Consumer Reaction to Food and Health

A longitudinal study of U.K. consumer behaviour and attitudes towards health, with particular reference to food purchasing and consumption habits, product quality, nutritional composition, ingredients and production methods.

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For

Carol

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Juliet and Steve	Thank-you
All my children	For listening to my problems.
Mum and Dad	For always encouraging
Miss E. Barrett	For starting it all
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Also: Paul, Brian, Aunt Mu, Barbera, Alison, Mr Leo Solomon Danyel, Barry, Simon, My friends and collegues at the Food Policy Research Unit.

ABSTRACT

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A longitudinal study of U.K. consumer behaviour and attitudes towards health, with particular reference to food purchasing and consumption habits, product quality, nutritional composition, ingredients and production methods.

Key Words: Attitudes; Behaviour; Consumer; Diet; Food; Health; Marketing; Nutrition; Quality; United Kingdom.

Consumers have increasing choice in food products and within the social environment of today's consumer, the factors of demand are increasingly complex. Food is no longer simply a primary necessity for survival, it is a leisure and family activity, the participation in which, takes up a considerable amount of time. Today, food is a social and a political issue - something about which people have opinions, be it food quality, healthiness, or the food supply itself. It is also central to consumer's self-image. There is a large sector of the economy which supplies food demand, and this sector is itself now under considerable scrutiny from the consumer.

This thesis examines consumer behaviour and attitudes towards food, with particular reference to the health aspects of food issues. It describes a programme of qualitative and quantitative research - group discussions, personal interviews and postal questionnaires.

The programme examines milk (particularly low fat milk) as a diet and health case study; knowledge about food; attitudes towards food; the food industry and related issues; shopping behaviour and eating habits.

It is important to both the consumer and the supplier of food, that consumer behaviour and attitudes are understood as fully as possible. This research highlights the misunderstandings between consumer and producer, emphasises the mistrust of the consumer for the producer and concludes with the need for communication between them. The thesis discusses the background to diet and health as an issue, describes the development of the current consumer environment and gives a profile of today's consumer. It then goes on to detail the research - two quantitative surveys, each undertaken over two years and a series of group discussions. The final section summarises the findings of each individual piece of the programme as a whole for various groups: food producers; food manufacturers; food retailers; advertisers; the media; health professionals; the consumer; consumer organisations and government.

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INTRODUCTION

Food is now discussed by many people as an issue rather than simply as something to eat. The specific issues have changed over recent years but the current interests have all stemmed from the 1983/1984 emphasis on diet and health. This thesis sets out to discover who is interested and what are they interested in. It then examines the implications of these interests.

This research is specifically concerned with reaction to diet and health issues. The first chapter concentrates on the background to the links between diet and health and how this subject has become a matter for concern amongst the general public.

Chapter Two discusses how the shopping environment of the consumer has changed in both the long and the short term. It details describes the development of a consumer market place and the approach of marketing orientated companies in today's environment.

Chapter Three describes the consumer - how the population and characteristics of the population have changed and how accurately the consumer can be described today. This chapter gives a picture of the subject of this research - the consumer - both in terms of the individual consumer and the population of consumers.

As a whole, section one of this thesis deals with the key aspects of food, health and the consumer. Chapter One described the development of food and health has an issue and the background to these concerns. Chapter Two described the environment in which the subject of this research lives and Chapter Three has described the subjects themselves.

Having introduced the issues, the environment and the subjects of the research, Section Two goes on to deal with the actual research methods and to describe the results of this research.

The first chapter in this section (Chapter Four) discusses the research methods available for this kind of programme and assesses the most appropriate for this situation.

There are two main elements to the research programme - qualitative and quantitative. Chapters Five and Six detail the qua itative elements - two surveys each undertaken over two years. Chapter Seven decribes the qualitative work - a series of group discussions.

Section Three summarises the results and discusses their implications for various groups of people: the food producers; the food manufacturers; the food retailers; the advertisers; the media; health professionals; the consumer; consumer organisations and the Government.

It is the fact that this research is useful and interesting to such a wide range of people and organisations that has made it a fulfilling exercise.

PART ONE

FOOD, HEALTH AND THE CONSUMER

CHAPTER ONE

DIET AND HEALTH

1.1 Lifestyle Related Disease

There are many diseases now prevalent in the UK and other Westernised countries, which are recognised as being in part attributable to life-style.

The medical profession and the general public are increasingly aware that such factors as stress, lack of exercise, poor diet, smoking and alcohol consumption are important in causing much ill-health. Conditions associated with such factors include: cardiovascular diseases, lung cancer, sclerosis of the liver, diabetes, cancer of the bowel, diverticulitis, piles, varicose veins, overweight and weight linked conditions such as hypertension and joint problems. This thesis examines the dietary factor implicated in the "Western Diseases".

Diseases in which these factors play a part are referred to as the "diseases of affluence" or "western diseases" because of their relatively high incidence in westernised, developed countries. These diseases are often slow to develop and both genetic and lifestyle factors may be involved in their etiology.

Of these, the cardiovascular diseases, including coronary heart disease, are responsible for a high proportion of all deaths today and the majority of premature deaths in England, Wales and Scotland.

Figure 1.1 indicates the mortality rates in European countries from various causes. The high proportion of deaths from cardiovascular diseases is illustrated, and it is evident that the U.K. figures compare unfavourably with those of other countries.

Figure 1.1

European Mortality Rates from Selected Causes.

Units: Rates per 100,000 total population.

COUNTRY	CARDIO-VASCULAR DISEASES	CANCERS	DISEASES OF THE RESPIRATORY SYSTEM	INJURY AND POISON	ALL CAUSES
SCOTLAND	516	451	84	46	1223
NORTHERN IRELAND	505	433	111	33	1194
DENMARK	262	431	54	65	948
ENGLAND AND WALES	359	417	72	32	928
WEST GERMANY	246	345	26	43	798
BELGIUM	236	312	28	68	784
FINLAND	291	282	31	43	745
SWEDEN	204	330	35	48	709
NETHER-LANDS	206	316	18	30	677
GREECE	235	246	30	26	673
NORWAY	210	304	26	29	665
FRANCE	141	275	19	53	635

Source: Catford and Ford, 1984

Mortality statistics do not indicate the full size of the problem, at any time a high proportion of the population may be suffering chronic ill-health from any one of these diseases which may result in years of discomfort and enormous expense in terms of treatment. The estimated cost of coronary heart disease alone to the National Health Service, is almost 390 million pounds, the breakdown of this is shown in Figure 1.2., below.

