Biographical Information (Appendix E)

Parents were asked to provide information regarding the child's age, gender, any current contact with social services or whether the child was on the Child Protection Register and details of any accidental injuries for which they sought medical advice or attention (including presentations to GP and other medical facilities, such as dentists). To try to reduce the potential confounding effects of memory, accidents reported as occurring in the past 2 years were used in analyses.

3.0 Results

All analyses were conducted using SPSS Version 11.0 (Pearson Higher Education, 2002). T-scores from the CBCL and CPRS-R(S) were used in all analyses.

3.1 Descriptive Information

3.1.1 Accidents and Injuries

A total of 71 children were reported to have experienced at least one accidental injury for which they sought medical attention, of these, 38 had experienced two or more such injuries (see Table 1). Overall, the mean number of accidental injuries was 1.27 (standard deviation of 0.90).

Table 1

Frequency distribution of accidents

Number of accidents sustained	Total		Boys		Girls	
	Number	(%)	Number	(%)	Number	(%)
00	20	(22.0%)	11	(25.0%)	9	(19.1%)
1.00	33	(36.3%)	14	(31.8%)	19	(40.4%)
2.00	31	(34.1%)	15	(34.1%)	16	(34.0%)
3.00	7	(7.7%)	4	(9.1%)	3	(6.4%)

Falls and trips were the most commonly reported accidents, followed by sporting accidents. The most frequently reported injuries were broken or fractured bones, followed by twisted or sprained muscles and ligaments (see Tables 2 and 3)

Table 2

Types of Injuries Sustained[a]

Injury	Total group	
	Number	**(%)**
Broken/Fractured Bone	24	(23.1%)
Sprain/twist/pulled muscle	17	(16.3%)
Bruising	20	(19.2%)
Head Injury	9	(8.7%)
Cut/laceration	8	(7.7%)
Swelling	7	(6.7%)
Burn/scald	2	(1.9%)
Other[b]	17	(16.3%)

[a]Proportion of injuries out of 104 reported.
[b] (e.g. pain, swelling, 'bump')

Table 3

Types of Accidents[a]

Accident	Total Group	
	Number	**(%)**
Fall/Trip	30	(31.9%)
Trapped finger	6	(6.4%)
Bike/scooter	10	(10.6%)
Sport	21	(22.3%)
Playing (miscellaneous)	11	(11.7%)
Collision (person/object)	4	(4.3%)
Other[b]	12	(12.8%)

[a]Proportion of accidents out of 94 reported.
[b](e.g. at school, banged limb)

3.1.2 Behavioural/Emotional Problems

The majority of children did not fall within the clinical or borderline clinical ranges of the CBCL subscales or aggregated scales of Internalizing, Externalizing and Total problems. Consequently, the clinical and borderline categories were collapsed into one

category for the purposes of data presentation. Similarly, only a small proportion of children scored at or above the recommended cut-off of 65 on the CPRS-R(S) (see Table 4). When they did score above the cut-off score, more girls fell within the clinical ranges of the CPRS-R(S) Oppositional subscale, CBCL Internalizing, Externalizing and Total Problems scales, whereas more boys fell within the clinical range on the CPRS-R(S) Cognitive Problems/Inattention and Hyperactivity subscales and the CBCL Somatic Problems subscale.

Table 4

Behavioural/Emotional Characteristics of the Sample

CPRS-R(S) subscales	Mean score	Median score	Range	Proportion within clinical range[ab]	
				Number	(%)
Oppositional	52.42	50.00	39-85	17	(19.1%)
Cognitive problems/inattention	51.41	47.00	41-82	14	(16.1%)
Hyperactivity	52.40	47.00	42-88	12	(13.6%)
ADHD	50.60	48.00	40-84	12	(13.8%)

[a]CPRS-R(S)– Clinical range = t-score >65
[b]Percentages are 'valid percent' i.e. calculated after taking missing data cases out

Table 4

Behavioural/Emotional Characteristics of the Sample

CBCL subscales	Mean score	Median score	Range	Proportion within clinical range[ab]	
				Number	(%)
Withdrawn	54.56	50.00	50-83	9	(10.3%)
Somatic complaints	56.84	54.00	50-84	11	(12.5%)
Anxious/depressed	55.43	50.00	50-88	13	(14.7%)
Social problems	54.90	50.00	50-89	10	(11.4%)
Thought problems	53.72	50.00	50-73	7	(7.9%)
Attention problems	55.40	51.00	50-95	12	(13.6%)
Delinquent behaviour	53.90	50.00	50-76	8	(9.1%)
Aggressive behaviour	53.72	50.00	50-82	8	(9.1%)
Internalizing behaviours	49.47	45.50	31-82	20	(22.7%)
Externalizing behaviours	47.26	46.00	30-76	15	(17.0%)
Total behaviour problems	48.31	48.00	23-80	18	(20.4%)

[a]CBCL: Syndrome scales: borderline T-score = 67-70; clinical scale T-score >70; Internalizing/Externalizing/Total scales: borderline T-score=60-63; clinical Tscore>63
[b]Percentages are 'valid percent' i.e. calculated after taking missing data cases out

3.2 Inferential Analysis

Due to the small numbers of children falling within the clinical ranges, the skew values were tested for significance, using the rule that if the skew value is greater than two standard errors of skewness, then the distribution is significantly skewed (Brown, 1997). All scores from the CBCL and CPRS-R(S) were significantly skewed, apart from the CBCL Internalizing, Externalizing and Total Problems Scales for the girls. Since the majority of scores were not normally distributed, each hypothesis was tested using non-parametric statistics.

3.2.1 Hypothesis one:

There will be a difference in the level of internalising and externalising behaviours of children who have sought medical help for two or more accidents in the past two years compared with those who have sought medical help for one or fewer accidents.

A Mann Whitney U test computed for the whole group indicated that there was no significant difference between the two accident groups (0-1 accident and 2+ accidents) in their scores on the Externalizing ($U=886.000$, $N_1=50$, $N_2=38$, $p=.589$, two-tailed) or Internalizing ($U=856.500$, $N_1=50$, $N_2=38$, $p=.430$, two-tailed) subscales of the CBCL. When males and females scores were examined separately, there was also no significant difference between the two accident groups on either subscale (Males: Externalizing – $U=164.500$, $N_1=24$, $N_2=19$, $p=.119$, two-tailed, Internalizing – $U=179.000$, $N_1=24$, $N_2=19$, $p=.229$, two-tailed; Females: Externalizing – $U=223.000$, $N_1=26$, $N_2=19$, $p=.580$, two-

tailed, Internalizing – U=243.500, N_1=26, N_2=19, p=.935, two-tailed).

3.2.2 Hypothesis two:

There will be a relationship between behavioural presentation and frequency of accidents.

Spearman's rho non-parametric measure of correlation was computed to explore whether there was a relationship between Number of Accidents and the individual subscales of the CBCL and CPRS-R(S) for the group as a whole and then for the male and female participants separately. There was a statistically significant negative correlation between boys scores on the CPRS-R(S) hyperactivity subscale and number of accidents in the past two years (rho=-.342, N=43, p<0.05, two-tailed) (see Table 5). No other correlations reached significance.

Table 5:

Correlations between Number of Accidents and Subscale T-Scores

CPRS-R(S) subscales	Number of accidents in the last 2 years		
	Total Group	**Males**	**Females**
Oppositional	-.140	-.267	-.020
Cognitive/Inattention	-.013	-.097	.103
Hyperactivity	-.085	-.342[a]	.251
ADHD	.007	-.096	.118

[a] significant at $p<0.05$

Table 5:

Correlations between Number of Accidents and Subscale T-Scores

CBCL subscales	Number of accidents in the last 2 years		
	Total Group	**Males**	**Females**
Withdrawn	-.121	.082	.006
Somatic complaints	.044	-.085	.216
Anxious/depressed	-.056	-.098	-.038
Social problems	.038	-.073	.136
Thought problems	-.088	.028	-.203
Attention problems	-.025	-.144	.099
Delinquent behaviour	-.085	-.149	-.012
Aggressive behaviour	-.091	-.248	.050

3.2.3 Hypothesis three:

There will be a difference in the frequency of accidental injury between children whose parents rate them highly on a measure of ADHD and their non-ADHD peers.

Conners (1997) states that whilst it is most common to use a T-score of 65 or above to determine whether further exploration of a child's difficulties is required, a lower cut-off point of 60 will identify more children with true problems. However, he points out that this strategy may also identify children who do not have such problems. In light of the small number of children in the current study with a T-score above 65, for the purposes of testing hypothesis 3, the cut-off point was indeed lowered to a T-score of 60. A Mann Whitney U test was computed for the group as a whole and for male and female scores separately. No statistically significant results were found (Whole group: $U=527.00$, $N_1=70$, $N_2=17$, $p=.443$, two-tailed; Males: $U=104.000$, $N_1=33$, $N_2=8$, $p=.373$, two-tailed; Females: $U=163.000$, $N_1=37$, $N_2=9$, $p=.935$, two-tailed).

4.0 Discussion and Conclusions

The majority of accidents in the current sample were falls or trips and sports-related accidents, which is consistent with previous research (e.g. Avery and Jackson, 1993). However, in the current study, boys and girls experienced a similar number of accidents over a two-year period, which does not accord with previous research that has found that boys suffer more accidents than girls (e.g. Purdon, 1998).

The current study aimed to examine the relationship between mental health problems in children, and to provide some clarity with regard to the relationship between externalizing behaviours and accidental injury. Little clarity was obtained from the current results. Children who had sought medical help for two or more injuries were no different in terms of their scores on the aggregated CBCL Externalizing Behaviour or Internalizing Behaviour scales than children with fewer injuries. Similarly, when individual behavioural and emotional problems were examined in relation to accident frequency, the only significant association was a negative correlation between boys scores on the CPRS-R(S) hyperactivity subscale and number of accidents in the past two years. This suggests that hyperactivity, in this sample, is not associated with repeated accidental injury. The reasons for this result are not clear, but may be due to limitations of the study (e.g. sample bias), which are discussed further below.

Generally, these findings suggest that behaviour or emotional problems per se, at least in this group of children, are not associated with frequency of accidental injuries, even when scores are aggregated together under broader concepts, thus allowing for a greater potential to fall within a clinical range.

Furthermore, when children were rated as ADHD or non-ADHD according to the CPRS-R(S), there was no significant difference in the rate of injury between the two groups. This latter finding adds support to previous research that has found no relationship between ADHD and accidental injury (Byrne et al., 2003; Schwebel et al., 2002).

4.1 Limitations

The current study suffers a number of limitations. The retrospective nature of the study and the use of self-report means there could be bias in terms of accuracy of memory or social desirability. Indeed, some respondents reported that they could not remember specific details. Future researchers may wish to explore alternative ways of measuring accident frequency, such as medical records, but these would need to include GP and dental records to cover the range of potential medical attention a child could receive. Alternatively, a checklist of a range of accidental injuries completed by parents may aid recall. Furthermore, a prospective design would reduce bias in terms of accuracy of memory.

The low response rate was disappointing and may be related to the design of the study. Some parents may have been deterred by the quantity of paperwork they received. With hindsight, it might have been better to send questionnaires only to those who expressed an interest. In addition, one parent declined to take part because she thought she was being 'checked up on'. It is unfortunate, though perhaps not surprising, that research looking at children's accidental injury should create such concerns.

The design of the study also meant that the researcher had no contact with the participants, which meant that queries regarding their responses could not be clarified. For example, when respondents gave two answers to a question an arbitrary decision was made to take the higher of the two answers. This may have led to an overestimation.

However, in light of the lack of statistically significant findings, this is unlikely to have biased the results greatly.

The lack of statistically significant findings could be attributable to a bias in terms of the characteristics of the children whose parents chose to respond. However, they could also be reflective of the fact that parents were not contacted immediately after their child's injury. Consequently, having seen their child playing, going to school etc without incurring further injuries, they may be able to provide a more accurate view of their child's behaviour.

4.2 Clinical Implications and Suggestions for Future Research

Whilst the current results suggest that emotional and behavioural characteristics of children may not be associated with injury frequency, it would be premature to dismiss previous findings. The current study should be replicated with a larger sample, and perhaps examined for age differences. The small number of respondents within the current study may have weakened any associations that would be present within a larger sample.

The current findings did not indicate that there is a group of children who are presenting with repeated accidental injuries who would usefully be served by Mental Health Services. However, there is still a group of children who had more accidents over a period of two years than their peers. The current study has been unable to shed light on why this might be.

The finding that girls had an almost identical number of accidental injuries to the boys may be indicative of a bias within the sample, but may also indicate that girls are engaging in more activities that put them at risk for injury or that boys are engaging in fewer activities that put them at risk (e.g. computer games). This is not intended to portray a stereotyped picture of boys, but to urge future researchers to investigate the nature of children's activities and how these might relate to the pattern of accidental injury.

Respondents included a range of accidents and injuries. It was not clear from many responses whether the target child was an active participant, or the only participant, in an accident. There may have been an interaction between the behaviour of the target child and the behaviour of other people that led to the accident. It would be useful for future research to investigate the potential impact of the relationship between the behavioural profile of peers and the target child on the occurrence of accidental injury.

4.3 Summary

The current study failed to find support for the hypotheses that behavioural and emotional problems are associated with repeated accidental injury. The lack of a statistically significant difference in rate of injury between children classified as ADHD and their non-ADHD peers, corroborates previous research. However, the negative correlation between hyperactivity and accident history indicates a need to consider factors in addition to behaviour (e.g. parental supervision, activities the child engages in).

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CHAPTER 3

Empirical Research Paper 2:

Children's understanding of the causes of accidents

This paper has been prepared for submission to

The British Journal of Clinical Psychology

(see Appendix B for notes to contributors)

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Abstract

Objectives: Research examining whether children can appraise risk has generally focused on a limited range of scenarios. The current study explored children's understanding of the role of the child, and influences on the child, in the process of accidental injury.

Design/Method: The study utilised a focus group discussion with 8 children aged 10 and 11. The transcript of the discussion was analysed using content analysis.

Results: The children described child-related factors such as behaviour and mood as well as the influence of peers and adults on children's behaviour.

Conclusions: The small sample and structured questioning limit the generalisability of this study, but the results highlight areas for further research, such as children's understanding of the interaction between multiple factors.

1.0 Introduction

Accidents are a leading cause of injury and death to children in England and Wales (Department of Health, 1998). A number of factors relating to the child and their environment have been associated with higher rates of accidental injury (e.g. gender (Vollrath, Landolt & Ribi, 2003), age (Avery & Jackson, 1993), activity level (Langley, McGee, Silva, & Williams, 1983) housing (Bagley, 1992) and parental characteristics (Matheny, 1986), but children's understanding of the potential risk factors has been somewhat neglected.

Literature on children's risk appraisals has tended to focus on whether children can appraise risk for injury and rate levels of risk in a fairly narrow range of situations. These are usually depicted in photos, drawings or video clips and, whilst the children tend to verify that certain portrayals are risky they represent only a limited example of children's experiences. An exception is a study by Gable and Peterson (1998) that explored children's attributions for their minor injuries and found that fate was the most common reason given for injuries. However, when children reported that their pre-injury behaviour would have been unacceptable to their mother, there was a significant increase in the rate of attributions to child behaviour. This study is limited in that children were only asked to indicate how much of a role they thought their own behaviour, fate or the situation played in the occurrence of injury, rather than what it was about their behaviour, for example, that they believed led to the injury.

The ability to accurately identify potentially dangerous situations improves as children mature (Mori & Peterson, 1995). If a child has no understanding of the causes of accidents, they will not know how to take aversive action (Thornton, Pearson, Andree & Rodgers, 1999). Younger children attribute injuries to bad luck, but as they mature there is an increase in attribution of injuries to their own behaviour (Morrongiello & Rennie, 1998).

It has been argued that, whether an objective danger is present or not, the presence of threat influences children's appraisals of risk (Hyson & Bollin, 1990; Sheehy & Chapman, 1986). Children with high confidence in their abilities perceive less threat of severe injury to others engaged in the same activity than peers with less confidence (Peterson, Gillies, Cook, Schick & Little, 1994). Experience has also been associated with lower appraisals of risk and successful experiences may lead to lower appraisals of risk to oneself (DiLillo, Potts & Himes, 1998).

There appear to be no significant gender differences in the ability to identify dangerous situations or injury risk factors in pictures (Grieve & Williams, 1985; Hillier & Morrongiello, 1998). Although boys have more accidental injuries than girls (Purdon, 1998), girls are perceived to be at greater risk for injury than boys particularly if the girl appears wary rather than confident (Morrongiello, Midgett & Stanton, 2000; Morrongiello & Rennie, 1998).

It has been argued that peers and adults shape children's risk appraisals, for example, parents appraise risk for young children (Hyson & Bollin, 1990) and children

who are able to provide a number of persuasive arguments can convince their peer to choose more risky decisions in laboratory tasks (Christensen & Morrongiello, 1997). Thus, the influence of peers is important to address in teaching children how to keep safe.