Figure 1.2

Estimated NHS Cost of Coronory Heart Disease in 1985 in England and Wales.

	Millions of Pounds
Hospital Care:	
In Patient	204.0
Out Patient	9.3
Primary Care:	
General Medical Services	17.7
Medicines	139.4
Dispensing Costs	19.5
TOTAL COST	**389.9**

Source: Office of Health Economics, 1987

1.2 Role of Dietary Components in Disease

There has been much research carried out in recent years into the effects of life-style, and diet in particular, on health. This research has consisted of: comparison between populations with differing lifestyles, intervention studies, and studies using groups of the population with conditions such as inherited hyperlipidaemias.

Groups of experts have been established to evaluate this research (for example, in the UK, the National Advisory Committee on Nutrition Education (NACNE) and the Committee on Medical Aspects of Food Policy (COMA) and to produce reports giving recommendations aimed at prevention of life-style related disease.

These are two of the best known groups to have made public, through various channels, their recommendations regarding disease prevention.

Several dietary components have been examined and over or under-consumption has been linked to specific disease states. In addition the entire balance of the UK diet has been implicated as a cause of ill-health, with its overdependence on fat as a source of energy.

1.2.1 Dietary Fat

The consumption of excessive amounts of fat, especially saturated fat has been linked to the incidence of cardiovascular diseases (James,1983; DHSS, 1984) and epidemiology suggests that fat consumption is also a risk factor for various cancers eg, cancer of the breast (Davidson and Passmore, 1979)

1.2.2 Dietary Fibre

Underconsumption of dietary fibre and the starchy carbohydrate foods which provide dietary fibre, have been cited as a cause of many bowel disorders, including constipation, diverticulitis, and cancer of the bowel (Royal College of Physicians Report, 1980), and has also been linked to other conditions including cardiovascular disease (Burkitt and Trowell, 1975).

1.2.3. Sugar Consumption

The major association between sugar and ill-health is its role in dental disease (Naylor, 1981) although excessive consumption has also been implicated in causing obesity and so might contribute indirectly to weight-related ailments (Royal College of Physicians, 1983).

1.2.4 Salt

A high salt (sodium chloride) intake is thought to be one factor in the causation of hypertension (Gleibermann, 1973), a risk factor for coronary heart disease. There has been some controversy over the exact role of salt or sodium in hypertension and it has been suggested that the effects of salt may only be evident in genetically susceptible individuals (Dahl et al, 1972).

Most of the salt currently consumed (about 70%) is contained in processed foods (James et al, 1987) and therefore is not under the control of the consumer, a high salt intake is a common feature of the diet of affluent countries which rely heavily on processed foods.

1.2.5 Dietary Balance

Dietary energy is provided by fats, carbohydrates, protein and alcohol. The current balance of the UK diet is as follows:

Fat provides-	43% total energy
Saturated Fat provides-	18% total energy
Polyunsaturated fat provides-	6% total energy
Carbohydrate provides-	44% total energy
Protein provides-	13% total energy

Source: National Food Survey.

It is suggested that this balance of energy sources is not ideal for health, that the high proportion of fat and low proportion of fibrous carbohydrate contributes to the forms of ill-health previously outlined (James, 1983). In addition, this type of diet, which is low in bulk and energy dense, is a factor in the high incidence of overweight and obesity in affluent countries (Royal College of Physicians, 1983).

1.3 Recommended dietary changes

The first major report in the UK which made quantified recommendations for integrated dietary changes, was the NACNE Report, (James, 1983). Reports making similar recommendations had previously been published in other countries including Norway and the USA (P Puska et al 1981; Select Committee, 1977; Concensus Conference 1985). Earlier UK reports (on which the NACNE Report was based) concentrated on specific states of ill-health, such as coronary heart disease, obesity or vitamin deficiency, or particular diet components such as bread and infant foods.

The NACNE document (James, 1983) was not published as an official Government report, its findings were made public initially through publication in the Lancet (Anon, 1983). The report received much wider recognition than is common for scientific reports due to the controversy surrounding

its publication. A news story in the Sunday Times claimed that the report had been suppressed (Cannon, 1983). The document was finally published by the Health Education Council as a discussion document in October 1983.

The COMA Report (DHSS,1984) was prepared by a panel of the official DHSS Committee on Medial Aspects of Food Policy which reports directly to the Government's Chief Medical Officer. This report gives recommendations specifically aimed at the prevention of cardiovascular diseases. The COMA Report had been eagerly awaited as official confirmation or rejection of some of the views proferred in the NACNE Report. The main difference between the NACNE report and the COMA report is that the COMA report deals specifically with cardiovascular disease and the NACNE report deals with diet and health in a more general sense.

In 1986 the British Medical Association published a report "Diet, Nutrition and Health", (BMA, 1986) this adds no new recommendations but does endorse all of those made in the NACNE report.

The following is a summary of the recommendations made in the NACNE report, 1983 and the COMA report, 1984:

The NACNE Report:

Fat	Should provide no more than 30% total energy.
Saturated Fat	Should provide no more than 10% total energy.
Poly-uusaturated Fat	No specific recommendations are made to increase consumption, but the P:S ratio is expected to increase if other recomendations are complied with.
Sugar	Average sucrose intake should be reduced to 20kg per head per year.
Salt	Should fall by an average of 3g per head per day
Dietary Fibre	Should increase to an average of 30g per head per day.

The COMA Report:

Fat	Should provide no more than 35% total energy
Saturated Fat	Should provide no more than 15% total energy
Poly-unsaturated Fat	No specific recommendation, but consumption is expected to increase if other recommendations are complied with
Sugar	Present intake should increase no further. The need to restrict intake on other health grounds is noted.
Salt	Consideration should be given to ways of reducing intake.
Dietary Fibre	It would be advantageous to compensate for a reduced fat intake by increasing consumption of fibre rich carbohydrates

1.4 Increased awareness of diet and disease

Since the publication of the above recommendations many initiatives have been taken with the object of increasing public awareness of the need for dietary change along these lines.

Initially the recommendations of the COMA Report were published in laymens terms in a leaflet entitled "Eating For a Healthier Heart" by the Joint Advisory Committee on Nutrition Education (JACNE, 1985), but this had only a limited circulation.