We need to understand how children appraise risk, not just that they can appraise risk, in order to be able to provide appropriate safety education. Whilst child behaviour is not the only risk factor for accidental injury, it is the one over which they are likely to have most control.

1.1 Aims

The aim of the current study is to explore children's understanding of their role in the process of accidental injury and of the potential influences on their behaviour. The three main areas that the research will explore are:

1.0 Whether children have an awareness of their role in childhood accidental injury.

2.0 Whether girls are perceived to be at greater risk for accidental injury than boys.

3.0 Whether peers are seen as a persuasive influence in encouraging children to engage in risky activities?

2.0 Method

2.1 Design

A focus group was employed to explore children's understanding of the risk factors for accidental injury.

2.2 Participants

The group consisted of 8 children, (4 boys and 4 girls) in year six of a local primary school. They were selected by the Head Teacher to be of average ability. Six of the children were aged 11 years and two were aged 10 years (mean age: 10.75 years).

Consent for participation was obtained from the Head Teacher in loco parentis and from the children themselves (Appendix G). The Head Teacher and children were given an information sheet (Appendix H) prior to the group discussion. The facilitator went through this information and emphasised that they did not have to take part in the group and could leave at any time. All children agreed to take part and no one chose to leave.

2.3 Procedure

Ethical approval for this study was obtained from Coventry University School Ethics Committee (Appendix I).

The group took place in the Head Teacher's office with the Head Teacher present and lasted for 45 minutes. A colleague noted down the order in which people spoke and the discussion was audio-taped for later transcription. The discussion was facilitated by the principal researcher and began with general questions around the topic to generate discussion (e.g. 'what kinds of accidents do children have?) and asking the children to think back to accidents they had had themselves. This was followed by more specific questions based on the literature regarding risk factors for childhood accidental injury (Appendix J). Finally, the discussion was summarised and the children were asked to correct any mistakes in the summary and to add any further comments.

2.3.1 Data Coding and Analysis

The discussion was transcribed and analysed using content analysis (Joffe & Yardley, 2004; Litosseliti, 2003; Wilkinson, 2003). Content analysis involves coding participants' verbal responses into categories (Wilkinson, 2003). The majority of categories were derived from the existing literature on risk factors for accidental injury. These categories had been used to inform the questions posed to the group.

A coding frame was produced with categories defined by the key questions that had been asked in the group and subcategories were created where relevant (Appendix K). Additional categories were also created to account for any responses not covered by these questions. Categories were exclusive and exhaustive. Coding units were defined as sentences spoken by the group members (but not the facilitator). A copy of the transcript and a transcription key are attached in Appendix L.

2.3.2 Inter-rater Reliability

The principal researcher and a colleague, who had not been present at the group, independently coded the whole transcript according to the coding frame. They then met and discussed any discrepancies between the two coded transcripts and restructured the coding frame accordingly. The principal researcher and colleague then recoded the transcript independently a second time and inter-rater reliability was calculated for each category. Agreement between coders ranged from 77.8%-100%.

3.0 Results

The results are presented qualitatively because with such a small group, it would be misleading to assume that the frequency of occurrence of any one category is representative of children in general (Joffe & Yardley, 2004). Themes are illustrated with direct quotes taken from the transcript. The number of times each theme was mentioned (out of a total of 190 relevant comments) is given in brackets. For reference purposes, and comparison with future studies, a frequency table is enclosed in Appendix M.

3.1 Behaviour

This was the most frequently mentioned reason for children having accidents. The group gave examples of behaviour that could result in accidental injury, some of which were from personal experience. The category was subdivided into three categories to describe behaviour of the child that could cause injury to that child (active behaviour), lack

of attention or carelessness (passive behaviour) and copying or imitating the behaviour of others.

3.1.1 Active behaviour of the individual child (24 instances)

"When we're playing British Bulldogs and when you stampede and everyone runs into you."

"I think the sillier you are the more you could hurt yourself because you could fall over if you're messing about."

3.1.2 Passive behaviour of the individual child (11)

"When you're not looking around."

"Sometimes laziness can cause an accident, like she just said, sometimes I have laced shoes and then I notice, and sometimes my friends tell me that my laces are undone and sometimes I notice it myself and I just can't be bothered and then I have an accident."

3.1.3 Copying or imitating others' behaviour (5)

"Late night stunt programmes."

"They might copy stupid things that their parents do.'

3.2 Behaviour of Others (22)

There was discussion of how the behaviour of one person could lead to an accident or injury in another person, for example

"Yeah, when somebody got pushed and pushed me."

One member of the group also recognised his own role in causing accidental injury to another child.

"My sister was going down the slide and I accidentally ran into it and it moved and she fell off."

3.3 Mood and Feelings (10)

The topic of mood initially arose when discussing behaviour, but was continued in relation to the specific question regarding the impact of mood and feelings and focused on two main feelings, angry and sad, for example

"[Indistinct] if they're angry [indistinct]."

"If you're sad and you're crying you might [indistinct] you might slip up."

One child also mentioned the possibility that a child might want to deliberately hurt themselves if they were sad.

"Sometimes if my, part of your family or a friend dies, then you could get really upset and feel like you want to kill yourself if you want to join them."

3.4 Own Previous Experience (16)

The group were asked to think about whether it would make a difference to have been in a situation before. Comments tended to focus around having done something before and expecting the same to happen the next time.

"When you've done something before and you try and do it again and it goes wrong, you could hurt yourself."

There was a general recognition within the group that one could learn from mistakes, for example

"When you're little and you hurt yourself, by the time you get older you've learnt from your mistakes."

However, the group did not spontaneously relate learning from experience to this question, although when questioned specifically about doing things differently, there were some suggestions for aversive action.

"Erm, I might listen to my mum sometimes now."

3.5 Influence of Peers

The group suggested, predominantly, that peer pressure can lead to accidents, and there was some discussion around getting involved in fights. The group also recognised that friends might discourage risky behaviour.

3.5.1 Pressure/Bullying (14)

"Sometimes friends tell you to do stupid things when you don't really want to and then they start calling you a chicken so you go and do it."

"People who are shy might be bullied into doing something."

3.5.2 Supportive (4)

"Sometimes your friends can watch out for you and tell you not to do something because it's silly."

3.6 Influence of Parents and Teachers (24)

Parents and teachers were seen as people who might warn against or stop a child doing something, which puts themselves or others at risk:

"You'll sometimes be a bit more sensible, or you could get into trouble."

"Yes because the person like, say if someone tried to trip you up, they might tell the person that tried to trip you up not to do it."

There was also discussion around the fact that children sometimes do not do as they are told and this might result in accidental injury, for example

"When I like my mum tells me because I was playing, like using the iron to iron some clothes because she asked me to iron some and she told me to put it down, but I wouldn't and I burnt my hand."

3.7 Age (15)

One member of the group noted that she had more accidents when she was little than she does now and there was a general recognition that with age comes knowledge and experience, for example

"As you get older, you're more aware where, you're more aware of things that could happen to you."

Two other comments related to possible physical changes that might take place as one gets older.

"You get tougher when you're older, so it's not going to hurt as much."

"Sometimes, if you're old and you have a car maybe, you should, you could be partly blind and you might not see an animal walk in front of the car and you might run over it without knowing."

3.8 Gender (19)

The focus of the discussion on gender centred around the presence, or not, of differences between boys and girls, but also recognition that there are a mix of abilities within the genders, for example

"I think it just depends on the personality because some girls are tough, as well as boys, and some boys are weak as well as girls."

One boy commented that boys engage in more daring activities and another boy described girls as "... more inside people ..." and boys as "... more out ...". There were also comments from girls and boys that some girls do not like to engage in activities

where they might get dirty. However, one girl described an opposing scenario with her being more active than her brother.

> "Yeah, because my brother's on the Play Station all day basically and I'm outside playing [indistinct]".

There were also very brief comments about girls being more vulnerable and the possibility that boys may deliberately hurt girls, for example

> "I think girls are more likely to show emotion when they get hurt because they're softer."

> "[Indistinct] football and [indistinct] kick it at a girl and it's gonna hit their head or something."

3.9 Other (26)

Whilst not the focus of the group, some comments were made regarding environmental factors such as slippery surfaces, windy weather blowing a door shut and hot objects which one might get burnt on.

Finally, there was one other comment regarding potential causes of accidents that did not fall within the other categories, and this concerned individual differences in ability:

"And other people can do it but other people can't."

4.0 Discussion and Conclusions

The children in the current study appeared to recognise their role in the causative process and could describe how different aspects of a child's behaviour or influences on a child's behaviour can impact on the risk for accidental injury. The group described the child victim's own active (e.g. running) or passive (e.g. not listening) behaviour as well as the impact of mood and behaviour of others (e.g. pushing).

With regard to gender differences, whilst there was some discussion around boys engaging in more daring activities and girls being clumsy, there was also discussion around individual differences within the genders. It is therefore, not possible to conclude from the present study that this group of children perceived girls to be at greater risk for injury. Whilst the present group seemed quite open with one another, it was not clear whether there was any bias caused by the presence of members of the opposite sex. A comparison between the responses from a group of boys and a group of girls would reduce this possibility.

The group also recognised the influence of peers and adults. There was a distinction between the supportive role of peers and peers who put pressure on a child to

engage in a risky activity. Children may know that a behaviour or situation is risky but due to peer pressure may, nevertheless, take part. Safety education may need to address issues of self-esteem and confidence so that children feel able to say 'no' or to walk away from situations where they are at risk for injury.

When asked about the influence of previous experience, the group did not spontaneously talk about learning from experience, which suggested that possibly they did not associate previous experience with the potential to prevent future accidents. However, when asked to say how they would behave differently in specific situations, the group were able to describe appropriate avoidance strategies (e.g. not running). This may indicate that children of this age need prompting about previous experiences in order for them to think about how to avoid accidental injury.

Teachers and parents were seen as protective agents, particularly when children were younger. They were recognised as having more experience than children with regard to potential dangers and consequences. However, the group believed that adults had less involvement in decisions about what is safe and unsafe as children grow older. Again, this is important because if children have not been taught how to deal with risky situations, they will struggle to deal with them appropriately when they are unsupervised. Parents need to ensure that they equip their children with adequate knowledge and skills to appraise risk and take appropriate action.

4.1 Limitations, Future Research and Clinical Implications

Using a focus group allowed the children to consider their own experiences, which is a more ecologically valid way of addressing children's attributions than imposing restricted choices on them. The results illustrate children's beliefs regarding known risk factors for childhood accidental injury. The next step would be to examine what children comprehend about the interactions between different factors. For example, one boy described being angry and focusing on the target of his anger; it would be useful to examine children's understanding of how their mood might impact on their behaviour and their ability to avoid accidental injury.

The use of structured questioning may have introduced bias by focusing on specific factors. The results would be strengthened if a less structured discussion obtained similar findings. Furthermore, due to the small numbers within the group, it is not possible to conclude that these comments are representative of other children of this age group. The research would need to be replicated for such conclusions to be drawn.

Moreover, the group situation may have been difficult for some children. For example, there may have been concerns about ridicule from peers. This has implications in terms of whether the comments are representative of the group as a whole or only of those who chose to speak more frequently. One-to-one interviews may create an atmosphere where quieter children are able to express their ideas and understanding more openly. It is not clear whether quieter children have more or fewer accidental injuries than more vocal children. It is for this reason that they should not be ignored as

their comments may offer alternative insights into the process of childhood accidental injury.

4.2 Summary

This study aimed to explore children's understanding of accident causation. The children in this study appeared to comprehend the role of the child in the causative process of accidental injury. However, there is still a high rate of childhood accidental injury at this age. The results indicate a need for further, more detailed investigation of children's understanding of the interaction between factors, but also what factors children take account of when trying to avoid risk. Education would usefully focus on teaching children about the range of risk factors, not just their physical environment, but how their behaviour impacts on it, as well as ways to avoid accidental injury.

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CHAPTER 4

Reflective Review

Reflections on the research process

Word count: 2956

Abstract

This paper presents my reflections on the process of conducting research into childhood accidental injury as part of the Clinical Psychology Doctorate course. The review focuses mainly on my own personal challenges and how these might impact on my role as a practitioner as well as the learning experiences I have gained. Ethical and methodological issues that arose are also discussed, with comments on how they may have impacted on the course of the research.

1.0 Background

My interest in child-related work is long-standing and my research was intended to continue that interest further. I set out to examine whether there are a group of children who seek medical attention for accidental injury who would usefully be served by psychological services. In my main empirical paper I examined the relationship between children's behavioural and emotional characteristics and their injury history, using questionnaire measures. In my second, brief, paper I explored children's understanding of their potential role in the causation of accidental injury through a focus group discussion. The following discussion outlines some of the challenges and issues I faced during the research process.

2.0 Methodological and Ethical Issues

In recent years, there have been a number of media reports of physical abuse to children, some of which have resulted in death. Research into accidental injury in children is, therefore, a sensitive topic. Efforts were made in the Information Sheet to reassure parents/carers that my research was examining reasons for accidental injury only. Nevertheless, one parent reported thinking that she was being checked up on. It is possible that other parents had similar beliefs and may have been concerned that their responses would be seen as a reflection on their abilities as a parent, or more gravely, that they would risk accusations of abuse. The response rate was relatively low (see below) and it may have been that such concerns deterred people from responding.

Furthermore, two of the questionnaire measures are used in clinical practice to aid in formulation and diagnosis of childhood difficulties. Whilst it was not intended that the measures would be used in this way, completion of the questionnaires may have raised concerns in parents as to whether their child was 'normal'. Whilst it was emphasised in the information provided that the behaviours being measured are present in most children to some degree, it is possible that rating their child on these problems could cause upset if they thought their child would score highly. What's more, I was not offering a clinical service to those parents whose children might require support, but could only recommend they contact their GP. Parents may have been discouraged from completing the measures if they thought it would not benefit their child.

When I conducted the focus group, I was aware of the potential for significant power differential. The children had been asked to take part by their Head Teacher who also stayed in the room during the discussion. I was aware that it might have been difficult for the children to refuse to take part and tried to make it easy for them to opt out by explaining that they did not have to take part.

Moreover, I was aware that children might not be able to look after themselves psychologically in the way that trainees are encouraged to do in group exercises. I emphasised that they did not have to talk about things that upset them and only to say things that they wanted to say. It is unclear what influence this had on what they chose to discuss. They appeared to be quite open, but may have chosen to discuss only a limited range of ideas in order not to become upset or ridiculed by peers. Furthermore, it is

possible that being part of a group made it difficult for some children to discuss their ideas. One child was particularly quiet. Despite raising her hand on a number of occasions, when it was her turn to speak, she often said she had forgotten what she wanted to say. Conducting one-to-one interviews may have created a situation where the children felt comfortable talking about broader ideas. It would be useful for future research to compare responses obtained in a group setting with those obtained from one-to-one interviews.

Although the group discussion was focused on accidental injury, it was possible that the children could discuss injuries that had occurred in non-accidental circumstances. Having the Head Teacher present meant that such a situation could be dealt with immediately and sensitively if it arose. The children talked about the possibility that fighting could result in injury, but did not discuss any issues of concern.

The number of respondents in the questionnaire study was disappointing. Out of 500 families only 92 responded. Without having information regarding the behavioural and emotional characteristics of the children whose families did not respond, it is not possible to say if the sample was biased in terms of such characteristics. It may be that the children whose parents responded are those with few or no problems whereas those who did not respond are those children with significant problems. If this were the case, it would explain my lack of a statistically significant relationship between behaviour/emotional problems and injury history.

Initially it had been intended that I would assess children's impulsivity and attention using a Continuous Performance Task. However, due to lack of space, this proved to be unworkable and the study was conducted using parental report of behaviour and emotional problems. The use of a Continuous Performance Task (CPT) would have removed the element of social desirability in describing the children's behaviour. However, in light of the small number of respondents, I am glad that I did not use the CPT as it might have meant me waiting for long hours for people who chose not to take part. Personally, this would have been very anxiety provoking which in turn may have impacted on the quality of my work in general.

The retrospective nature of the main study and the use of parental report are limitations of the study. The results would be supported if they could be replicated using a prospective design. Such a design may consist of accidental injuries recorded in a diary, and behavioural and emotional problems assessed independently by a clinician.

For my second empirical paper, I did not collect information on the children's accident history and consequently made no comparison of their responses in group with their accident history. A comparison of this sort would be informative in terms of indicating whether children who understand the potential role of behaviour in accidental injury have fewer accidents or whether there is a gap between understanding and application.

3.0 Personal Learning and Reflections

3.1 Challenging my beliefs about the Scientist-Practitioner Model

When I began training, the idea of being a scientist-practitioner made sense to me, not only informing my practice with evidence and applying scientific principles to my practice but also contributing to the evidence base through my own research (Marzillier and Hall, 1999). I looked forward to developing my research skills and learning how to combine science and practice. However, I encountered a number of challenges during the research process that made me question whether it was feasible to be a scientist-practitioner.

3.1.1 Time

The research process was very time consuming. I suspect this was partly due to my limited research experience and thus the need to broaden my knowledge of research skills. However, some aspects of this challenge were due to the research itself. My research colleagues and I were based in different cities. This meant that I had to factor in travelling time for meetings in the early stages of planning the research. This was time that I would have liked to spend reading around the topic and writing my literature review. If I were to repeat the experience, I would seek to work with colleagues who were based closer to my own base.

The time issue also impacted on friends and family. Whilst I tried to keep my studying to weekday evenings and my study day, this was not always possible. Family and friends were very supportive and tried to understand, but it nevertheless put pressure on relationships. As a trainee I could tell them that "it's not much longer" or "it's just until May". I do not think that as a qualified clinician I could justify the amount of time the research imposed on my personal life. However, it is likely that any future research would be around a topic or client group that I was involved with in my practice, which would hopefully mean easier access to information and the client group. This would probably reduce the amount of time taken out of my personal life with research issues.

3.1.2 Conflicting Demands

My placement during the final 6 months of the research was quite challenging in terms of the complex difficulties the clients presented with. It was also a new area of working for me, which meant I had to do additional reading. I found that when I had spent time at work reading, I struggled to focus in the evenings. In particular, towards the end of placement, when writing my reports, I struggled to concentrate both at work and on my research. I think during that time my reports and my research suffered, because I could not find the mental energy to think about both of them effectively. With hindsight, I might have been better to opt for a placement working with the client group I conducted my research with, to reduce the amount of information I had to digest.

3.1.3 Ethical Approval Process

I found the ethical approval process lengthy and frustrating. I was required to obtain the signature of the Research and Development Manager prior to submitting an application to the Local Research Ethics Committee (LREC). This delayed the process of submission. Furthermore, communication with the LREC was problematic in that it was difficult to contact them by telephone as there was often no answer and they could not access my email messages, possibly because I emailed from outside of the NHS. Moreover, correspondence was often sent to me at the wrong address, which led to a delay in amendment requests and confirmations reaching me.

Late in the research process, I sought to extend the study to compare my data with data already in existence at the local child and family mental health service. However, ethical approval would only be granted when parental consent had been obtained to access their records. In light of the late stage at which this application was made, it was decided not to go ahead with this addition to the research, but it raised the question of clinician's ability to predict what they want to study in the future. One cannot always know in advance when one will want to investigate clinical phenomena; patterns sometimes emerge over time. If families have moved away, it may not be possible to explore important information. A previous colleague, who worked in a non-NHS child assessment setting, noticed a pattern in the presenting characteristics of some of the children she assessed. Over time, she noticed this pattern more frequently and subsequently explored the phenomena further. This exemplifies the potential for something of clinical interest to emerge over time, but which one could not predict. I

began to consider the possibility that I should discuss research with clients when they attend for assessment and therapy, alongside my discussion of confidentiality. If it is part of standard practice to discuss such issues, more people might be willing to take part and we can gain a better understanding of psychological issues.

3.1.4 Is it Feasible to be a Scientist-Practitioner?

Some of the challenges I faced were compounded by factors related to the fact that I was a trainee. For example, I had a deadline, which meant that if there was a significant problem with the research, I had limited time in which to rectify this. Furthermore, if I failed the research, I would not qualify as a Doctor in Clinical Psychology. I anticipate that as a qualified practitioner, the majority of research deadlines will be self-imposed and thus more flexible. Moreover, if problems are encountered there is time to seek further ethical approval to alter the study. The added issue of failing to qualify is not a consideration once qualified and whilst poor research is not beneficial to the individual's reputation, the peer review process serves to reduce the likelihood that poor research is published.

In light of the above, there are implications for clinicians who wish to conduct research. I do feel that it would be feasible to incorporate research into one's role as a practitioner. However, it would need to be focused around a topic area or client group which one was involved with in order to have relatively easy access to information and participants. It would also need to be supported by the team in order that time could be taken out of clinical work in order to undertake the research. Furthermore, it would need

to be planned carefully and without an impending deadline, in order that an application to the Ethics Committee could be made and approved. Finally, it is worth considering introducing the idea of research participation to clients in the early stages of contact so that if they are approached in later months or years, it is not unknown to them.

4.0 Supervision

Supervision was an invaluable source of support and affirmation. When I struggled to understand, my supervisors helped me to work things out; when I was frustrated with the speed at which things were moving, they allowed me to vent my frustrations; when I became fed up with looking at my research, they told me I was normal. I would advise anyone conducting research to ensure they have good colleagues or supervisors to whom they can turn when they require support.

I was initially unclear of my research question. I was able to discuss it within supervision, but once I left that forum, I struggled to formulate what it was that I was exploring. This made it difficult for me when I began reviewing the literature and when making my LREC application. Supervision was invaluable in helping me overcome this obstacle.

Amongst all the advice and support I received, two pieces of wisdom have remained with me. One was from a research supervisor and the other from a placement supervisor and both concerned writing. The first was to 'tell a story' and related to structuring my literature review and two empirical papers. By having in my mind that I

was trying to tell someone the story of where my research had come from, I found it a little easier to structure and focus the information. The second piece of advice was to 'take them on a journey'. I had a tendency to be disjointed in my writing and to fill each paragraph with a number of unrelated points, so that text lurched from point to point, paragraph to paragraph. I was encouraged to take the reader on a journey through my thought processes, addressing each point in turn, moving through points in a logical sequence. These two pieces of advice helped me to try to make sense of what I was writing from the reader's point of view. I think I still have some way to go, but having been made aware of these points, I am now more conscious of trying to address them each time I write.

5.0 Emotional Journey

I experienced a range of positive and negative emotions throughout the research process, which at times were surprisingly strong.

I began by feeling excited about the prospect of contributing to the knowledge base. However, I had anticipated approximately a 50% return rate and was sorely disappointed when I did not achieve this. I struggled to find the motivation to write on numerous occasions when I thought that the research would fall through because of low numbers. I expected challenges such as this to be motivating drives for me, but instead they seemed to have the opposite effect. It surprised me to feel annoyed that people had not made the effort to complete my questionnaires.

There were times when I felt overwhelmed by the amount of literature I was faced with and struggled to see what was relevant. I think this was related to my initial difficulty in formulating my research question (discussed previously). I was frustrated with myself for this, as I compared myself with peers who did not appear to be struggling with such difficulties.

As the research deadline loomed closer, my feelings fluctuated between highly stressed and panicky to very calm and in control. I have noticed my tolerance for everyday challenges to be much less than it used to be and my mood tended to change very quickly. It has surprised me just how much of an impact the research process has had on my emotions. It has, however, helped me to recognise more quickly when I am becoming stressed and to identify ways to reduce that stress.

6.0 Conclusions

In combination with a challenging placement, the research process has been a difficult journey. I have experienced a roller-coaster ride of emotions, which cannot have been easy for those around me either. However, I am pleased with the end result and despite the challenges I faced, I believe I could incorporate research into my clinical practice, given the caveats outlined above. I have certainly gained confidence in my ability to conduct and report research. Moreover, I am aware of some of the challenges that are posed when conducting research and would hopefully use such knowledge in planning and conducting any future research.

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Appendix A: Search Criteria

PsychINFO

Used terms relating to cognitive style, perception of danger and risk-taking combined with terms related to accidents and accident-proneness. The search was limited to journal articles, English language, human population and childhood/school age group. This latter limitation was chosen as the focus of the main research paper was to be children within the 6-12 age group. A total of 90 titles were returned; from reading the abstracts of these, 16 were found to be relevant (1 could not be obtained through the British Library), leaving 15.

Medline (from 1966 to November 2003)

The same terms as those used for the PsycInfo search were used in Medline, but mapped to the thesaurus terms. This produced 100's of titles and in the interests of simplifying the search, terms were searched for in the Descriptors. The search was limited to English language, humans, children and journal articles. Those without abstracts were discarded. A total of 27 were produced. From reading the abstracts, 4 were found to be relevant.

Reading the reference lists of a sample of the articles already obtained indicated a further 8 journal articles and 1 article was discovered by chance.

Studies excluded from this review were those which examined accident prevention, parental perceptions of risk, accidents and crime, non-accidental injuries, dental trauma, treatment, physical characteristics (e.g. handedness, obesity), life events, injury behaviours, assessment of reporting methods. In addition, studies examining only preschool or adolescent populations were excluded.

Appendix A: Search Criteria (terms used in searches)

PsycINFO:

((((cognitive complexity) in KC) or ((cognitive development) in KC) or ((cognitive ability) in KC) or ((cognitive style) in KC) or ((explode "Cognitive-Ability" in DE) or (explode "Cognitive-Complexity" in DE) or (explode "Cognitive-Development" in DE) or (explode "Cognitive-Maps" in DE) or (explode "Cognitive-Processes" in DE) or (explode "Cognitive Processing-Speed" in DE) or (explode "Cognitive-Style in DE)) or ((cognitive maps) in KC) or ((cognitive processing speed) in KC) or ((cognitive processes) in KC)) or (((personality) in KC) or ((explode "Personality-" in DE) or ((temperament*) in KC) or (explode "Personality-" in DE) or ((temperament*) in KC)) or ((explode "Self-Control" in DE) or ((self-control) in KC)) or ((explode "Impulsiveness-" in DE) or ((impulsive*) in KC)) or ((danger*) in KC) or (((risk* in KC) or ((explode "Risk-Factors" in DE) or (explode "Risk-Perception" in DE) or (explode "Risk-Taking" in DE)) or ((risk taking) in KC) or ((risk perception) in KC) or ((risk factor*) in KC))) and ((((accident*) in KC) or ((accident proneness) in KC)) or ((explode "Accident-Proneness" in DE) or (explode "Accidents-" in DE))) and ((AG:PY=CHILDHOOD) or (AG:PY=SCHOOL-AGE)) and (LA:PY=ENGLISH) and PO:PY=HUMAN)

Medline

((cognitive$. DE) or (risk$. DE or risk-taking# . DE) or (danger$. DE or dangerous-behavior#. DE) or (impulsiv$. DE or impulsive-behavior#. DE) or (temperament$. DE or temperament#.W..DE. or character#.W..DE) or (personality. DE or personality#.W..DE)) and (accident adj prone$ or accident-proneness#.DE) and ((LG=EN and HUMAN=YES) and (CHILD#))

Appendix B: Notes for Contributors

Clinical Psychology Review

The Journal of Child Psychology and Psychiatry

British Journal of Clinical Psychology

Appendix B: Notes for Contributors

Guidelines for contributors/authors have been followed where they are in accordance with submission guidelines for the Universities of Coventry and Warwick. The following deviations from guidelines have been made:

1. Acknowledgements and details of abbreviations are given after the Table of Contents.

2. Tables are included within the text, rather than on a separate page.

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as
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Clinical Psychology Review

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Guide for Authors

SUBMISSION REQUIREMENTS: All manuscripts should be submitted to Alan S. Bellack, Department of Psychiatry, The University of Maryland at Baltimore, 737 W. Lombard St., Suite 551, Baltimore, MD 21201, USA. Submit three (3) high-quality copies of the entire manuscript; the original is not required. Allow ample margins and type double-space throughout. Papers should not exceed 50 pages (including references). One of the paper's authors should enclose a letter to the Editor, requesting review and possible publication; the letter must also state that the manuscript has not been previously published and has not been submitted elsewhere. One author's address (as well as any upcoming address change), telephone and FAX numbers, and E-mail address (if available) should be included; this individual will receive all correspondence from the Editor and Publisher.

Papers accepted for *Clinical Psychology Review* may not be published elsewhere in any language without written permission from the author(s) and publishers. Upon acceptance for publication, the author(s) must complete a transfer of Copyright Agreement form.

COMPUTER DISKS: Authors are encouraged to submit a 3.5" HD/DD computer disk to the editorial office; 5.25" HD/DD disks are acceptable if 3.5" disks are unavailable. Please observe the following criteria: (1) Send only hard copy when first submitting your paper. (2) When your paper has been refereed, revised if necessary, and accepted, send a disk containing the final version with the final hard copy. Make sure that the disk and the hardcopy match exactly (otherwise the diskette version will prevail). (3) Specify what software was used, including which release, e.g., WordPerfect 6.0a. (4) Specify what computer was used (IBM compatible PC, Apple Macintosh, etc.). (5) The article file should include all textual material (text, references, tables, figure captions, etc.) and separate illustration files, if available. (6) The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given in the Instructions to Contributors. (7) The file should be single-spaced and should use the wrap-around end-of-line feature, i.e., returns at the end of paragraphs only. Place two returns after every element such as title, headings, paragraphs, figure and table call-outs. (8) Keep a backup disk for reference and safety.

TITLE PAGE: The title page should list (1) the article; (2) the authors' names and affiliations at the time the work was conducted; (3) a concise running title; and (4) an unnumbered footnote giving an address for reprint requests and acknowledgements.

ABSTRACT: An abstract should be submitted that does not exceed 200 words in length. This should be typed on a separate page following the title page.

KEYWORDS: Authors should include up to six keywords with their article. Keywords should be selected from the APA list of index descriptors, unless otherwise agreed with the Editor.

STYLE AND REFERENCES: Manuscripts should be carefully prepared using the *Publication Manual of the American Psychological Association*, 5th ed., 1994, for style. The reference section must be double spaced, and all works cited must be listed. Avoid abbreviations of journal titles and incomplete information.

Reference Style for Journals: Raymond, M.J. (1964). The treatment of addiction by aversion conditioning with apomorphine. *Behaviour Research and Therapy, 3*, 287-290.

For Books: Barlow, D.H., Hayes S.C., & Nelson, R.O. (1984). *The scientist practitioner: Research and accountability in clinical and educational settings*. Elmsford, NY: Pergamon.

TABLES AND FIGURES: Do not send glossy prints, photographs or original artwork until acceptance. Copies of all tables and figures should be included with each copy of the manuscript. Upon acceptance of a manuscript for publication, original, camera-ready photographs and artwork must be submitted, unmounted and on glossy paper. Photocopies, blue ink or pencil are not acceptable. Use black india ink and type figure legends on a separate sheet. Write the article title and figure number lightly in pencil on the back of each.

PAGE PROOFS AND OFFPRINTS: Page proofs of the article will be sent to the corresponding author. These should be carefully proofread. Except for typographical errors, corrections should be minimal, and rewriting the text is not permitted. Corrected page proofs must be returned within 48 hours of receipt. Along with the page proofs, the corresponding author will receive a form for ordering offprints and full copies of the issue in which the article appears. Twenty-five (25) free offprints are provided; orders for additional offprints must be received before printing in order to qualify for lower publication rates. All coauthor offprint requirements should be included on the offprint order form.

COPYRIGHT: Publications are copyrighted for the protection of the authors and the publisher. A Transfer of Copyright Agreement will be sent to the author whose manuscript is accepted. The form must be completed and returned to the publisher before the article can be published.

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The Journal of Child Psychology and Psychiatry

Published on behalf of the Association for Child Psychology and Psychiatry

Edited by:
Frank C. Verhulst

Print ISSN: 0021-9630
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Current Volume: 45
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Impact Factor: 2.514

Author Guidelines

Notes for Contributors

Contributions from any discipline that further knowledge of the mental life and behaviour of children are welcomed. Papers are published in English, but submissions are welcomed from any country. Contributions should be of a standard which merits presentation before an international readership.

Papers may assume either of the following forms:

- *Original articles*
  These should make an original contribution to empirical knowledge, to the theoretical understanding of the subject, or to the development of clinical research and practice. **Original articles should not exceed 6000 words, including title page, abstract, references, tables, and figures. Limit tables and figures to 6 or fewer double-spaced manuscript pages. The word count of both text and references should be clearly stated on the front page.**
- *Review articles*
  These will survey an important area of interest within the general field and may be offered or commissioned. All papers in the Annual Research Review, Annotations and Practitioner Reviews are usually commissioned.
- *Announcements*
  The Journal will normally publicize details of forthcoming *international* meetings and conferences only. Send copy to the Journal Secretary to arrive at least *6 months* prior to the meeting deadline to ensure inclusion in an appropriate issue.

General

1. Submission of a paper to the *Journal* will be held to imply that it represents an original contribution not previously published (except in the form of an abstract or preliminary report); that it is not being considered for publication elsewhere, and that, if accepted by the Journal, it will not be published elsewhere in the same form, in any language, without the consent of the Editors. When submitting a manuscript, authors should state in a covering letter whether they have currently in press, submitted or in preparation any other papers that are based on the same data set, and, if so, provide details for the Editors.

Ethics

2. Authors are reminded that the *Journal* adheres to the ethics of scientific publication as detailed in the *Ethical principles of psychologists and code of conduct* (American Psychological Association, 1992). These principles also imply that the piecemeal, or fragmented publication of small amounts of data from the same study is not acceptable.