Literature outlining the types of dietary changes suggested had previously been published by the Health Eduction Council (now the Health Eduction Authority) including "Eating for Health" and "Beating Heart Disease" (Health Education Council, 1982) which was and still is available through local health education units along with a number of other similar publications (Health Education Authority, 1986; Health Education Authority, 1987).

Information has also been produced at a local level in many health authorities, the majority of which have now developed a healthy eating policy (Montague, 1985; Worcester Health Promotion Unit, undated; Tameside Metropolitan Borough, 1988; Bradford and Airedale Health Education Unit, undated). Such literature is distributed through schools, clinics and health promotion events.

Charities such as the Coronary Prevention Group and the British Heart Foundation have produced diet and health information aimed specifically at reducing coronary heart disease risk (Coronary Prevention Group, 1985)

An enormous amount of publicity has been given to the diet and health issue by the food industry itself. Both manufacturers and retailers have produced leaflets outlining the recommendations, which are available free to customers (National Dairy Council, 1985; Nabisco,1986; Tesco, 1985) In addition many companies have added nutrition labelling to their products packaging, which if properly used, enable the consumer to make a more informed choice of foods.

Finally diet and health has become a popular topic and as such is regularly featured in the media. Following the publication of the NACNE (1983) and COMA (1984) reports, several television programmes have publicised their recommendations including "A Taste of Health" (BBC TV, 1985) "The Food Programme"- a regular Radio 4 programme (BBC Radio 4) "Food and Drink" (BBC TV) and many more.

All these efforts to publicise diet and health recommendations have resulted in an increased awareness of, and interest in, dietary issues. This publicity may also have resulted in altered perceptions of certain foods and food habits. This research explores some of the attitudes and beliefs regarding diet and health which are now prevalent, and discusses the factors which have helped to shape these attitudes.

CHAPTER TWO

THE CONSUMER MARKET

This chapter describes the development of the environment surrounding today's consumer. It begins with definitions of marketing, a market and a market place which are all terms used throughout this thesis. It goes on to describe the development of consumer markets and of market segmentation. The application of market segmentation is demonstrated with reference to a number of different consumer markets other than the food market. The final sections of this chapter look specifically at the ways in which consumers are approached with regard to food. The chapter concludes with a description of changes in the food market and a discussion about the relationship between food manufacturers and retailers.

2.1 Marketing and the Consumer

The concepts of "marketing" and of the "consumer" are central to this thesis, which is concerned with the reaction of the consumer to the marketing of food in relation to the diet and health issue. This section defines some of the terms used in this thesis and discusses the importance of marketing in today's environment. The definitions put forward in this section are taken from the Glossary of Marketing Terms published on behalf of the Institute of Marketing (Hart and Stapleton, 1987).

Marketing: any textbook on marketing puts forward a definition of the function, and they are all essentially similar:

> "the Management process responsible for identifying, anticipating and satisfying customer requirements profitably"

The Market for a product can be considered to be -

> "The group of persons and/or organisations identified through a common need and with resources to satisfy that need" or "A place where buyers or sellers gather to do business"

The Market Place is a figurative description and applies to any place or environment where buyers and sellers dobusiness

The Consumer: the strict definititon of a consumer is the person who ultimately consumes a product or uses a service - the person who derives the satisfaction or the benefit offered. The "consumer" is not necessarily the "customer".

The distinction between the consumer and the customer is particularly pertinent to the food market - everyone is a consumer but not everyone is a customer and yet the purchasing decision can be influenced by either group of people. The most striking example of this is that children are not customers for most food products, but a great deal of marketing effort is put into reaching them as consumers. Children do have a strong influence on purchasing decisions in many families.

The most important trend in the consumer market has been the shift in emphasis, from production to consumption. More specifically, this shift is from production for self-consumption to the consumption of goods which have been produced specifically for sale and which are consistently available in the market place. When there is a choice of foods available, it can be the marketing of these foods which influences the purchase choice of the consumer.

In the UK, the economy is highly sophisticated, a long way from its origins in barter and home production, and for the last 150 years, more people have become purchasers (consumers) rather than producers of goods and services.

2.2 The Development of a Consumer Market Place

A market place develops as individuals need to dispose of surplus goods and those consuming the goods demand more quantity and greater choice. In simple barter systems, there is advantage to be gained from having a central market place. This system develops into a permanent market place where individuals with particular skills provide a consistent service. As the range of foods and services available from these specialists increases, the economy develops and wealth is generated. When this begins to happen, suppliers begin to satisfy different kinds of needs and wants - people no longer buy solely on the basis of necessity.

A series of needs and wants has been described which is central to understanding today's consumer market (Maslow, 1954). Maslow suggests that a hierarchy of needs exists which is demonstrated in Figure 2.1.

Figure 2.1 Maslow's Hierarchy of Needs

5. Self Actualisating needs : the desire for self fulfilment which is associated with a personal value system

4. Esteem: the respect of others

3. Social needs: to both give and receive love

2. Safety needs: to avoid danger

1. Physiological needs: such as food and shelter

It is only when physiological needs have been met that safety needs can be considered; fulfilment of the higher order needs generally assumes prior fulfilment of lower order needs. This hierarchy of needs advocated by Maslow has recently come under scrutiny and criticism as more intricate models of consumer behaviour have been developed to suit new commercial situations. With regard to food, the question could be posed: "Is this hierarchy of needs still valid when all consumers have access to modern food systems?"

In answer to this question as an overall assessment of human needs and wants, Maslow's model is successful in describing a progressive hierarchy. There are many people in both developed and developing countries who have severe

problems in satisfying the primary needs such as relief from hunger and homelessness. As a general statement of behaviour at a macro level, it is a useful model although to understand the behaviour of individuals, a more comprehensive classification system is necessary to deal with the concepts of individual personality and of consumer behaviour.

As needs and wants stem from higher levels of this chain of human needs, the market place begins to change in two ways:

- Horizontal Diversification where traders begin to specialise in products such as gloves rather than the production of clothes.
- Vertical Diversifcation where a distribution chain is established in which merchants are supplied by traders and in turn supply to shopkeepers.

The emphasis has now shifted from the making of the goods to the pleasing of a more demanding clientele.

By the 19th Century, the UK market for many products had become extremely fragmented horizontally. The next development was that retailers put together sets of shops in the same building. These shops were obviously larger than the specialist organisations and in order for them to work effectively a technological revolution was required.

- Customer service was delegated to shop staff
- Prices were fixed, removing the need to haggle
- Quality was standardised and consistent
- The ability to buy in quantity from manufacturers kept prices low
- Direct purchasing from manufacturers reversed to some extent the previous trend towards vertical fragmentation.

It is these trends which have shaped todays market place.

2.3 Market Segmentation

The technique of market segmentation divides the market for a product or a service into several sub-markets (segments) each of which have one or more defined criteria in common ie. that the members of each segment are, in some way homogeneous. Segmenting consumer markets is a recognition that consumers themselves may differ in ways which are exploitable by marketing activity. To aim a standard product at an average consumer is no longer an appropriate strategy to obtain optimum market share, and significant marketing opportunities will be missed in this situation. It is necessary in today's competitive economic environment to identify and target the company's potential market.

There are, in fact, two methods of segmentation -by market and by product. The most popular form of market segmentation is in terms of demographic characteristics although psychological characteristics and media habits are also important (Lunn,1983). Selection of the characteristics for market segmentation is a key factor for effective targeting - the effective grouping of consumers relies on the identification of one or more characteristics which differentiate consumer behaviour of one group of people from another. There are many factors which can be used as variables of market segmentation but age, sex, marital status, family size, geographic location, employment, education, religion, nationality, race, socio-economic group and family life cycle (Williamson, 1979) are typical.

The alternative approach is to segment on the basis of products, this philosophy groups products and brands into homogeneous groups based on criteria used by consumers to distinguish between choices presented to them (Barnett,1969).

Ultimately, these groups of products and brands have to be effectively targeted themselves and so product - market segmentation is a related approach rather than a separate technique.

The philosophy of a market orientated company may be tacit, but it is always to identify the needs and wants of its market and to meet these needs and wants with its products or brands. It follows that identification of the similarities and differences between customers is crucial. In this sense market segmentation is fundamental to a company's marketing strategy.

2.4 Segmentation of Consumer Markets

Market segmentation is in a sense a new term but an old concept. It is only relatively recently that marketing based companies developed their corporate strategies around target marketing. It has however, always been apparent that certain products are purchased by certain types of people.

The following examples of the diversity of market segmentation purposefully do not include food, This thesis is, of course, concerned primarily with food but it is important to emphasise that segmentation is important and prevalent in all areas of consumer marketing and not just the food sector. The following are all examples of products or services but consumers are now targeted in many areas of their lives. Notable examples of this being the development of the marketing techniques of both political and religious organisations.

The car market has always been highly segmented; in the early part of this century very different people would have bought a model T Ford and a Bentley, indeed, it was only certain people who would buy a car. Today the market for motor cars is highly segmented in terms of private-v-fleet, price, age, sex and family circumstances (Earles,1982).

The clothes market is segmented very strongly between males and females but also between price levels, life-styles and aspirations.

Washing powders all do the same job, but promotional campaigns are frequently aimed at different groups of people often distinguished by age or family circumstances.

Personal banking services are now aimed at different groups of people. Both current and savings accounts have been developed into concepts designed to appeal to distinct groups of people from school leavers, to young professionals or to those who are retired.

It is appropriate to mention here, the ways in which the producer's messages are conveyed to the consumer, all of which have developed considerably over the past few decades.

Packaging has been transformed by technology in both packaging materials used and production engineering. It is, as it has always been, a valuable reinforcement of brand development and a medium for displaying product information.

Promotional activities are becoming more sophisticated but the most noticeable changes have been in advertisements, which, particularly in the consumer market, are often the most visible promotional tools. Television advertising for example was very bland in the 1950's consisting largely of

consumer testimonials and product information. Today, advertisements (on television and elsewhere) are more colourful, humorous, positive and realistic.

2.5 Targeting the Food Consumer

The food industry is no exception to innovations in marketing and as part of the market for fast moving consumer goods, are in the forefront of developments. Product development, manufacturing techniques, physical distribution and retailing have all been utilised and developed in order that the food industry can react to consumer needs and wants.

2.6 The Food Market Place

One of the major developments in the food market over the last 20 years has been the change in food retailing and the development of the supermarket. There have been two main developments in retailing:

(i) Concentration into fewer companies and consequent demise of the independents

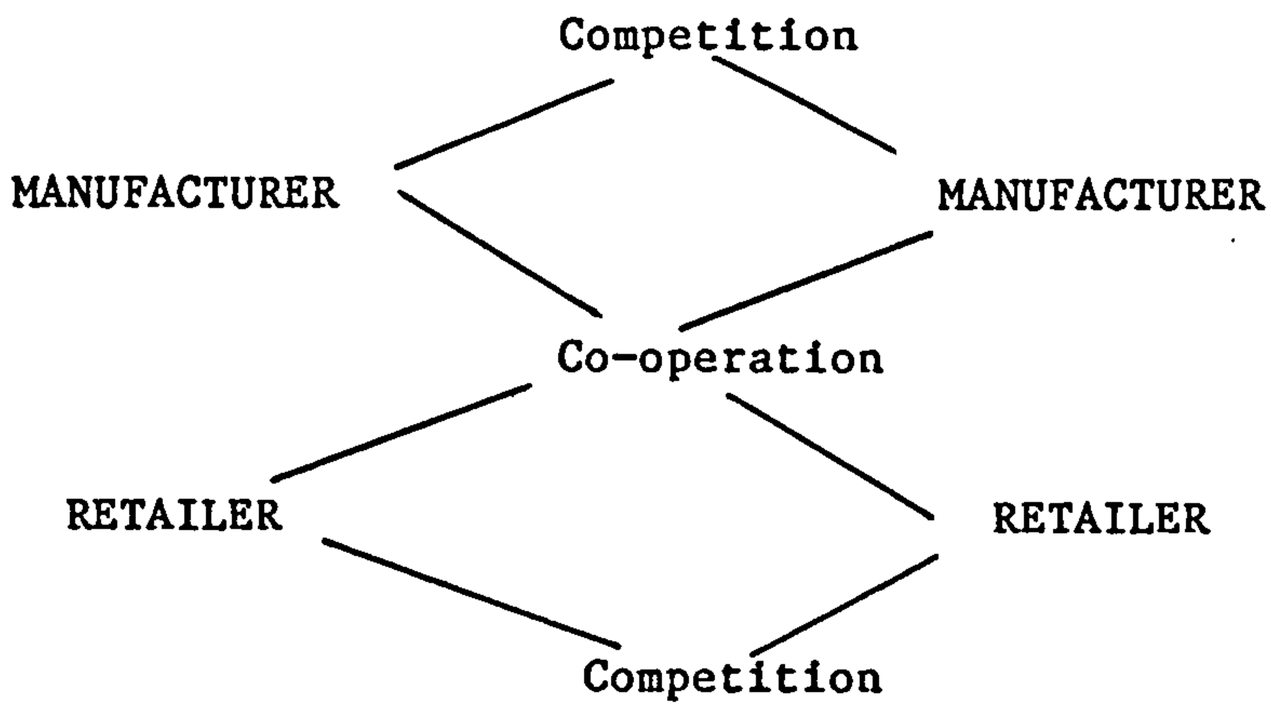
(ii) Growth in size of individual stores which cater for the mass market.