3. Papers should be submitted online. For detailed instructions please go to: **http://acpp.manuscriptcentral.com**. Previous users can *Check for existing account*. New users should *Create a new account*. Alternatively, contributions, correspondence and a disk containing all files can be sent to The Editors, JCPP, St Saviour's House, 39/41 Union Street, London SE1 1SD, UK. Telephone: +44 (0)20 7403 7458. Faxline: +44 (0)20 7403 7081. E-mail: mark.jenkins@acpp.org.uk

Upon acceptance of a paper, the author will be asked to transfer copyright to the ACPP.

Manuscript Submission

1. The manuscript should be typed clearly on one side only of white A4 (8 x 11 inches or 210 x 297 mm) paper, and double-spaced throughout including references and tables, with wide margins. Sheets should be numbered consecutively. A letter giving the name, telephone and fax number, and email address of the author to whom communication should be addressed should accompany the submission. Authors not submitting online should send 2 copies of the manuscript together with a 3.5 floppy disk containing all relevant files. The preferred file formats are MS Word or WordPerfect, and should be PC compatible. If using other packages the file should be saved as Rich Text Format or Text only.

2. Papers should be concise and written in English in a readily understandable style. Care should be taken to avoid racist or sexist language, and statistical presentation should be clear and unambiguous. The *Journal* follows the style recommendations given in the *Publication Manual of the American Psychological Association* (5th edition, 2001), available from the Order Department, APA, P.O. Box 2710, Hyattsville, MD 20784, USA.

3. The *Journal* is **not** able to offer a translation service, but, in order to help authors whose first language is not English, the Editors will be happy to arrange for accepted papers to be prepared for publication in English by a sub-editor.

Layout

1. *Title*
The first page of the manuscript should give the title, name(s) and short address(es) of author(s), and an abbreviated title (for use as a running head) of up to 80 characters. Authors requesting masked review should provide a first page with the title only and adapt the manuscripts accordingly.

2. *Abstract*
The abstract should not exceed 300 words and should be structured in the following way with bold marked headings: Background; Methods; Results; Conclusions; Keywords; Abbreviations. The abbreviations will apply where authors are using acronyms for tests or abbreviations not in common usage. Any questions regarding the new structure should be addressed to the Editors.

3. *Headings*
Articles and research reports should be set out in the conventional format: Methods, Results, Discussion and Conclusion. Descriptions of techniques and methods should only be given in detail when they are unfamiliar. There should be no more than three (clearly marked) levels of subheadings used in the text.

4. *Acknowledgements*
These should appear on a separate sheet, double spaced, at the end of the body of the paper, before the References.

5. *Correspondence to*:
Full name, address, phone, fax and email details of the corresponding author should appear on a separate sheet of paper at the end of the manuscript, before the References.

Referencing
The *Journal* follows the text referencing style and reference list style detailed in the *Publication manual of the American Psychological Association* (5th edition).

(a) References in text.

References in running text should be quoted as follows:
Smith and Brown (1990), or (Smith, 1990), or (Smith, 1980, 1981a, b), or (Smith & Brown, 1982), or (Brown & Green, 1983; Smith, 1982).

For up to five authors, all surnames should be cited in the first instance, with subsequent occurrences cited as et al., e.g. Smith et al. (1981) or (Smith et al., 1981). For six or more authors, cite only the surname of the first author followed by et al. However, all authors should be listed in the Reference List.

Join the names in a multiple author citation in running text by the word 'and'. In parenthetical material, in tables, and in the References List, join the names by an ampersand (&).

References to unpublished material should be avoided.

(b) Reference list

Full references should be given at the end of the article in alphabetical order, and not in footnotes. **Double spacing** must be used.

References to journals should include the authors' surnames and initials, the full title of the paper, the full name of the journal, the year of publication, the volume number, and inclusive page numbers. Titles of journals must not be abbreviated and should be italicised.

References to books should include the authors' surnames and initials, the full title of the book, the place of publication, the publisher's name and the year of publication.

References to articles, chapters and symposia contributions should be cited as per the examples below.
Kiernan, C. (1981). Sign language in autistic children. *Journal of Child Psychology and Psychiatry*, 22, 215-220.
Thompson, A. (1981). *Early experience: The new evidence*. Oxford: Pergamon Press.
Jones, C.C., & Brown, A. (1981). Disorders of perception. In K. Thompson (Ed.), *Problems in early childhood* (pp. 23-84). Oxford: Pergamon Press.

Use Ed.(s) for Editor(s); edn. for edition; p.(pp.) for page(s); Vol. 2 for Volume 2.

Tables and Figures
All Tables and Figures should be supplied on separate sheets, not included within the text, and have their intended position clearly indicated in the manuscript. They should be constructed so as to be intelligible without reference to the text. Figures should be supplied as high quality original artwork and any lettering or line work should be able to sustain reduction to the final size of reproduction. Tints and complex shading should be avoided and colour should not be used. However, if authors consider colour essential, please note that the extra costs will have to be borne by the authors themselves. Figures supplied on disk must be accompanied by a hard copy and should be originated in a drawing package and saved as an EPS or TIFF file. Halftones should only be included when essential and must be prepared on glossy paper and have good contrast. Table and figure legends should be typed on a separate page.

Nomenclature and symbols
Each paper should be consistent within itself as to nomenclature, symbols and units. When referring to drugs, give generic names, not trade names. Greek characters should be clearly indicated.

Refereeing
The *Journal* has a policy of anonymous peer review and the initial refereeing process

seldom requires more than three months. Authors may request that their identity be withheld from referees and should follow the procedure for masked review, as above. Most manuscripts will require some revision by the authors before final acceptance. Manuscripts, whether accepted or rejected will not be returned to authors. The Editor's decision on the suitability of a manuscript for publication is final.

Proofs

Proofs will be sent to the designated author only. These will be sent via email as a PDF file, therefore a current email address must be provided with the manuscript. Only typographical or factual errors may be changed at proof stage. The publisher reserves the right to charge authors for correction of non-typographical errors.

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Top

British Journal of Clinical Psychology

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

The following types of paper are invited:

- Papers reporting original empirical investigations;
- Theoretical papers, provided that these are sufficiently related to the empirical data;
- Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications;
- Brief reports and comments.

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

Papers should normally be no more than 5,000 words, although the Editor retains discretion to publish papers beyond this length.

3. Reviewing

The journal operates a policy of anonymous peer review. Papers will normally be scrutinised and commented on by at least two independent expert referees (in addition to the Editor) although the Editor may process a paper at his or her discretion. The referees will not be aware of the identity of the author. All information about authorship including personal acknowledgements and institutional affiliations should be confined to the title page (and the text should be free of such clues as identifiable self-citations e.g. 'In our earlier work...').

4. Online submission process

1) All manuscripts must be submitted online at http://bjcp.edmgr.com.

First-time users: click the REGISTER button from the menu and enter in your details as instructed. On successful registration, an email will be sent informing you of your user name and password. Please keep this email for future reference and proceed to LOGIN. (You do not need to re-register if your status changes e.g. author, reviewer or editor).
Registered users: click the LOGIN button from the menu and enter your user name and password for immediate access. Click 'Author Login'

2) Follow the step-by-step instructions to submit your manuscript.

3) The submission must include the following as separate files:
- Title page consisting of manuscript title, authors' full names and affiliations, name and address for corresponding author
- Abstract
- Full manuscript omitting authors' names and affiliations. Figures and tables can be attached separately if necessary.

4) If you require further help in submitting your manuscript, please consult 'Tutorial for Authors' (PDF 130Kb)

Authors can log on at any time to check the status of the manuscript.

5. Manuscript requirements

- Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
- Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript with their approximate locations indicated in the text.
- Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate page. The resolution of digital images must be at least 300 dpi.
- For articles containing original scientific research, a structured abstract of up to 250 words should be included with the headings: Objectives, Design, Methods, results, Conclusions. Review articles should use these headings: Purpose, Methods, Results, Conclusions.
- For reference citations, please use APA style. Particular care should be taken to ensure that references

are accurate and complete. Give all journal titles in full.
- SI units must be used for all measurements, rounded off to practical values if appropriate, with the Imperial equivalent in parentheses.
- In normal circumstances, effect size should be incorporated.
- Authors are requested to avoid the use of sexist language.
- Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations etc for which they do not own copyright.

For Guidelines on editorial style, please consult the *APA Publication Manual* published by the American Psychological Association, Washington DC, USA (http://www.apastyle.org).

6. Brief reports and comments

These allow publication of research studies and theoretical, critical or review comments with an essential contribution to make. They should be limited to 2000 words, including references. The abstract should not exceed 120 words and should be structured under these headings: Objective, Method, Results, Conclusions. There should be no more than one table or figure, which should only be included if it conveys information more efficiently than the text. Title, author and name and address are not included in the word limit.

7. Publication ethics

Code of Conduct
Principles of Publishing

8. Supplementary data

Supplementary data too extensive for publication may be deposited with the British Library Document Supply Centre. Such material includes numerical data, computer programs, fuller details of case studies and experimental techniques. The material should be submitted to the Editor together with the article, for simultaneous refereeing.

9. Post acceptance

PDF page proofs are sent to authors via email for correction of print but not for rewriting or the introduction of new material. Authors will be provided with a PDF file of their article prior to publication for easy and cost-effective dissemination to colleagues.

10. Copyright

To protect authors and journals against unauthorised reproduction of articles, The British Psychological Society requires copyright to be assigned to itself as publisher, on the express condition that authors may use their own material at any time without permission. On acceptance of a paper submitted to a journal, authors will be requested to sign an appropriate assignment of copyright form.

11. Checklist of requirements

- Abstract (100-200 words)
- Title page (include title, authors' names, affiliations, full contact details)
- Full article text (double-spaced with numbered pages and anonymised)
- References (APA style). Authors are responsible for bibliographic accuracy and must check every reference in the manuscript and proofread again in the page proofs.
- Tables, figures, captions placed at the end of the article or attached as separate files.

Appendix C: Ethical Approval for Empirical Research Paper 1

COVENTRY UNIVERSITY - SCHOOL OF HEALTH AND SOCIAL SCIENCES

STUDENT SUBMISSION TO SCHOOL RESEARCH ETHICS COMMITTEE

1. Student's name: CLAIRE DAVID 2. Course: DOCTORATE IN CLINICAL PSYCHOLOGY
(BLOCK CAPITALS)

3. Title of project: WHY DO CHILDREN HAVE ACCIDENTS?

4. **Summary of the project in jargon-free language and in not more than 120 words:**

Sample: 500 PRIMARY CAREGIVERS OF CHILDREN WHO HAVE ATTENDED THE ACCIDENT AND EMERGENCY DEPARTMENT DURING THE PAST 12 MONTHS PRIOR TO START OF DATA COLLECTION.
Research site:
ACCIDENT + EMERGENCY DEPARTMENT, ALEXANDRA HOSPITAL, REDDITCH & THE ROAR TREE CENTRE, SMALLWOOD HOUSE, CHURCH GREEN WEST, REDDITCH
Design (eg experimental):
RETROSPECTIVE, UTILISING QUESTIONNAIRES, CORRELATIONAL
Methods of data collection:
POSTAL QUESTIONNAIRES TO PARENTS
- BIOGRAPHICAL / HISTORY QUESTIONNAIRE
- BEHAVIOURAL AND EMOTIONAL MEASURES (CONNER'S PARENT RATING SCALE - REVISED, SHORT FORM AND CHILD BEHAVIOUR CHECKLIST)

Access arrangements (if applicable):
PARTICIPANTS WILL BE ACCESSED VIA THE A+E DEPARTMENT OF THE ALEXANDRA HOSPITAL. WORCESTERSHIRE LOCAL ETHICS BOARD APPROVAL IS BEING SOUGHT.

5.	Will the project involve patients(clients) and/or patient(client) data?	Yes [✓]	No [ ]
6.	Will any invasive procedures be employed in the research?	Yes [ ]	No [✓]
7.	Is there a risk of physical discomfort to those taking part?	Yes [ ]	No [✓]
8.	Is there a risk of psychological distress to those taking part?	Yes [ ]	No [✓]
9.	Will specific individuals or institutions (other than the University) be identifiable through data published or otherwise made available?	Yes [✓]	No [ ]
10.	Is it intended to seek informed consent from each participant (or from his or her parent or guardian)?	Yes [✓]	No [ ]

LOANE DEPT, ROAR TREE CENTRE

Student's signature: C. David Supervisor's signature: Date: 25/6/03

FOR COMMITTEE USE:

Immediate approval [✓] Referral to full School Committee [ ]
Referral to local Hospital Ethics Committee [ ] Decision pending receipt of further information (specify below) [ ]

Committee Member's signature: David Giles Date: 11/8/03

Appendix C: Ethical Approval for Empirical Research Paper 1

West Midlands South
Strategic Health Authority
(Including Coventry, Warwickshire, Herefordshire & Worcester)

HEREFORD & WORCESTER
LOCAL RESEARCH ETHICS COMMITTEE

Chairman:
Mrs Carol Thompson B.Sc.

Please reply to

Isaac Maddox House
Shrub Hill Road
Worcester
WR4 9RW
Direct Line Number: (01905) 760091
Direct Fax Line: (01905) 6170
E-mail kath.garrad@sworcs-pct.nhs.uk

Ms C David
Principal Researcher, Clinical Psychologist in Training
Worcestershire Specialist Children's Services
The Pear Tree Centre, Child & Family Therapy Service
Smallwood House
Church Green West
Redditch B97 4BD

Our Reference: KG/
Your Reference:

08 August 2003

Dear Ms David

LREC: 03/45 – Why do children have accidents

Local researchers: Ms C David, Mr R Morrell, Dr C Tinline, Dr E Knight, Dr B Williams, Dr D Giles

Papers reviewed:

- ***LREC application form, received 30 April 2003***
- ***Letter dated 17 February 2003 from The University of Warwick regarding indemnity insurance on behalf of Claire David***
- ***Research Protocol***
- ***CV for Ms C David***
- ***Participant Information Sheet, version 2, 09.07.03***
- ***Questionnaires***
- ***Consent Form***
- ***Letter to parents***
- ***Follow up letter to parents***
- ***Letter acknowledging receipt of questionnaire***

Thank you for your letter and enclosures of 31 July 2003, received on 5 August, and for the amendments concerning the above study.

I write to confirm that, with the additional information now received, the Chair, acting on behalf of Hereford and Worcester Local Research Ethics Committee, has no objection to the above research proceeding, so long as the following matters are taken into account, and providing the following amendments are made:

❖ **THIS APPLICATION HAS BEEN GIVEN A UNIQUE REFERENCE NUMBER. PLEASE QUOTE THIS ON ALL CORRESPONDENCE.**

Conditions of approval

- Satisfactory Indemnity arrangements being in place.
- You will no doubt realise that, whilst The Committee has no objection to the study on ethical grounds, it is still necessary for you to obtain approval from the relevant Clinical Directors and/or bodies in which the work will be carried out.
- In keeping with the Committee's protocol and in line with the Good Clinical Practice guidelines, would you please inform us of the results of the study when it is completed. If this is not within twelve months, please inform us of progress on an annual basis.
- Active approval is required until the study has been completed.
- Compliance with the Data Protection Act.
- The Committee would wish to be kept informed of serious adverse events, amendments and any other modifications to patient information sheets and patient consent forms.

ICH GCP Compliance

Worcestershire LREC is fully compliant with the International Committee on Harmonisation/Good Clinical Practice (ICH) Guidelines for the Conduct of Trials Involving the Participation of Human Subjects as they relate to the responsibilities, composition, function, operations and records of an Independent Ethics Committee/Independent Review Board. To this end it undertakes to adhere as far as is consistent with its Terms of Reference, to the relevant clauses of the ICH Harmonised Tripartite Guideline for Good Clinical Practice, adopted by the Commission of the European Union on 17th January 1997.

LREC Membership

Please find attached, for information, a list of members of the LREC.

Legal and Regulatory Requirements

It remains your responsibility to ensure in the subsequent collection, storage or use of data or research sample you are not contravening the legal or regulatory requirements of any part of the UK in which the research material is collected, stored or used. If data is transferred outside the UK you should be aware of the requirements of the Data Protection Act 1998

As referred to on page 1, the following amendments need to be made to the paperwork and submitted for our

- Parent/Guardian letter:
  - Please delete your name from this letter.
  - Add version 2, August 2003

- Reminder letter:
  - As above.
  - NB, As Mr Morrell is sending out the reminders, then providing he has matched the returned questionnaires to his original numbered address list the reminders need only go to those numbers who have not responded.

- Information Sheet:
  - Paragraph 5, last line, change to 'that another family can be invited to take part'.
  - Paragraphs 1, 5, 6, 9, 10, 11 and the last two lines refer to the researcher; to me; I am; I will; Claire David; Mr Morrell; Mr Morrell; to me; to me. These references need to be logical, the main point is that the researcher should not be unaware of the names of patients until the questionnaires have been returned as this is in effect giving consent for participation.

Please make alterations and renumber version 3; August 2003.

Regarding the Data Protect Act, please ensure storage of material also complies.

Please re-submit the above three documents for final checking.

Please forward a copy of the amended documents.

If the project continues after THREE YEARS from the date of this letter Hereford and Worcester Local Research Ethics Committee will wish to re-examine it.

Would you please communicate this approval immediately to all members of the investigating team and, where appropriate, the sponsoring commercial company.

Yours sincerely

Kath Garrad

Kath Garrad
Administrator, Hereford and Worcester Local Research Ethics Committee

Enc: List of LREC members

Appendix D: Invitation Letter from Consultant to Parents

Worcestershire NHS
Acute Hospitals NHS Trust

Alexandra Hospital
Woodrow Drive
Redditch
Worcestershire
B98 7UB

Tel: 01527 503030
Central fax: 01527 517432
Safehaven fax: 01527 512034

Date as Postmark

Dear Parent/Guardian

Further to your child's visit to the Accident and Emergency Department, we are writing to invite you to take part in a research study looking at why children have accidents, run in conjunction with The Pear Tree Centre Child and Adolescent Mental Health Service, Redditch. The study is being conducted by Claire David, with my support as Consultant in the Accident and Emergency Department of the Alexandra Hospital, Redditch.

Claire David is a clinical psychologist in training working towards her Doctorate in Clinical Psychology at the universities of Coventry and Warwick. This study will form the thesis component of this qualification. Enclosed with this letter is an Information Sheet, which details the reasons why the study is being conducted and what you would be asked to do. Please read the information carefully. If you require help in reading the information or completing the forms, for example, if English is not your first language, please feel free to ask a friend or relative to help you. Your decision to take part, or otherwise, will not affect the standard of care you receive The information sheet explains what to do once you have made your decision

Thank you for your time.

Yours sincerely

Mr Richard Morrell
Consultant
Accident & Emergency Department

Appendix D: Information Sheet for Parents

Worcestershire NHS
Acute Hospitals NHS Trust

Title of the study: **Why do children have accidents?**

Alexandra Hospital
Woodrow Drive
Redditch
Worcestershire
B98 7UB

Tel: 01527 503030
Central fax: 01527 517432
Safehaven fax: 01527 512034

INFORMATION SHEET

You are being asked to take part in a research study. The information given below will outline why the research is being done and what will be involved. Please read this information and discuss it with others if you wish. If there is anything that you do not understand and you would like further information, please contact the principal researcher whose details are given over the page. If you require help to read this information, for example, if English is not your first language, please feel free to ask a friend or relative to help you. Take time to decide whether you wish to take part.

Thank you for reading this.

What is the purpose of the study?
Childhood accidents account for a large number of injuries, and sometimes death, to children in the UK and throughout the world. If we are to reduce this number, we need a better understanding of some of the factors, which might lead to accidents. Some of those factors might be particular behavioural characteristics or combinations of such characteristics. The aim of the study is to explore the relationship between children's behaviour and frequency and type of accidents. If you agree to take part, you will be asked to complete three questionnaires, which will take approximately ½ an hour.

Why have I been chosen?
You have been chosen as one of the families of children who have attended the Accident and Emergency Department of Alexandra Hospital, Redditch in the last 12 months. We intend to contact around 500 families who have attended A&E for a variety of reasons.

Do I have to take part?
It is up to you to decide whether or not to take part. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw, or not to take part, will not affect the standard of care you receive.

What will happen to me if I take part?/What do I have to do?
As mentioned above, you will be asked to complete three questionnaires in relation to your child who most recently attended A&E at the Alexandra Hospital, Redditch. One questionnaire will ask for some background information about your child, his/her medical and accident history and his/her family. The second and third questionnaires are rating scales, which ask to what extent different behavioural characteristics are apparent in your child. The characteristics examined are present in most children to a lesser or greater degree. The parent/carer who feels they know the child best or spends most time with the child should complete the questionnaires. These questionnaires have been enclosed with this information sheet in order to help you make an informed decision. If you choose not to take part, please return the unused questionnaires to the principal researcher so that another family can be invited to take part.

What are the possible disadvantages/risks of taking part?
The questionnaires you will be asked to complete are not diagnostic instruments and the researcher will make no diagnoses from the answers you give. However, they are used by psychologists to inform their assessments of children who have a range of difficulties, such as anxiety, hyperactivity, social difficulties. In the unlikely event that the researcher is concerned and feels you should seek further advice, you will be contacted by letter, advising you to speak to your GP in the first instance.

What are the possible benefits of taking part?
It is unlikely that there would be any particular benefits for your child from taking part in this study. It is envisaged that the results will go towards informing the way parents and professionals can reduce the number of accidents that children have.

Will my taking part in this study be kept confidential?
All information that is collected about you and your child during the course of the research will be kept strictly confidential, accessed only by those directly involved in the research study

Information from the study will **not** be held in your child's medical notes.

What will happen to the results of the research study?
Claire David (principal researcher) is currently working towards her Doctorate in Clinical Psychology at the Universities of Coventry and Warwick. Results from all returned questionnaires will be included in the written report to be submitted for the Doctoral thesis. This will also be submitted for publication to a suitable psychological journal. Personal details will be changed or omitted in order to maintain confidentiality

Who is organising and funding the research?
The research team consists of Claire David (Principal Researcher, Clinical Psychologist in Training), with supervision from Mr Morrell (A&E consultant, Alexandra Hospital, Redditch), Dr Bryn Williams (clinical psychologist) and Dr Colin Tinline (Locum Consultant Child and Adolescent Psychiatrist) from the Pear Tree Centre in Redditch and Dr Eve Knight (lecturer/practitioner in clinical psychology), with statistical support from Dr David Giles (research tutor). The principal researcher, will not receive payment for conducting this research over and above her usual salary, other than to cover necessary expenses, such as travel.

Who has reviewed this study?
The initial idea for this study came from Dr Colin Tinline, with support from Mr Richard Morrell. The details of the study have been discussed with the supervisors listed above. In addition, ethical approval for the research has been sought from the Hereford and Worcester Local Research Ethics Committee, the Research and Development Committee for Worcestershire Acute Hospitals NHS Trust and Coventry University Ethics Committee

Who can I contact for further information?

If you have any queries, you can contact:

Claire David or Eve Knight
c/o Doctorate Course in Clinical Psychology
School of Health & Social Sciences
Coventry University
Priory Street
COVENTRY CV1 5FB
02476-887806

Or

Bryn Williams
Child and Adolescent Mental Health Services
The Pear Tree Centre
Smallwood House
Church Green West
REDDITCH B97 4BD
01527-488650

Independent Advice

If you would like independent advice about taking part in the study, you can contact the Community Health Council at:

Burgage Lodge, 184 Franche Road, Kidderminster, Worcs, DY11 5DA – telephone: 01562 69243 or

Red House, Church Green West, Redditch, B97 4BG – telephone: 01527 61375 or

Severn House, 10 The Moors, Worcester, WR1 3EE – telephone: 01905 22715

Thank you for taking the time to read this information.

If you **wish to take part**, please complete the questionnaires and return them to Claire David (Principal Researcher) in the enclosed stamped addressed envelope
If you **do not wish to take part**, please return unused questionnaires to Claire David (Principal Researcher) in the enclosed stamped addressed envelope

Appendix E: Questionnaire Pack

Background Information Questionnaire

Conners' Parent Rating Scale-Revised (Short Form)

Child Behavior Checklist

APPENDIX E QUESTIONNAIRE PACK.

NOT SUITABLE QUALITY FOR FILMING.

PLEASE APPLY DIRECT TO UNIVERSITY.

Appendix E: Subscales for the Child Behavior Checklist - Parent Form

15 subscales:

Syndrome scales

- Withdrawn
- Somatic complaints
- Anxious/depressed
- Social problems
- Thought problems
- Attention problems
- Aggressive behaviour
- Delinquent behaviour

Internalizing

Externalizing

Total problems

Competence scales

- Activities
- Social
- School

Total competence

Appendix F: Follow-Up Letter to Parents

Worcestershire NHS
Acute Hospitals NHS Trust

Alexandra Hospital
Woodrow Drive
Redditch
Worcestershire
B98 7UB

Tel: 01527 503030
Central fax: 01527 517432
Safehaven fax: 01527 512034

Date as postmark

Dear Parent/Guardian

Re: Research Study – Why do children have accidents?

We wrote to you in October asking if you would be willing to take part in a research study looking at why children have accidents. Please ignore this letter if you have already replied and thank you for your time. If you have not yet replied, but wish to take part, it is not too late and we would be grateful if you could complete and return your questionnaires to us. If you did not receive our initial letter and would like to know more, please contact Claire David c/o Doctorate Course in Clinical Psychology, School of Health & Social Sciences, Coventry University, Priory Street, Coventry, CV1 5FB, and she will send you the relevant information. If you have decided not to take part, but have not returned your unused questionnaires, please do so, so that we may invite another family to take part in the study.

Thank you for your time

Yours sincerely

Mr Richard Morrell
Consultant
Accident & Emergency Department

Appendix G: Consent Form for Head Teacher

Programme Director
Doctorate Course in Clinical Psychology
Cushw[illegible]
BA (Hons) MSc PhD AFBPS CPsychol (Clin Foren)

School of Health and Social Sciences
[illegible] University
[illegible] Street Coventry [illegible]
Telephone [illegible] 7688 8[illegible]28

WARWICK

COVENTRY UNIVERSITY

Consent Form

Title of project: Why do children have accidents?
Name of researcher: Claire David

I confirm that I have read and understand the information sheet attached (dated March 2004, Version 1) for the above study and have had the opportunity to ask questions.

I understand that participation is voluntary and that the children are free to withdraw at any time, without giving any reason.

I agree to allow the children to take part in the above study.

Name .... Signature .... Date ....

Relationship to children taking part in study ....

Researcher .... Signature .... Date ....

Appendix G: Consent Form for Children

Programme Director
Doctorate Course in Clinical Psychology
Dr Dawn Cushway
BA (Hons) MSc PhD AFBPS CPsychol (Clin Foren)
School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8400

THE UNIVERSITY OF WARWICK

COVENTRY UNIVERSITY

Date

Consent Form

Title of project: Why do children have accidents?
Name of researcher: Claire David

Claire has gone through the information sheet (dated March 2004, Version 1) with me.

I have had a chance to ask Claire questions about the project.

I know that I do not have to take part in the group and I can leave at any time.

I agree to take part in this project.

Name ..... Signature ..... Date .....

Researcher ..... Signature ..... Date .....

Appendix H: Information Sheet for Head Teacher

Programme Director
Doctorate Course in Clinical Psychology
Cushwa
(Hons) MSc PhD AFBPS CPsychol (Clin Foren)

School of Health and Social Sciences
University
Street Coventry 5FB
Telephone 024 7688 8328
8300

WARWICK

COVENTRY UNIVERSITY

Our ref

Title of the study: **Why do children have accidents?**

INFORMATION SHEET

Children in your school have been asked to take part in a research study. The information given below will outline why the research is being done and what will be involved. If there is anything that you do not understand or you would like further information, please speak to Claire David.

What is the purpose of the study?
Childhood accidents account for a large number of injuries, and sometimes death, to children in the UK and throughout the world. If we are to reduce this number, we need a better understanding of some of the factors, which might lead to accidents. Research suggests that a number of factors are involved in accidental injury to children, including behaviour, presence of peers, presence of supervisors, experience, age and gender. The aim of this study is to explore what children themselves think are the relevant factors in accidental injury.

What will the children be required to do?
The children will be asked to take part in a 45-minute focus group discussion, with peers of the same age. Claire David will facilitate this group and will prompt discussion with a number of questions, which address some of the factors that are thought to be related to the incidence of children's accidental injury. She will also ask the children to think about their own accidents and what factors they think were important in those instances. The discussion will be audio-taped for the purposes of analysis later. All information that is collected will be kept strictly confidential, accessed only by those directly involved in the research study

Do the children have to take part?
Participation in the group is voluntary. After outlining the procedure and ground rules, Claire will ask if anybody wants to change their mind about being in the group.

What are the possible disadvantages/risks of taking part?
It is not anticipated that there are any risks or disadvantages to taking part.

What are the possible benefits of taking part?
It is unlikely that there would be any particular benefits from taking part in this study. It is envisaged that the results will further our understanding of why children have accidents.

What will happen to the results of the research study?
Dialogue from the discussion will be analysed and results will be included in the written report to be submitted for Claire's Doctoral thesis. This will also be submitted for publication to a suitable psychological journal. Personal details will be changed or omitted in order to maintain confidentiality.

Who is organising and funding the research?
Claire David (Clinical Psychologist in Training) is the Principal Researcher, and is supervised by Dr Bryn Williams (Clinical Psychologist), and Dr Eve Knight (Lecturer/Practitioner in Clinical Psychology), with statistical support from Dr David Giles (Research Tutor). The principal researcher, will not receive payment for conducting this research over and above her usual salary, other than to cover necessary expenses, such as travel.

Dean of School of Health and Social Sciences ... CV1 5FB
Chair of Department of Psychology ... CV4 7AL

Appendix H: Information Sheet for Head Teacher

Who has reviewed this study?

The details of the study have been discussed with the supervisors listed above. In addition, ethical approval for the research has been obtained from Coventry University School Ethics Committee.

Who can I contact for further information?

Claire David or Eve Knight
c/o Doctorate Course in Clinical Psychology
School of Health & Social Sciences
Coventry University, Priory Street
COVENTRY CV1 5FB
02476-887806

Or

Bryn Williams
Child and Adolescent Mental Health Services
The Pear Tree Centre, Smallwood House
Church Green West
REDDITCH B97 4BD
01527-488650

Appendix H: Information Sheet for Children

Programme Director
Doctorate Course in Clinical Psychology
Dr Delia Cushway
BA (Hons) MSc PhD AFBPS CPsychol (Clin Foren)
School of Health and Social Sciences
Coventry University
Priory Street Coventry CV1 5FB
Telephone 024 7688 8328
Fax 024 7688 8300

THE UNIVERSITY OF WARWICK

COVENTRY UNIVERSITY

INFORMATION SHEET

Title of the project: Why do children have accidents?

You have been asked to take part in a group to talk about why you think children have accidents.

This information tells you what you will be asked to do.

Why have I been asked to take part?

Claire David is training to be a Clinical Psychologist. A Clinical Psychologist is a bit like a Doctor, but they are interested in thoughts and behaviour. As part of Claire's training, she is writing a project about why children have accidents. She would like to know what you think.

What will I have to do?

You will be part of a small group, with other children of your age. The group will last about 45 minutes. Claire will ask questions about why you think children have accidents. She will also ask you to think about accidents that you have had and why you think you had those accidents.

The conversations will be tape-recorded, so that Claire can write about them later.

You don't have to talk about anything that you don't want to talk about.

You don't have to take part in this group if you don't want to.

What will Claire do with the things that we say?

Claire will write a report about the ideas you talk about. She will hand this in to be marked at University. She will also send it to be published with other projects in libraries and universities.

When Claire talks about, or writes about, what has been said in the group, she will not use your names, so other people will not know who has said what.

What do I do if I have any questions?

You can ask Claire, or if you think of something later, you can speak to Mr Garner.

March 2004. Version 1

Appendix I: Ethical Approval for Empirical Research Paper 2

COVENTRY UNIVERSITY - SCHOOL OF HEALTH AND SOCIAL SCIENCES

STUDENT SUBMISSION TO SCHOOL RESEARCH ETHICS COMMITTEE

1. Student's name: CLAIRE DAVID 2. Course: DCLINPSYCH
(BLOCK CAPITALS)

3. Title of project:
WHY DO CHILDREN HAVE ACCIDENTS?

4. Summary of the project in jargon-free language and in not more than 120 words:

Sample: 6 - 8 CHILDREN AGED 10-11 YEARS

Research site: WALKWOOD MIDDLE SCHOOL, REDDITCH

Design (eg experimental):

Methods of data collection:
FOCUS GROUP DISCUSSION - THE REASONS CHILDREN THINK FOR WHY ACCIDENTS HAPPEN TO CHILDREN PARTICULARLY FOCUSING ON THOSE WHERE THE CHILD IS AN ACTIVE PARTICIPANT (eg PLAYING) RATHER THAN PASSIVE (eg PASSENGER IN A CAR)

Access arrangements (if applicable):

5.	Will the project involve ~~patients~~(clients) ~~and/or patient~~(client) data?	Yes [✓]	No [ ]
6.	Will any invasive procedures be employed in the research?	Yes [ ]	No [✓]
7.	Is there a risk of physical discomfort to those taking part? } None anticipated	Yes [ ]	No [✓]
8.	Is there a risk of psychological distress to those taking part? }	Yes [ ]	No [✓]
9.	Will specific ~~individuals or institutions~~ (other than the University) be identifiable through data published or otherwise made available? ONLY WITH CONSENT	Yes [ ]	No [ ]
10.	Is it intended to seek informed consent from each participant (or from his or her parent or guardian)? FROM HEAD TEACHER	Yes [ ]	No [ ]

Student's signature: C. DAVID Supervisor's signature: Date: 21/3/04

FOR COMMITTEE USE:

Immediate approval	[✓]	Referral to full School Committee	[ ]
Referral to local Hospital Ethics Committee	[ ]	Decision pending receipt of further information (specify below)	[ ]

Committee Member's signature: David Giles Date: 23/3/04

Appendix J: Focus Group Questions

1. Tell us your first name and how old you are.
2. What kinds of accidents do children have?
3. Think back to the last time you had an accident, what do you think the reasons were for you having that accident?
4. Would you say that anyone was to blame for the accident?
5. What did you learn that might mean the accident wouldn't happen again if you were in that situation?
6. Do you think some children have more accidents than others?
7. What kinds of things lead to children having accidents?
8. What effect does a child's behaviour have on whether they'll have an accident or not?
9. How might what sort of mood the child is in effect whether they have accidents?
10. How do you think experience helps in not having accidents?
11. How is it different if friends are around?
12. How is it different if parents or a teacher is around?
13. What about age? What difference does that make to why children have accidents?
14. What about whether you're a boy or a girl? What difference does that make to why children have accidents?
15. Have we missed anything?