The retail multiples responsible for the growth of supermarketing are now a major force in the food chain. Previous to this development, food retailers were effectively only the middlemen between the manufacturers (and wholesalers) and the consumer, having little influence on which products were actually available. Supermarket chains are now an influential factor in the development of food products particularly in view of the development of the concept of supermarket "Own Brands". Intense competition for market share between retailers has also led to pressure on manufacturers to produce new products which can be used to entice customers into particular supermarkets (Senker,1988).

Product branding has also influenced the food market considerably and this is also a source of intense competition for market share, this time between manufacturers.

Competition between manufacturers and between distributors has been the major contributor to the expansion of the range of food products available to today's consumer and choice is a dominant issue in the consumer market. Tony Kershaw of the Co-operative Wholesale Society said that "The customer is only satisfied with the choice if she has a range of choice".

The relationship between food producers and distributors is complex and has developed throughout the 1970's and 1980's. Whilst it is in the interests of both groups to co-operate with each other to meet the market's needs and wants there is also intense competition as discussed above, between producers and retailers. Both manufacturers and retailers will co-operate with organisations who are co-operating with their direct competitors. This is summarised below.



Segmentation in the food market is highly complex and can be done in a number of ways, such as:

(i) by source - purchasing in supermarkets or corner shops

(ii) by type of product - luxury or commodity items

(iii) by type of food - fresh or frozen etc.

(iv) by branding - products such as soup can be highly differentiated such as Baxters lobster bisque and Heinz tomato soup

(v) by market - products such as cup-a-soup could be segmented into either the soup market or the snack market and targeted accordingly

(vi) by consumer - a company such as Findus can target products such as fish fingers and "Lean Cuisine" to very different consumers.

(vii) by lifestyle - products can be targetted to groups of people who have interests or activities in common.

(viii) by benefit - different benefits such as convenience or healthiness can be used to identify potential customers.

2.7 Summary

Products or services are transferred from the supplier to the consumer in the market place.

This Chapter has described

- the development of a consumer market
- how consumers are encouraged to buy
- segmentation of markets to influence particular buying groups
- segmentation in the food market
- the development and current status of the food market

This chapter has examined the market environment in which the consumer makes buying decisions, both in general and with specific reference to food.

CHAPTER THREE

THE CONSUMER

The previous chapter discussed how the environment has changed and how marketing orientated companies seek to influence the behaviour of consumers. This chapter looks at consumers and how they have changed in the context of a population and as individuals.

3.1 The Changing Consumer Population

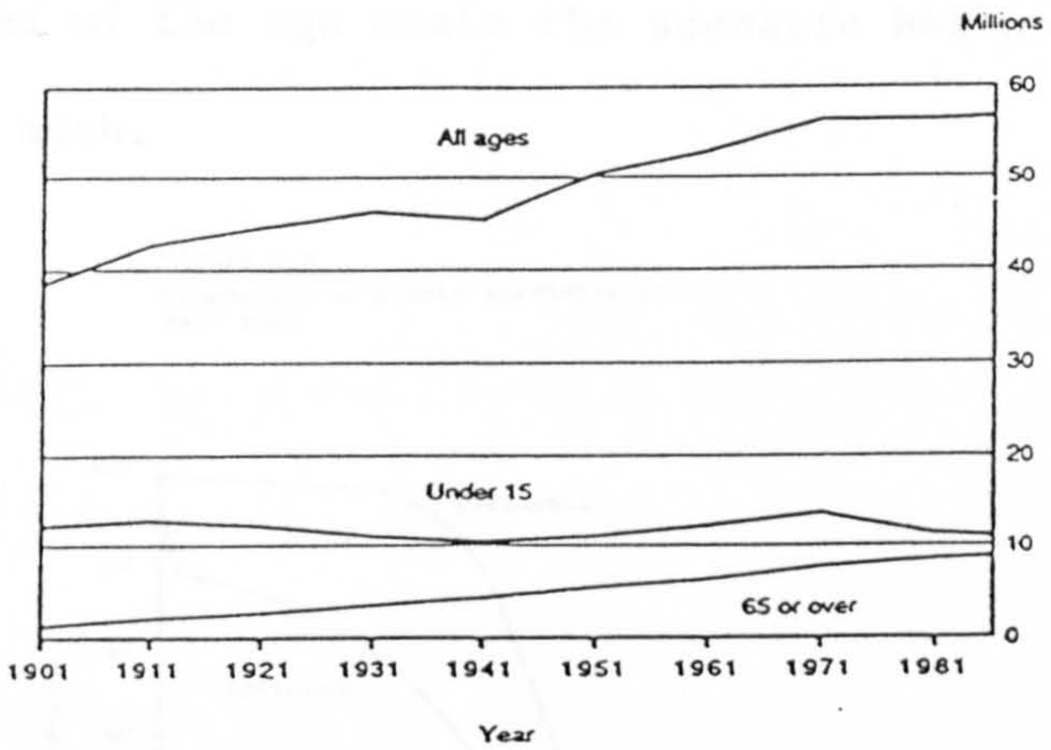
Populations are constantly changing in terms of size, composition, life-styles and attitudes. For the purposes of this thesis, the population is the consumer population of the United Kingdom. This chapter discusses population changes in general and then household and individual trends.

A discussion of the demographic details is essential to any work on consumer behaviour and attitudes as this describes the subjects of the research and provides insights useful during the analysis of the implications of the findings of the primary research. In this sense, this section forms part of the exploratory research discussed in Section 4.2.

3.2 Population Changes

The population of the UK grew steadily during the first 70 years of this century but since then has begun to plateau (Figure 3.1) and only slow growth is anticipated over the next 50 years.

Figure 3.1
U.K. Population by Age.



Source: Office of Population Censuses and Surveys.