Appendix K: Coding Frame

CODING FRAME

Coding unit = each speaker in turn (not group facilitator) and then each sentence within each unit.

Codes should be exclusive and exhaustive.

Categories

1. Own Behaviour

1a Own behaviour: Active

Descriptions of behaviour or activities that the child engages in that has or could cause an accident to the self.

'[indistinct] silly stuff.'

'Like when you're walking or running or something and you like, somebody's legs are out like that and you trip over them or leg of a chair or something.'

1b Own behaviour: Passive

Lack of attention or awareness of the environment, or carelessness, leading to potential for accidental injury.

'When you're not looking around.'

1c Copying/imitating others

Comments relating to copying, imitating or emulating the behaviour of others.

'They might copy stupid things that their parents do.'

2. Other's behaviour

Behaviour of one person that could lead to accident or injury to another person.

'Er, people break their arms from falling or being pushed.'

'My sister was going down the slide and I accidentally ran into it and it moved and she fell off.'

3. Mood/feelings

Any description of how mood or feelings could lead a child to have an accident or to behave in a way which might lead to accidental injury.

'If they're angry [indistinct]'

'If you're sad and you're crying you might [indistinct] you might slip up.'

4. **Own previous experiences**
Any comments relating to the influence of previous experience on occurrence of injury-risk or injury-avoidance behaviours. This would include comments regarding learning from past experiences and ideas for preventing accidents.

'When you've done something before and you try and do it again, and it goes wrong, you could hurt yourself.'

5. **Influence of peers**
5a Pressure/bullying
Comments which suggest that the child feels pressured into engaging in a particular activity, or behaving in such a way, that could lead to injury. Also includes fighting.

'One is, like, your friends say they won't be your friend if you don't do something.'

5b Supportive
Comments that suggest that friends discourage risky behaviour or encourage avoidance behaviour.

'Sometimes your friends can watch out for you and tell you not to do something because it's silly.'

'[Indistinct] climbing up a tree and you fall down, your friends [indistinct] try and catch you [indistinct].'

6. **Influence of parents/teachers/other adults**
Comments that indicate what role parents and teachers have in influencing the likelihood that a child will/will not sustain an accidental injury. Also to include occasions when the child does not do what they are told.

'Now she doesn't really tell me, I just do what I want.'

'Because they sometimes, er, stop you from doing things, er like silly things, and you if you do it around them they'll tell you off.'

'Erm, they would stop you and tell the other person off for doing it.'

7. **Age**
Comments regarding whether the risk factors for accidental injury vary with age. Also comments relating to whether experience and knowledge influence the likelihood of engaging in accident-risk behaviours.

'I have more accidents when I was little than I do now.'

'As you get older, you're more aware where, you're more aware of things that could happen to you.'

8. Gender

8a Individual differences

Comments relating to the differences or similarities between boys and girls in factors that put them at risk for accidental injury.

'And boys are tougher, so (...).'

'I think girls are more likely to show emotion when they get hurt because they're softer.'

'I think it just depends on the personality because some girls are tough, as well as boys, but some boys are really weak as well as girls.'

8b Deliberate acts

Comments relating to deliberate acts which either gender engage in which put themselves or others at risk for injury.

'Boys, they tend to hurt girls more, because (...)'

9. Environmental factors

Physical factors within the environment that put individuals at risk for accidental injury if they come into contact with those factors.

'Well I was just standing by the door and it was windy, I got my finger stuck in the door.'

'When the kitchen floor's all wet and you run and you slip over.'

90. Other accident-related comments

Any other discussion regarding accidental injury, including accidents and other potential causal factors not included elsewhere.

'They fall over a lot.'

'Yeah, when she sees blood.'

'I've got one but it's not like with friends.'

'And other people can do it but other people can't.'

100. Irrelevant comments or responses

Topics not related to accidental injury. Also incidental comments and encouragers.

'Yeah.'

'[indistinct]'

'I can't say really.'

'Sometimes the teachers are the ones that are, like, wrong.'

Appendix L: Transcript Key

- (hyphen) at end of word used when the word was cut off abruptly.
- (...) used when the speaker trails off.
- [ ] (square brackets) indicates comments by the transcriber, such as when it is difficult to hear what was said. Also encouragers and other interactional elements, for example [shakes head], [laughs].
- CI... (3 dots after two letters) indicates a person's name.

(Adapted from transcription conventions used by Wilkinson, 2003)

Appendix L: Transcript of Focus Group Discussion

Date: 31 March 2004

Present:

Facilitator	Cl
Assistant	Te
Head Teacher	Ht

Ae (male)	aged 11	Ja (female)	aged 11
Pa (male)	aged 11	Ka (female)	aged 11
Ch (male)	aged 11	Na (female)	aged 11
Mi (male)	aged 10	Al (female)	aged 10

Speaker	Line No. and Transcript
Ae	1. So, what sort of accidents?
Cl	2. Well, that's the first question, well, it's the second question. 3. But the first question, can we go round and find out what your names are and how old you are? 4. [work round group obtaining names and ages] 5. OK, so we've done the names, so you mentioned about what kinds of accidents, well my next question is what kind of accidents do children have?
Ja	6. They fall over a lot.
Cl	7. They fall over a lot. OK, what else?
Al	8. I smashed my mum's teapot.
Cl	9. You smashed your mum's teapot, OK.
Ka	10. Er, people break their arms from falling or being pushed.
Cl	11. Yeah, they break their arms from falling or being pushed.
Ch	12. [indistinct] silly stuff
Cl	13. Like what, can you think of [indistinct]
Ch	14. Standing on a football with no feet on the ground.
Cl	15. Right, yeah standing on a football with no feet on the ground, yep.
Pa	16. I was by the island, when I was about 2 years old and it fell on my foot.
Cl	17. Right.
Pa	18. I've still got the mark.
Cl	19. Right, something fell on your foot and that was an accident.
Ae	20. Sometimes people just wet themselves.
Cl	21. Yeah, that's an accident, yeah, yeah. [Turns to Na] have you got any ideas?
Na	22. [Shakes head]
Cl	23. No? 24. So we've got lots of different kinds of accidents that children have. So some of you have mentioned accidents that you've had, so think, I want you all to think back to the last time you had an accident, something where you, if we just think of particular kinds of accidents, so perhaps where you accidentally hurt yourself, or you were in an accident where you got a little bit hurt. 25. What do think the reasons were for you having that accident?

Pa	26.	When you're not looking around.
Cl	27.	When you're not looking around, that's a good one.
Pa	28.	And carelessness.
Cl	29.	Carelessness, that's a good word.
Mi	30.	When my pencil case [indistinct]
Cl	31.	Right, so you didn't see that it had got broken?
Mi	32.	No.
Cl	33.	OK.
Al	34.	Not doing what you're told.
Cl	35.	Right, so can you think of a time when that happened to you?
Al	36.	Erm, I got told not stand by the door.
Cl	37.	And what happened?
Al	38.	The door shut on me.
Cl	39.	Right.
Al	40.	(Ja...) got her thumb caught in the door once when [indistinct] told her not to.
Ja	41.	[Indistinct]
Cl	42.	Can you speak loudly.
Ja	43.	Well I was just standing by the door and it was windy, I got my finger stuck in the door.
Cl	44.	When the door blew shut you got your finger stuck.
Ja	45.	Yeah.
Cl	46. 47.	I don't know. What about the rest of you, can you think back to an accident that you've had, maybe you only hurt yourself a little bit, or maybe you didn't hurt yourself at all, and what happened.
Pa	48.	In year 5, I got pushed down the stairs.
Cl	49.	You got pushed down the stairs?
Ae	50.	[Indistinct] Everybody in year 5 was going down the stairs [indistinct]
Cl	51.	Right.
Pa	52.	[Indistinct] I had to go to hospital.
Cl	53.	Did you? Because you got hurt?
Pa	54.	Well no I didn't get hurt.
Cl	55.	You didn't get hurt. That was lucky then.
Pa	56.	But I thought I broke my leg.
Ka	57.	People have pushed you over and [indistinct] by accident.
Cl	58.	Maybe, yeah.
Ja	59.	I was playing with [indistinct] my friend and he accidentally bashed it on my finger.
Cl	60.	Right, OK
Ch	61.	I was riding on a go-cart and I was riding one-handed so I caught [indistinct] and got run over by it.
Cl	62.	So it flipped over and ran over you?
Ch	63.	Yeah.
Cl	64.	I don't know.
Mi	65.	We were all going down a hill and I fell off my scooter and (hurt my foot)
Cl	66.	Right and that hurt your foot.
Al	67.	When we're playing British Bulldogs and when you stampede and everyone runs into you.

Cl	68.	Right, and that can hurt you by accident can it?
Ka	69.	I ran into the lounge and fractured my brother's nose.
Cl	70.	How did you manage that?
Ka	71.	I head butted him.
Cl	72.	Right
All	73.	[Laughs]
Cl	74.	Yeah, that would fracture his nose.
	75.	[Turns to Na...] Can you think of a time when you've had an accident?
Na	76.	Yeah, I was looking at my mum and I bashed into the lamppost.
Cl	77.	So you weren't looking where you were going?
Na	78.	No
Cl	79.	You were looking at your mum instead?
Na	80.	[Nods].
Cl	81.	I don't know.
Pa	82.	There was another accident, it wasn't with me, but I had a penknife in the car. I left it in the front seat where there was a little pocket and I told my sister not to mess about with it, but she got the sharp knife out of it.
Cl	83.	Right
Pa	84.	She got it out like that and she, I didn't notice, but then I saw blood spurting everywhere.
Cl	85.	So she'd got, how old is she?
Pa	86.	She's 4, it was just spurting everywhere.
Cl	87.	I don't know.
Ae	88.	[Indistinct] and there's these steps and I was running up the steps and then I went, tripped over and I stubbed my toe and hurt it.
Cl	89.	Right, so you went running up the steps and stubbed your toe.
	90.	I don't know.
Al	91.	In my dad's old house, he's moving to France now, but we had like a chair there and a chair there and I was swinging on them and I fell off and I made my nose bleed [indistinct].
Cl	92.	I don't know.
Ch	93.	My sister was going down the slide and I accidentally ran into it and it moved and she fell off.
Cl	94.	Right, so she was going down, you ran into it and she fell off.
	95.	I don't know.
Ja	96.	I was climbing a lamppost and I nearly fell off from the top.
Cl	97.	You've told me about lots of different accidents that you've had, but would you say that, thinking back to some of those that you've just mentioned, who would you say was to blame in different cases?
Ja	98.	Me.
Cl	99.	You were to blame?
	100.	OK.
Ka	101.	Other people.
Cl	102.	Other people?
	103.	So, remind me of the one that you (...).
Ka	104.	Fractured my brother's nose.
Cl	105.	Oh you fractured (...), so who was to blame then?
Ka	106.	My brother, he ran into me.
Cl	107.	Right, OK. Pa did you have something?

Pa	108.	Yeah, when, somebody got pushed and pushed me.
Cl	109.	So it wasn't, you're saying it wasn't your fault [indistinct]?
Pa	110.	No.
Cl	111.	OK, it was someone else's.
Ch	112.	I hurt my thumb, burnt my hand on a teapot.
Cl	113.	Yeah.
Ch	114.	[Indistinct] because it slipped on the work top.
Cl	115.	So would you say anyone was to blame for that?
Ch	116.	No, no one.
Cl	117.	Right, OK.
Mi	118.	How the pencil case was made [indistinct].
Cl	119.	So it was the people that made the pencil case.
	120.	Anyone else? [pause]
	121.	Excellent, OK.
	122.	You're doing ever so well, I'm really impressed with the way you're all taking it in turns to speak, it's really good.
	123.	So, the next one.
	124.	What kind of things did you learn from the accidents that you've talked about, so that you perhaps wouldn't do it again.
Ja	125.	Well I wouldn't do it again because sometimes I really hurt myself and I don't want to because I don't listen to my mum sometimes [indistinct].
Cl	126.	So what might you do differently.
Ja	127.	Erm, I might listen to my mum sometimes now.
Cl	128.	Right.
Al	129.	When I like my mum tells me because I was playing, like using the iron to iron some clothes because she asked me to iron some and she told me to put it down, but I wouldn't and I burnt my hand.
Cl	130.	So what would you do differently?
Al	131.	Put the iron down.
Ka	132.	Walk round the house instead of running [indistinct].
Cl	133.	That's a good one.
Ch	134.	Don't copy things that I see on TV.
All	135.	[Laughs].
Cl	136.	So what were you copying then to have your accident?
Ch	137.	Late night stunt programmes.
Cl	138.	In your go-cart.
Ch	139.	Yeah, and jumping off things.
Cl	140.	Right, so you wouldn't copy things.
Mi	141.	Look in my bag to get my pencil case out.
Cl	142.	So you didn't look before, is that what you're saying?
Mi	143.	Yeah.
Cl	144.	I see.
	145.	What about you two [turns to Pa... and Ae...], anything you would do differently?
Pa	146.	[Shakes head]
Cl	147.	No?
	148.	OK, great.
	149.	Right then, so my next question.
	150.	Do you think that some children have more accidents than others?

Ch	151.	When you're little, you're not so much aware of what's going on around you sort of thing, you do more silly things [indistinct] when you get older you don't do those things because you know more about what hurts.
Cl	152.	I think that's really good.
	153.	I think that's really good.
	154.	So when you're little, you're saying that you don't know what's going on and you learn as you get older.
Ka	155.	Some people are careless, some people watch out and check that they're on [indistinct]
Cl	156.	OK.
	157.	Anybody else, do you think some children have more accidents than others?
Al	158.	I have more accidents when I was little than I do now.
Cl	159.	Right.
Al	160.	Because I fell over quite a lot when I was little.
Cl	161.	So you had more when you were little than you do now?
Al	162.	Yeah.
Cl	163.	OK.
	164.	Anyone else?
Mi	165.	You get tougher when you're older, so it's not going to hurt as much.
Cl	166.	You think?
	167.	You get tougher as you get older?
Mi	168.	[Indistinct]
Cl	169.	Ahh, that's something to think about.
Ch	170.	As you get older, you're more aware where, you're more aware of things that could happen to you.
Cl	171.	OK, that's a good one.
	172.	Ae..., did you have one as well?
Ae	173.	Yeah, my sister, she [indistinct] she [indistinct] a bit accident prone because I think she's a bit careless sometimes.
Cl	174.	So you think your sister's a bit careless.
Ae	175.	Yeah, like, she'll go up a ladder [indistinct] and then she [indistinct] slipped and fell.
Cl	176.	Right
Ae	177.	[Indistinct]
Cl	178.	And is she older or younger than you?
Ae	179.	Younger.
Cl	180.	Younger than you.
Ja	181.	I've had more accidents now than I did when I was little, because I think that I can do things that I can't and then I know that I can't because then I go and hurt myself.
Cl	182.	But you don't know that before you go and have a go?
Ja	183.	No.
	184.	I see.
Ka	185.	I have more when I'm older because my mum used to tell me what to do when I was little, so she told me if it was going to hurt me.
Cl	186.	Right, so now (...)
Ka	187.	Now she doesn't really tell me, I just do what I want.
Cl	188.	Oh, right.

Ch	189.	When you're little and you hurt yourself, by the time you get older you've learnt from your mistakes.
Cl	190.	You're coming out with some really good ideas.
	191.	[Indistinct]
	192.	OK, so what kinds of things, and I think you've mentioned some already, but see if you can come up with any more, what kinds of things lead to children having accidents?
	193.	[Pause] Ch...
Ch	194.	Things that are hot around the house and can burn you.
Cl	195.	OK, yeah, hot things.
	196.	[Indistinct]
Na	197.	[Shakes head]
Mi	198.	Electrical things.
Cl	199.	Electrical things.
Ja	200.	Not looking.
Cl	201.	Not looking.
Al	202.	Like when you're walking or running or something and you like, somebody's legs are out like that and you trip over them or leg of a chair or something.
Cl	203.	Right, so when you trip over something when you're running?
Al	204.	Yeah.
Cl	205.	OK. Ka... did you have one?
Ch	206.	[Indistinct]
Cl	207.	Did you have one Pa...?
Pa	208.	[Shakes head]
Cl	209.	Ae(...)?
Ae	210.	[Shakes head]
Cl	211.	No?
Mi	212.	When you're not looking.
Cl	213.	When you're not looking, yeah, that's a good one.
	214.	Is there anything else that might lead to children having accidents?
Ja	215.	Not listening to people.
Cl	216.	Not listening to people
Ka	217.	Things that are unsafe [indistinct] somewhere.
Cl	218.	That's a good one, yeah.
Al	219.	When like, sometimes, when you fall out with your friends and you call them names then call each other names and all that and then the teacher might find out and you could get into trouble.
Cl	220.	You could get into trouble, yeah.
	221.	Good one.
	222.	Any others?
Ja	223.	You could start a fight [indistinct] each other and you could start a fight [indistinct] and get hurt.
Cl	224.	So you could perhaps get hurt by accident if you were having, is that what you're saying.
Ja	225.	Well, some people start fights and even though they might not want to be in a fight, but they just feel like it at that moment.
Cl	226.	Right.
Ja	227.	And then they get hurt and they wish they never did it.

Cl	228.	Sounds as if you're saying that perhaps they don't think about it beforehand.
Ja	229.	Yeah.
Cl	230.	I see.
	231.	Did you have another one?
Mi	232.	If somebody accidentally hits you.
Cl	233.	If somebody accidentally hits you? OK.
Ch	234.	Being careless around with things that you've got that might hurt other people, so like in games with the hockey sticks you swing it round and you hurt other people.
Cl	235.	So swinging your hockey around might hurt somebody?
Al	236.	When you break somebody's tooth.
Cl	237.	How might you break somebody's tooth.
Al	238.	Well, my next door neighbour, I was learning how to do this bunny hop on his skateboard and when he tried to show me, I tried to do it and I fell off and cracked my tooth.
Cl	239.	So perhaps when you try to do tricks on a skateboard.
Al	240.	Yeah.
Cl	241.	Yeah.
	242.	All good ideas.
	243.	Did you have another one [turns to Mi...]?
Mi	244.	[Shakes head].
Cl	245.	No?
	246.	OK, so this next question then.
	247.	What about a child's behaviour, how does that effect whether they'll have accidents or not?
	248.	Mi...
Mi	249.	[Indistinct] if they're angry [indistinct]
Cl	250.	So if they're ang-
Mi	251.	If they're angry [indistinct]
Cl	252.	So they might run more if they're angry and that might make them slip?
Mi	253.	Yeah.
Cl	254.	OK. Na... [pause] has it gone again?
	255.	Write it down if you can't get chance to speak, that might help you to remember.
	256.	Ja...
Ja	257.	If someone's, erm, naughty, they don't exactly listen to their parents 'cos they might have had a fallout and they might think they're parents are bluffing as well because if they've had a fallout the child might think that the parents' bluffing and that they should do it because their mum or dad's trying to stop them from doing it. They can do it but they can't really.
Cl	258.	So it's almost like mum and dad are tricking you into not doing it, so you do it anyway?
Ja	259.	Yeah.
Cl	260.	Is that what you mean?
Ja	261.	[Nods]
Al	262.	I think like the sillier you are the more you could hurt yourself because you could fall over if you're messing about.
	263.	Right.

Al	264.	Like run into the road or something.
	265.	That's a good one, yeah.
Ka	266.	The less careless you are the more accidents you probably have because you're not looking where you're going or anything.
Cl	267.	And if you're not looking where you're not looking where you're going you might have more, [indistinct]
Pa	268.	[Shakes head]
Cl	269.	Has it gone?
	270.	OK.
	271.	Did you have anything Ae...?
Ae	272.	[Shakes head]
Cl	273.	That's alright. Mi...? No?
Ch	274.	Some people might tell you to do things and you shouldn't always listen to them [indistinct] stupid.
Cl	275.	So somebody might tell you to do something that's stupid so you shouldn't always do things that they say. OK. Pa...
Pa	276.	I know this hasn't got anything to do with the question at the moment.
Cl	277.	That's alright.
Pa	278.	But, erm I didn't listen to my mum and dad because we went to my friend's house, they they had a swimming pool [indistinct] and I said I could swim, I was about 2 years old, I jumped in and I couldn't get up.
Cl	279.	Right.
Pa	280.	I drowned.
	281.	So then my dad just jumped in and pulled me out.
Cl	282.	So you thought you could do it.
Pa	283.	Yeah.
Cl	284.	And you were gonna have a go anyway?
Pa	285.	Yeah.
Cl	286.	I see.
Ka	287.	People who are shy might be bullied into doing something.
Cl	288.	That's a good point, people who are shy might be bullied.
Al	289.	My brother, he, when he was about 7, he went erm, jumped in, dived into the shallow part of the pool and bashed his nose.
Cl	290.	Oh right, so did he not know that it was shallow.
Al	291.	No, he knew, because he was younger then and he didn't like want to go in the deep end and he wanted to do some diving, he dived in to the small end instead of the deep end.
Cl	292.	I see.
Al	293.	And bashed his nose on the pool.
Cl	294.	I don't know.
	295.	Did you have one Ja... [pause]
	296.	Has it gone?
Ja	297.	Well my friend got drunk and she ran into the road and nearly got ran over.
Cl	298.	So she wasn't paying attention, perhaps.
Al	299.	[To Ja...] how old was she?
Ja	300.	[Indistinct]
Cl	301.	Have you got one Mi...?
Mi	302.	They might be bossy and if you're telling them what to do you might get beat up for telling them what to do.

Cl	303. Right.
Mi	304. [Indistinct]
Cl	305. And you could get hurt that way. 306. Al... do you want to come in a bit, you're disappearing around the back.
Ht	307. [Indistinct] Go on, you move right in, [indistinct]
Cl	308. So can anyone else think about how a child's behaviour can have an effect on whether they'll have an accident or not? 309. Na...
Na	310. If their parents are being nasty to them and they run away they might hurt themselves.
Cl	311. OK, yeah.
Ch	312. They might copy stupid things that their parents do.
Cl	313. They might copy stupid things that their parents do?
Mi	314. If you're sad and you're crying you might [indistinct] you might slip up.
Cl	315. If you're sad and you're crying (...)
Mi	316. Slip up.
Cl	317. Oh, your tears might go on the floor and you might (...)
Mi	318. Yeah.
Cl	319. Yeah, yeah.
Al	320. Sometimes if my, part of your family or a friend dies, then you could get really upset and feel like you want to kill yourself if you want to join them.
Cl	321. So how might that mean that the child has an accident?
Al	322. Because they could go and run in the road or something or try and drown themselves or something.
Ht	323. That's a good point.
Na	324. When the kitchen floor's all wet and you run and you slip over.
Cl	325. Right, yep, run and slip over on a wet floor.
Ka	326. You might have fallen out with your friends and be really angry and then do something silly.
Cl	327. Can you think of an example?
Ka	328. [Indistinct]
Cl	329. That's alright.
Ka	330. Run into the road or something like that.
Cl	331. Could do, yeah, so if you were angry with your friends you might do something silly. 332. [Pause] 333. OK, you've talked a bit in that about different moods and feelings that people have, can you think of anything else to do with moods and feelings that might (...)
Al	334. Sometimes if like you're really angry or something, like, or sometimes you can have like a competition who can hold their breath for the longest and you could like get hurt by that if you like want to win and then you can get really angry.
Cl	335. OK.
Al	336. And you hold your nose and (not) open your mouth.
Cl	337. So you're doing something that perhaps you shouldn't be doing and you could hurt yourself?
Al	338. Yeah.
Cl	339. That's a good one.

	340.	Ae...
Ae	341.	If you're angry sometimes you, and if want to get someone you're running really fast to try and get them and sometimes you're just concentrating on them too much and trip over [indistinct].
Cl	342.	Good point, yeah, so you're concentrating on who you're going for and you don't see what's around you.
Pa	343.	When you trip over, you've got a slight moment you think something and, when I fall over, I think 'oh no' and then as soon as I hit the ground I, I don't feel angry with myself, but I
Ae	344.	[Indistinct to Pa...]
Pa	345.	Yeah, because, well not die, like erm, I don't know, but then again, I feel silly for not looking around because I'm looking at something else.
Cl	346.	Yeah, so you sometimes feel silly.
Pa	347.	Yeah.
Cl	348.	OK.
Al	349.	I know it hasn't got anything to really do with feelings, but we've got a friend in our class called [child's name] and whenever she sees blood, she like faints.
Cl	350.	Right so, that can make her hurt herself when she faints.
Al	351.	Yeah, when she sees blood.
Cl	352.	Yeah, OK.
	353.	[To Ch...] did you have one, I thought I saw your arm go up?
Ch	354.	Um, no.
Cl	355.	No, OK.
	356.	So we've talked a bit about behaviour, we've talked a lot about different feelings, especially anger and how that can perhaps make a child have an accident.
	357.	What about experience, so what about having been in that situation before, or played that game before, how does that make a difference?
Ae	358.	When you've done something before and you try and do it again, and it goes wrong, you could hurt yourself.
Cl	359.	You could do, yes.
Ja	360.	You might think you know what's coming but then something else might happen instead, so [indistinct] 'cos I went down the stairs on a blanket and the second time I did it I fell off the side on the stairs hurt myself and I thought it would just be all the same and it wasn't.
Cl	361.	Right, that's interesting. Did you have one Mi...?
Mi	362.	[Shakes head]
Ch	363.	[Indistinct] you could really hurt yourself [indistinct] if you've done something before and it's really good and you do it again and it goes all wrong and you hurt yourself.
Cl	364.	I see.
	365.	Al...
Al	366.	If your friend's done something, like they can do something really good and it looks quite easy but, it's hard but they make it look easy, and then, because they make it look easy and you try it, then you could hurt yourself then.
Cl	367.	So if you think, if you see your friends being able to do it you think you can do as well.

Al	368.	Yeah.
Cl	369.	Ahh, that's a good point.
	370.	Anybody else got any ideas about how (...)
Mi	371.	When you're playing a game and it goes right the first time round and you want to do it again to show your friends and it just doesn't go right.
Cl	372.	Right, so it went right the first time, but the second time it didn't quite go so right?
Mi	373.	Yeah.
Al	374.	My next door neighbour he was chucking stones in the air and he chucked one at me and I had this big bruise on my nose and because really he was like messing about.
Cl	375.	So he was messing about?
Al	376.	And he was, he got really angry with us and he started chucking stones, he was intending to miss me and my brother and [indistinct] he actually caught me on the nose and he asked me why I didn't get out the way and I said it's not my fault that you chucked a stone, I'm not supposed to get out the way if you hurt me.
Cl	377.	So you don't think it was your fault that he (...)
Al	378.	No.
Cl	379.	That he was messing around and you got hurt.
Al	380.	But like, erm, he chucked it and it was my fault that I got hurt.
Cl	381.	Right and that's what he said?
Al	382.	Yeah.
Cl	383.	[To Na...] you're frantically scribbling there, have you got an idea?
Na	384.	No [indistinct].
Cl	385.	That's alright.
	386.	Alright, so you've talked a little bit about friends, but what about if friends are around, how are things different when chil(...).
Ka	387.	Sometimes your friends can watch out for you and tell you not to do something because it's silly.
Cl	388.	Sometimes they can tell you it's silly and not to do it, yeah, OK.
Ja	389.	Sometimes friends tell you to do stupid things when you don't really want to and then they start calling you a chicken so you go and do it.
Cl	390.	Right, I see.
	391.	Mi...
Mi	392.	[Indistinct] climbing up a tree and you fall down, your friends [indistinct] try and catch you [indistinct].
Cl	393.	So they might help you, yeah.
Al	394.	Erm, I've got two.
	395.	One is, like, your friends say they won't be your friend if you don't do something.
	396.	Or they make you be in a club and you want be in their club and they say you have to do something [indistinct] and if you, like, you're being silly you could get electrocuted by something around you, like a light or (...)
Cl	397.	So how might you be silly, what might you do that's silly?
Al	398.	Well you might just pull the, like, on the light without turning it off you might pull the plug out.

Cl	399. Right, OK. 400. Did you have one Ch... 401. No, OK. 402. Is there anything else about your friends being around how that can mean that you have accidents or not? 403. Ae...
Ae	404. Sometimes you do things to show off a bit.
Cl	405. So you do things to show off. OK, yep.
Ja	406. Me and Al... were playing around and we bashed heads.
Al	407. I've got one but it's not like with friends.
Cl	408. Alright.
Al	409. Like, I've just noticed this because my shoe lace is undone because if you're running around and your shoe lace is undone
Cl	410. Yeah
Al	411. You could trip over.
Cl	412. You could.
Al	413. [Indistinct]
Cl	414. So is that because you don't see it you might trip over it.
Al	415. Yeah.
Cl	416. OK. Mi... did you have one?
Mi	417. [Indistinct] you might get into a fight with someone and your friends come and help you and stick up for you.
Cl	418. So they might come and help you if you're having a fight with somebody. 419. [Indistinct]
Pa	420. Sometimes laziness can cause an accident, like she just said, sometimes I have laced shoes and then I notice, and sometimes my friends tell me that my laces are undone and sometimes I notice it myself and I just can't be bothered and then I have an accident.
Cl	421. Right, so, laziness, that's a good one, yeah. 422. So you know that you might have an accident, but you can't be bothered to do your laces up at that minute.
Mi	423. [Indistinct]
Cl	424. Sorry say that again.
Mi	425. Knowing the risks.
Cl	426. Knowing the risks. 427. Tell me a bit more what you mean.
Mi	428. I can't say really.
Cl	429. Can you think of a time when, when it's happened, knowing the risks?
Mi	430. No.
Cl	431. No, just knowing the risks?
Mi	432. Yeah.
Cl	433. OK, that's a good one. 434. So we've talked about friends, but what about if parents or teachers are around, how does that affect everything. 435. Ka...
Ka	436. You'll sometimes be a bit more sensible, or you could get into trouble.
Cl	437. OK.
Ch	438. [Indistinct]
Cl	439. Oh, beat you to it again. Mi...

Mi	440.	It's like [indistinct] teachers might notice something and come and help you.
Cl	441.	So teachers might come and help you, OK.
Al	442.	If like somebody bigger and older than you are picking on you and bullying you then they see a teacher or something or somebody, a grown up and they are about to hit you or something and the teacher or somebody sees, they might pretend that they, they're not hurting them, they're laughing together and then the other one will go and tell on them the next day and they might bully them even more.
Cl	443.	Right.
Ka	444.	Sometimes if there's a parent or teacher around some people do it even more, just to make you, like they might go 'oh you hit me' just 'cos, to try to get you in trouble or something.
Cl	445.	Right, get you into trouble.
	446.	OK.
	447.	[To Ja...]
Ja	448.	[Indistinct]
Cl	449.	So what about, thinking about when you've had accidents when you've been playing or (...)
	450.	[To Ja...] go on.
Ja	451.	Some teachers lie about things, 'cos, erm, nothing's happened to me or anything, but a teacher might see something happen and another teacher might ask them about what they saw and they might lie.
Cl	452.	Right.
Ja	453.	And they might even say that that erm child hit them [indistinct].
Cl	454.	Right.
Ja	455.	And the other teacher will always believe the teacher and not the child.
Cl	456.	Right, OK, sometimes you might feel that teachers believe each other rather than the children.
Ja	457.	Yeah.
Cl	458.	Thinking about the accidents that you've had when you've been out playing or when you've been at school or at home, or wherever, would things have been different if a parent or teacher was around?
Ch	459.	Yeah.
Cl	460.	In what way?
Ch	461.	Because they sometimes, er, stop you from doing things, er like silly things, and you if you do it around them they'll tell you off.
Cl	462.	Right, so they might tell you if they've told you already not to do it.
	463.	OK, Mi...
Mi	464.	[Indistinct] they'll warn ya.
Cl	465.	They'll warn you.
Mi	466.	[Indistinct]
Cl	467.	Right, OK.
Ka	468.	Yes because the person like, say if someone tried to trip you up, they might tell the person that tried to trip you up not to do it.
Cl	469.	Right, so, they'll help you.
Al	470.	Sometimes people tell you to do something silly and then you go and do it and then the next day they go, they would say something like, I'll give you £50 if you jump off this building and then it would be a bit stupid because

		you wouldn't actually in the end, it's very like, not possible to get the £50 in the end because you would have died.
Cl	471.	Right.
	472.	So how would that be different if a teacher or parent was around?
Al	473.	Erm, they would stop you and tell the other person off for doing it.
Cl	474.	Right, I see.
	475.	Ja... have you got one?
Ja	476.	Well, some people might, rather than [indistinct] try and actually get you into trouble and they're gonna get into trouble, and kind of like what Al... said, they might try and pay you off to do it.
Cl	477.	Right.
Ja	478.	But if you ask them to do it themselves and you give the money they wouldn't do it.
Cl	479.	And would that be different if a parent or teacher was around?
Ja	480.	Yeah because they would warn you not to do it and stop you.
Cl	481.	Right, OK.
	482.	Do you have anything Na...?
Na	483.	[Shakes head]
Cl	484.	No, OK.
	485.	Ae... did you have anything?
Ae	486.	[Shakes head]
Cl	487.	Alright.
Al	488.	Sometimes the teachers are the ones that are, like, wrong.
Cl	489.	In what way?
Al	490.	Like if you got told, like, if a teacher or something told you not to erm like, [indistinct], like people say you owe me money because I bought you [indistinct] and you need to pay me the money, sometimes if the teacher found out and I said they're just trying to get money off you or something, not to pay it, you could end up in big trouble because you said you'd pay them back and the teacher told you not to or one of your parents told you not to.
Cl	491.	Right.
Pa	492.	Is it just about children having accidents, or is it also adults?
Cl	493.	If you've got an idea about adults I'd like to hear it. Did you have one?
Pa	494.	No I was just [indistinct].
Cl	495.	Oh, right, that's alright.
	496.	It is mainly about children, but children grow up into adults [indistinct].
	497.	[Pause]. So we've talked about behaviour, we've talked about mood, we've talked about experience, and friends and how [indistinct]. [Handing biscuits around]
	498.	What about age? What difference does age make to whether children have accidents or not?
	499.	Mi...
Mi	500.	When you're an adult you know more and you can watch out.
Cl	501.	So when you're an adult you know more so you can watch out, OK.
Ka	502.	Sometimes when you're younger and you're mum and dad tell you, like, not to do things, or what to do and when you're older you make your own decisions.
Cl	503.	OK.