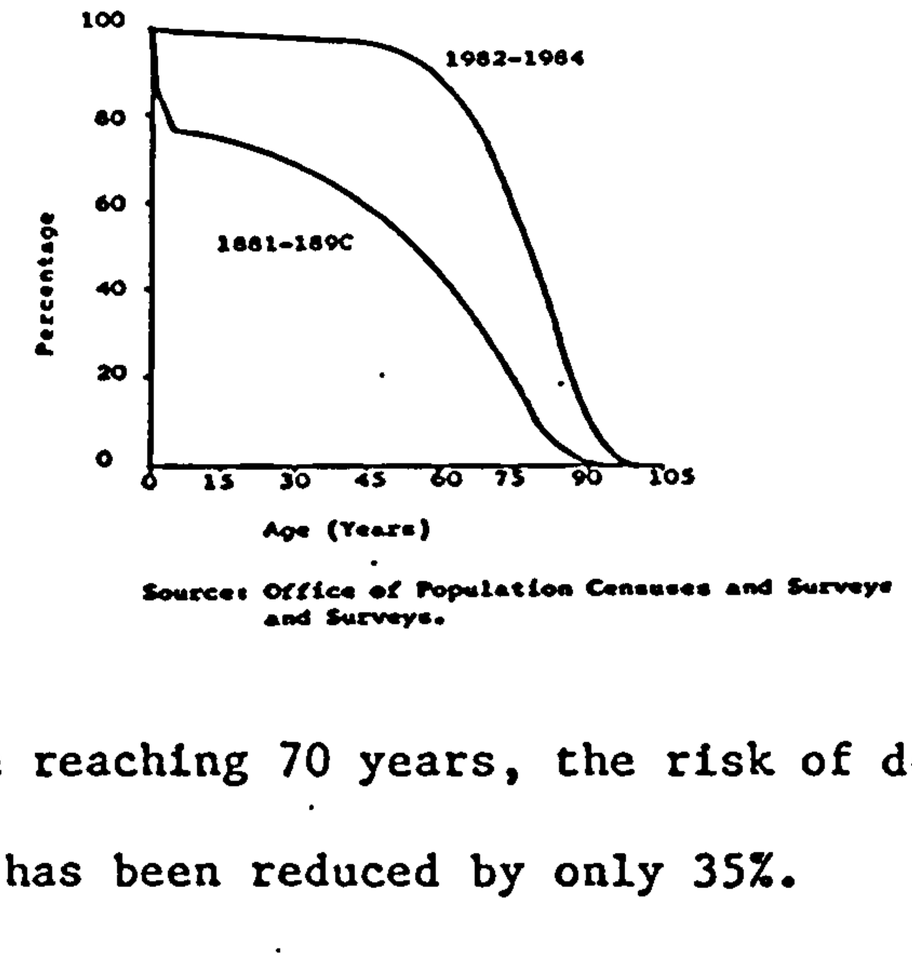
What is changing noticeably is the age structure of the population (Figure 3.2) which is getting older.

Figure 3.2
Age structure of the population: 1951-2025

Source: Office of Population Censuses and Surveys: Government Actuarys Department.

This trend has implications for the provision of adequate services and facilities, for example in education, medicine and services for the elderly. The mortality in the first 10 years of life has been reduced by 95% in the last 100 years - the odds used to be against surviving to 54 years but are now in favour of surviving to 77 years (Doll,1988). Figure 3.3 illustrates this change but also implies that at the higher end of the age scale the scenario has not changed quite as much.

Figure 3.3
Proportion of people surviving at each age.



Source: Office of Population Censuses and Surveys and Surveys.

For those reaching 70 years, the risk of death in the next 10 years has been reduced by only 35%.

Although there is little change in the maximum expectation of life, more people are reaching the older age groups. With the high incidence of degenerative diseases in mid life, it follows that the quality of life in old age is often less than it should be.

It is those people in the mid-age groups who are most at risk from degenerative diseases and hence at risk of suffering a premature death. Such people can gain considerable advantage from changes to their life-style; by taking preventative measures, to reduce their risk of developing the diseases of affluence and thus increase the probability of surviving into old age.

3.3 Individual Changes

This section looks beyond movements in the numbers and characteristics of the total population, to the ways in which individuals and groups of individuals live within the population.

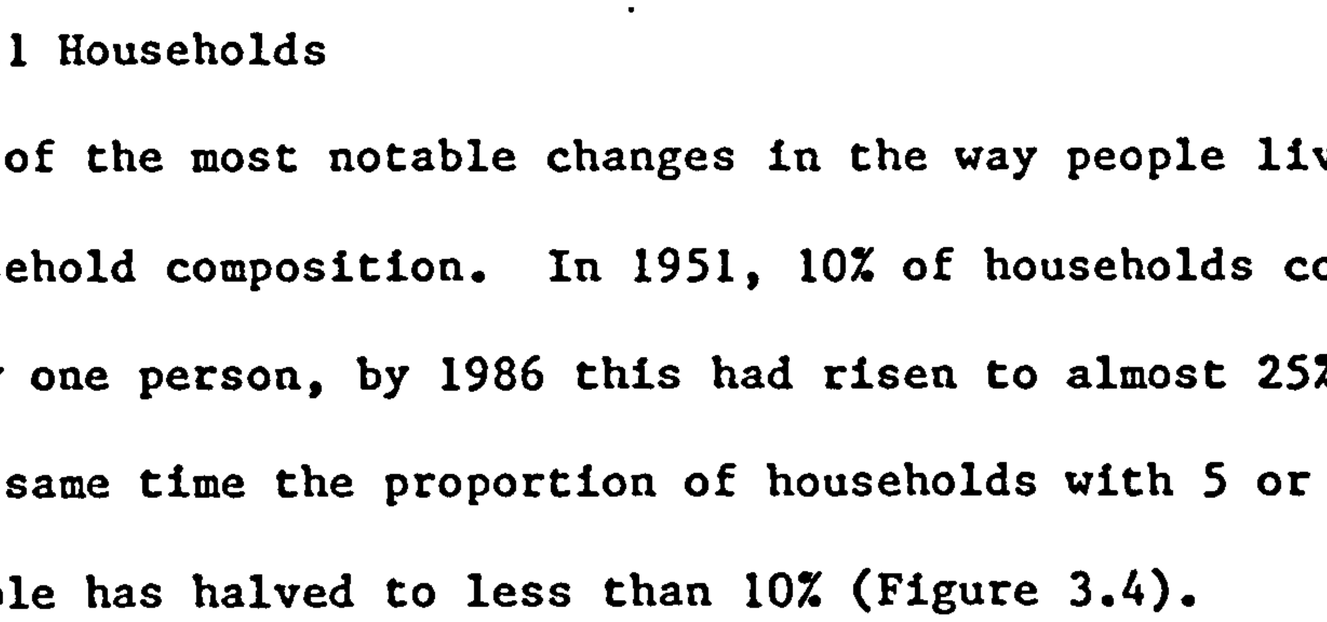
3.3.1 Households

One of the most notable changes in the way people live is in household composition. In 1951, 10% of households contained only one person, by 1986 this had risen to almost 25%. At the same time the proportion of households with 5 or more people has halved to less than 10% (Figure 3.4).

Figure 3.4

Households by size: Great Britain.

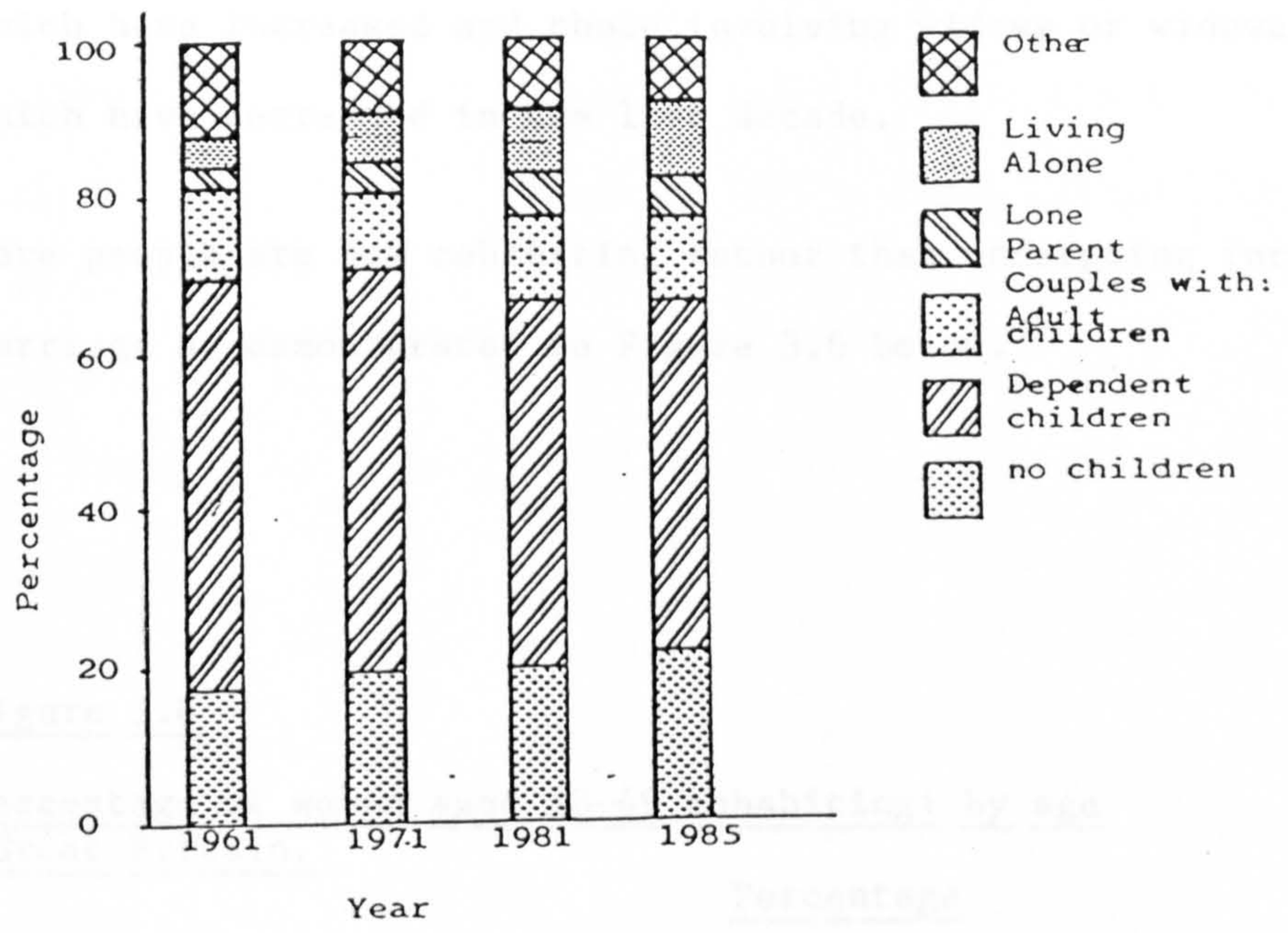
Percentage of all households containing one person and five or more people.



Source: Office of Population Censuses and Surveys: Department of Employment.

There are also fewer families consisting of married couples with dependent children as shown in Figure 3.5 below, which details the percentage of people in different types of household.

Family and Household Type.



Source: Office of Population Censuses and Surveys.

In summary, the major trends are:

- A growth in the number of single person households
- A decline in the average household size
- A decline in the number of families with children

3.3.2 Marriage and Divorce

Patterns of marriage and family building are also changing. In 1986 marriages between bachelors and spinsters accounted for 65% of all marriages, this compares to 86% twenty-five years ago. The Divorce Reform Act of 1969 meant that there was a large increase in remarriages between 1971 and 1976 and these marriages have now reached 35% of the total. Within this 35%, it is remarriages involving divorced people which have increased and those involving widows or widowers which have decreased in the last decade.

More people are now cohabiting rather than undergoing formal marriage as demonstrated in Figure 3.6 below.

Figure 3.6

Percentage of women aged 18-49 cohabiting: by age
Great Britain.

	Percentage				
	1979	1981	1983	1984	1985
Age group					
18-24	4.5	5.6	5.2	7.3	9.1
25-49	2.2	2.6	3.2	3.3	3.9
All aged 18-49	2.7	3.3	3.6	4.2	5.0

Source: General Household Survey

There are now less people, in most age groups undertaking first marriages, as detailed in Figure 3.7 below.