	504. Anybody else got any ideas about it? 505. [Pause] How old do you think you need to be before your parents or an adult needs to tell you what's safe and what's not safe? 506. [Pause] Do you think, at your age, do you think parents and teachers still need to be telling you what's safe and not safe or do you think you make decisions on your own?
Ka	507. Your teachers and your parents say a little bit, but you make most of the decisions for yourself now.
Cl	508. Right.
Ka	509. They just give you some ideas to help you.
Cl	510. Right, OK, yeah.
Al	511. Like, when you go into teenagers and you start swearing and stuff, like there's, you're in an underpass or something and you start swearing and stuff and maybe old people come along walking their dogs [indistinct] they could have a friend that may be dying and then people would say that, erm, [indistinct] they're swearing.
Cl	512. Right.
Al	513. [Indistinct] and then they could get upset.
Cl	514. I see.
Ja	515. I make my own decisions now. 516. When I go to my dads, sometimes I don't want to so I ring him and say I'd like to come at a different time instead and because my mum said it's really up to me and it's not up to my dad to tell me when and what time I can and can't come, it's up to me now.
Cl	517. So you make the decision now?
Ja	518. Yeah.
Cl	519. OK. Mi...
Mi	520. [Indistinct]
Cl	521. Has it gone? 522. If you remember it, tell me. 523. So, thinking about accidents, do you think that you make your own [to Mi...] have you remembered?
Mi	524. Yeah, I watched this on a programme, it's a true story [indistinct]
Cl	525. Right, and they got into a fight. 526. So thinking about accidents then, do you think age makes a difference about when you decide whether it's safe or not to do something?
??	527. Yeah.
Al	528. Sometimes, if you're old and you have a car maybe, you should, you could be partly blind and you might not see an animal walk in front of the car and you might run over it without knowing.
Cl	529. Right, you might not see it. 530. Did you have on Pa...?
Pa	531. No.
Cl	532. No, OK. 533. Anybody else got any thoughts about age? 534. [Pause] OK, one more question, [to Ja...] sorry, did you have something?
Ja	535. Age might make a difference because when you're older, most older people are wiser, but some people aren't as wise as they used to be.
Cl	536. Right.

Ja	537.	Like, erm, well, my granddad used to have a motorcycle and he drives a car now because he learnt that motorcycles were too stupid to drive.
Cl	538.	Right.
Ja	539.	And he didn't want it anymore so he got rid of it and got a car.
Cl	540.	I see, so he grew a bit wiser as he got older.
Ja	541.	Yeah.
Al	542.	Oh, yeah, when you, erm, you have like little things and you like put them in your mouth and then you can choke on them, swallow them
Cl	543.	How old would you be doing that?
Al	544.	Sometimes you could be like, well, you could have a lolly pop stick in your mouth, [indistinct] chewing it or bubble gum, you might swallow it by accident and it could get stuck in your throat.
Cl	545.	And does that happen to children of your age?
Al	546.	I swallow bubble gum all the time.
Cl	547.	Do you, oh, right so that's something you know about.
Al	548.	Yeah.
Cl	549.	Alright, one more question.
	550.	What about if you're a boy or a girl, how does that make a difference?
Mi	551.	Girls are clumsier.
All	552.	[Indistinct]
Cl	553.	Oh, this is going to be a good one, go on Na...
Na	554.	Boys, they tend to hurt girls more, because (...)
Mi	555.	[Laughs]
Na	556.	[Indistinct] football and [indistinct] kick it at a girl and it's gonna hit their head or something.
Cl	557.	So you think boys are a bit, will kick the ball hard and it might hurt the girls?
	558.	OK.
	559.	Ae...
Ae	560.	It isn't really fair because [indistinct] she had got something that I wanted and she went and sat on my head and stamped me in the eye.
Cl	561.	Right, so she hurt you?
Ae	562.	And that's my little sister who's 8 years old.
Cl	563.	Right, not so little.
	564.	Pa...
Pa	565.	I think girls are more likely to show emotion when they get hurt because they're softer.
All	566.	[Laughs]
Pa	567.	And boys are tougher, so (...).
Cl	568.	OK.
	569.	Ka...
Ka	570.	I think it just depends on the personality because some girls are tough, as well as boys, but some boys are really weak as well as girls.
Cl	571.	Oh right, that's a good point.
	572.	Al...
Al	573.	I think that boys are more like immature because like when you're like playing with a football or something and girls go and ask if they can play, because, like, they're a tomboy or something and they ask if they can play, they like tell, they say 'no, no' or tell you to 'get lost'.

Cl	574.	Right.
Al	575.	It's like 'no' and they swear at you because, and they tell you 'umm' [indistinct] and then you say 'why can't we play?' or something and they'll say 'oh, because you're a girl', so it's really like sexist [indistinct].
Cl	576.	Oh, OK.
Ja	577.	[Indistinct] just because boys are boys doesn't mean that girls can't, doesn't mean that girls can't [indistinct] have a rough and tumble just like the boys do, [indistinct]. Boys aren't supposed to hit girls anyway. I haven't seen many boys hit girls, but quite a few boys have hit me.
Cl	578.	Oh dear.
Ja	579.	Yeah and [indistinct] call me a boy sometimes as well.
Al	580.	'Cos the other day when Ja... came to my house, she erm, we were walking down to the shops and these boys, in year 8 in this school, starting chucking cake at us.
Cl	581.	That wasn't very pleasant.
Al	582.	We were thinking about catching it but [indistinct].
?	583.	[Indistinct].
Ch	584.	I agree with Ka... because there are weak boys and stronger girls, but erm, she's right really, because it's a mix.
Cl	585.	It's a mix.
	586.	I'll come to you in a minute.
	587.	So do you think boys or girls have more accidents than the other?
Ch	588.	Boys have more accidents because they do more daring things.
Cl	589.	What did you say Mi...?
Mi	590.	[Indistinct]
Cl	591.	So boys do more daring things and get into more fights.
Al	592.	I think girls are more like, if they're not tomboys, they're more like 'I don't want to get mucky' or ...
Cl	593.	Right.
Al	594.	Erm, I don't want to play because I'll get mucky, they're more like [indistinct].
Ja	595.	[Indistinct]
Cl	596.	So they might not get involved in many messy things.
Al	597.	Yeah.
Cl	598.	Ka...
Ka	599.	I think what the parents like on the, their attitude as well, depends on what they want to do and if they're going to be silly and have an accident, or if they're not going to.
Cl	600.	OK.
	601.	Pa... was that your's as well?
Pa	602.	Yeah.
Cl	603.	Sorry.
	604.	Ae...
Ae	605.	Girls tend to be a little more self-independent.
Cl	606.	Girls are a bit more self-independent?
Ae	607.	Yeah.
Cl	608.	OK.
Pa	609.	Some of them, if you have, hold your finger up with a little insy bit of mud on, they go 'argh' and run away.

Cl	610.	So some girls don't even like a [indistinct] bit of mud?
Pa	611.	Yeah.
Cl	612.	Ahh, OK. Pa...
Pa	613.	I think I'm going with Ae...'s point because girls are more inside people and they seem more organised and they're like, they show more emotion, but boys, they're more less organised but they're more out, they're go out.
Cl	614.	Out going?
Pa	615.	Yeah.
Cl	616.	Ahh, OK.
	617.	Ka...
Ka	618.	I don't agree with that, 'cos I always play outside more than my brother does, really.
Cl	619.	So you think perhaps that some girls are different?
Ka	620.	Yeah, because my brother's on the Play Station all day basically and I'm outside playing [indistinct].
Al	621.	Well in our class, normally, when we have to line up for assembly the boys are always going at the front and then all of the girls are like running to get to the back to try and, because they don't want to sit by one of the boys.
Cl	622.	Right.
Al	623.	And then when they start up, somebody starts off the lurgy, they keep going 'lurgy' and then the other, and then everyone just goes [indistinct] everyone else is like [indistinct].
Cl	624.	You're all trying to get away from the one with the lurgy.
Al	625.	Yeah.
Ja	626.	[Indistinct] because lots of boys as well that think they're great a football, they're just rubbish and the boys that aren't, that don't brag as much are just, they're quite good. L
	627.	Like all the time the year 6 boys go against the year 5 and always the year 5 win and when, erm, the year 5's score a goal, the year 6's will just go 'oh, no, no, that wasn't a score, you cheated' and then they'll pick up the ball any time they want and just throw it in the goal.
Cl	628.	So do you think that has any effect to do with accidents as well, about knowing whether they're good at something or not?
Ja	629.	Well most of the time, if girls try and play as well, if, erm, they tackle the ball off the boy they'll swear at em and tell them to get lost and then they'll start pushing you and everything and sometimes that can lead to accidents as well.
	630.	I got kicked [indistinct] a football, hard football got whacked in my face and it really hurt me [indistinct].
Cl	631.	I bet it did.
Ja	632.	[Indistinct]
Cl	633.	Yes, I bet it did.
	634.	OK, I'll just come to Ae... and Ka... and then we'll have to finish anyway.
	635.	Ae...
Ae	636.	Some boys as well as girls, they think that they're [indistinct] but in actual fact they're not, like sometimes they pick on people and then if, if they pick on the person and the person gets into a fight with them, the person that picks on you, they're gonna run away [indistinct].
Cl	637.	Right, OK.

Ae	638.	[Indistinct]
Cl	639.	That's a good point, yeah.
	640.	Ka...
Ka	641.	A lot of boys hit girls and things and think that the girls are gonna be scared, but they, so they don't get, the girls don't tell of them 'cos they're scared of the boys, but really the boys are weak, that's why they need to hit people and things, because [indistinct]
Cl	642.	Right, that's a good point.
Al	643.	Sometimes if a boy and a girl are going out, they don't [indistinct] the girl wouldn't actually, they might have thought once that they really liked them, but then as they grow older they think, [indistinct] really, really like, like dumb or something.
Cl	644.	So they change their mind.
Al	645.	And then, the other person still thinks that they fancy them or something and then it spreads around to everyone and everyone makes fun of them.
Cl	646.	I see.
	647.	Ja... this is the last one.
Ja	648.	I think boys are cowards as well, because they wouldn't need to pick on people, because if, like the people that don't pick the fight sometimes they don't [indistinct] want to get into a fight and everything but they still fight with them and the person that doesn't really to have a fight, they [indistinct] or appear to be quite strong and the people that start the fight think that they're strong [indirect] and they just think 'oh no', they're just gonna say 'I'll give you what I've got' and then erm [indistinct] fight that, sometimes [indistinct] fight and then the bully just runs off and, now they know that some people that they pick on are stronger than them [pause].
Cl	649.	Stronger's a good word.
Ja	650.	[Indistinct].
Cl	651.	Yeah.
Ja	652.	Because normally the people that pick [indistinct] get bullied a lot [indistinct].
Cl	653.	OK, thank you for all your ideas.
	654.	You've talked about lots of things, you've told me about accidents that you've had, and who you thought was to blame, you've talked about behaviours and mood that lead to children having accidents, and how experience might help or not, you've talked about how it's different if friends or parents and teachers are around, and about the differences to do with age or whether you're a boy or a girl.
	655.	Is there anything that we've missed? Anything that you can think of that you haven't told me that you think might be important in why children have accidents?
Al	656.	Sometimes, if you've got, erm, something dangerous, but it doesn't look dangerous, so you go and mess with it, like Pa...'s sister, erm, she like, it looked like a knife or something, it doesn't look sharp, and it just like, by feeling it sometimes, when you go down it doesn't feel sharp, but when they've actually, when they're like calving with it or something, they could actually cut theirself.
Cl	657.	When they find out it's sharp.
Al	658.	Yeah, that's when they see, that's how they know, that's why their mum and dad tell them not to mess with it, 'cos, they've taken something out the

		house that they weren't meant to play with, like matches or something.
Cl	659.	OK. Ja...
Ja	660.	I got poked in the eye with a pen knife by my friend, we were playing, and then she found a pen knife and she said 'come on let's play with this' and she accidentally, well I think it was an accident, and it accidentally caught my eye and the next day was school photos and my mum put foundation on my eye.
Cl	661.	To cover up the mark?
Ja	662.	Yeah [indistinct].
Ka	663.	[Indistinct] like Pa...'s incident, a lot of like younger kids don't listen to their brothers or sisters 'cos they think they're wrong and everything, so they don't [indistinct] what they've said.
Mi	664.	[Indistinct]
Cl	665.	Sorry, say that again.
Mi	666.	Adults know what's gonna happen and the kids don't.
Cl	667.	Right, OK.
Ch	668.	I think you should listen to your parents when they tell you not to do things and when something happens to you [indistinct] just learn from your mistakes and don't do it again.
Cl	669.	Good point.
	670.	Al... and then Pa... will be the last one.
Al	671.	Sometimes people are proved wrong, like, say somebody goes 'oh you'll really badly hurt yourself if you do that' and then you've got the whole class saying 'don't do that you'll hurt yourself' and then the class are saying 'we'll prove you wrong but you'll get hurt' and then the other person will say 'no I won't' and then they do it and they don't get hurt and everyone's like, erm, they try it and they don't get hurt either, but they might, so might not be able to like flip over, they could break their back or something or hurt themselves.
Cl	672.	So if they're doing a flip, they might hurt themselves.
Al	673.	And other people can do it but other people can't.
Cl	674.	Pa... what was your point?
Pa	675.	I think adults tell them because they have more experience from when they were young and the children who are not going to listen to their parents have less experience in getting hurt, for example, like, sometimes, like if there was a child and, a baby, just about a few months old, erm, it was born, and it was on an aeroplane all the way to another country for some reason with it's mum and dad, the mum and dad would be scared because they knew if the plane was crashing, and the mum and dad would be scared but the young [indistinct] wouldn't be because it didn't, it hadn't felt any pain before.
Cl	676.	Ahh, so it doesn't know, but mum and dad do.
	677.	Excellent.
	678.	Thank you very much, you've given me some really great ideas and told me lots of different thoughts about why you think children have accidents, you've told me about different things that you've done yourselves and it's really gonna help me write my project so I hope I get a good mark on it because you lot have worked really hard.

Appendix M: Frequency Table of Categories and Inter-rater Agreement

Category Title	Frequency (Number) Rater 1	Frequency (Number) Rater 2	Percentage Agreement
Behaviour			
Own behaviour: Active	24	24	100%
Own behaviour: Passive	11	14	78.6%
Copying/imitating others	5	5	100%
Other's behaviour	22	21	95.5%
Mood/feelings	10	9	90.0%
Own previous experiences	16	13	81.3%
Influence of others			
Pressure/bullying	14	14	100%
Supportive	4	4	100%
Influence of parents and teachers	24	24	100%
Age	15	17	88.2%
Gender			
Individual differences	13	14	92.9%
Deliberate acts	6	6	100%
Environmental factors	7	9	77.8%
Accident-related comments	19	21	90.5%
Irrelevant comments or responses	111	92	82.9%