Figure 3.7

First marriages: by sex and age at marriage
Great Britain

	Thousands				
	1961	1971	1981	1985	1986
Women aged:					
16-19	76.5	92.4	42.0	28.0	24.4
20-24	259.1	246.8	141.7	108.4	103.1
25-29	166.1	167.5	120.1	111.0	106.9
30-34	72.2	74.6	66.4	65.1	65.7
35-44	29.0	29.7	28.1	27.6	28.0
All aged 16 or over	82.0	95.6	63.8	56.8	55.4
Men aged:					
16-19	16.9	26.8	11.6	7.4	6.1
20-24	158.7	169.4	95.6	69.1	64.5
25-29	184.5	169.0	121.2	108.4	104.0
30-34	91.3	85.0	69.7	72.0	72.7
35-44	39.3	33.6	30.5	29.7	30.6
All aged 16 or over	76.3	82.5	52.0	45.8	44.8

Source: Office of Population Censuses and Surveys.
General Register Office (Scotland)

The decline is most marked for both men and women under 30 years of age and conversely there has been a slight increase in the older age groups.

Divorce rates have increased over the last 25 years as shown in Figure 3.8 below. Britain has a higher proportion of divorces than any other country in the European Community although this can be explained to some extent by the higher rates of cohabitation in other countries and the relatively recent introduction of the Divorce Reform Act in 1969 (Divorce Reform Act, 1969).

Figure 3.8

Annual Divorce and Remarriage Rates

Divorces per 1,000 existing marriages

1961	1971	1981	1985
2.1	5.8	11.5	13.2

Percentage of divorcees who remarry within 2.5 years 1979-1981

Neither	Man	Woman	Both
43	24	23	10

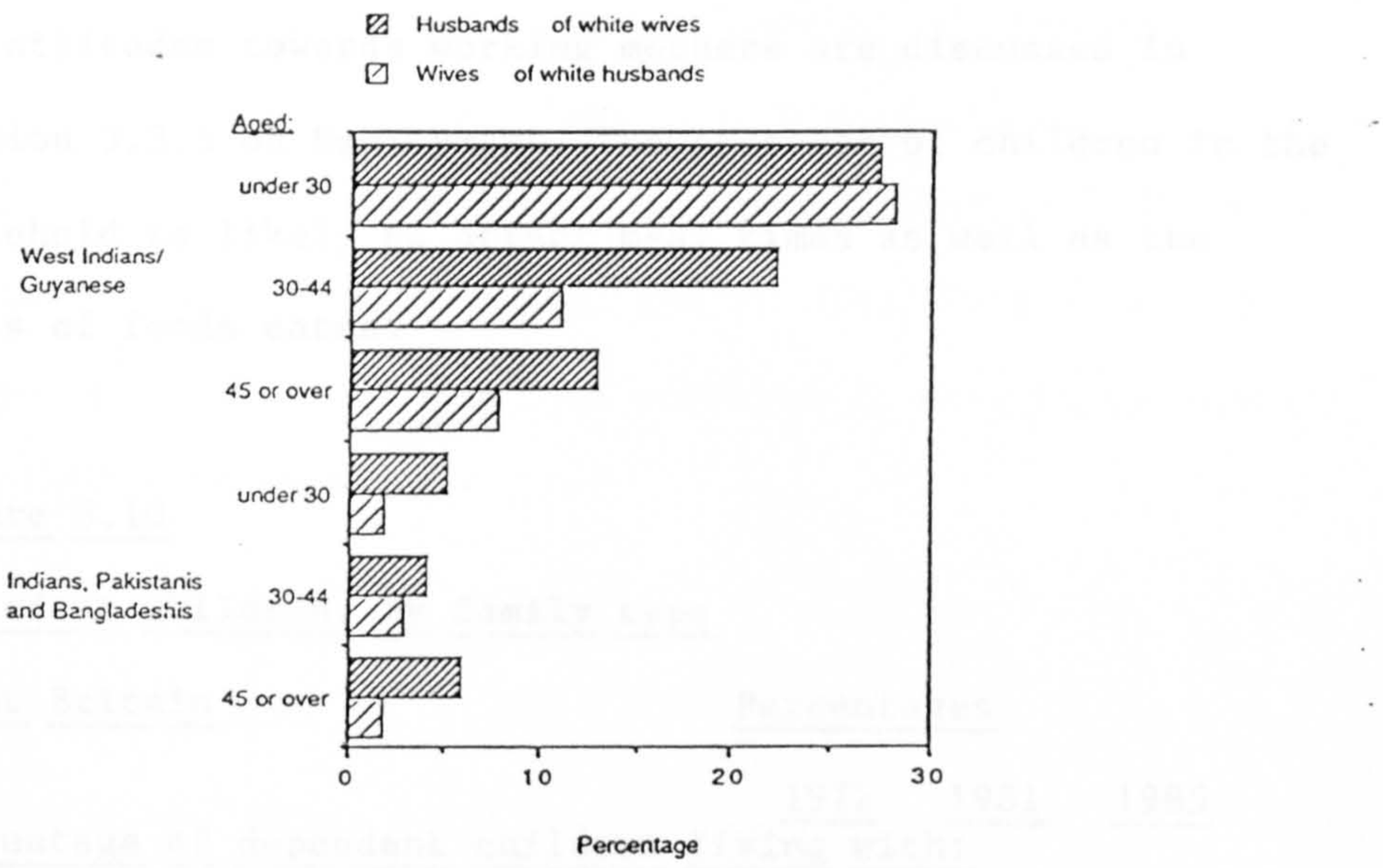
Source: Office of Population Censuses and Surveys.

One of the most interesting aspects of the marriage and divorce statistics is the number of divorced people who remarry. In only 43% of divorced couples did neither partner remarry within 2.5 years.

Composition of families by ethnic group is changing, Figure 3.9 shows that intermarriages between ethnic groups now represented in the UK are more common amongst younger people.

Figure 3.9

Percentage married to white persons by ethnic group and age.



Source: Labour Force Survey.

Many people in the UK, although from non-UK ethnic backgrounds are second generation immigrants and as such are more likely than the first generation to be integrated into British culture and therefore more likely to be part of a 'mixed' marriage.

As marriage and divorce trends affect household composition, eating habits are also likely to be influenced. More smaller units lead to a demand for smaller packages and convenience products.

3.3.3 Children

There is now a lower percentage of families with two dependent children than there was in 1972, on the other hand there has been an increase in the proportion of lone parents with dependent children over the same period (Figure 3.10).

The attitudes towards working mothers are discussed in Section 3.3.5 on Employment. The presence of children in the household is likely to affect meal times as well as the types of foods eaten.

Figure 3.10

Dependent children: by family type

Great Britain — Percentages

	1972	1981	1985
Percentage of dependent children living with:			
Married couple with:			
1 dependent child	16	18	19
2 or more dependent children	76	70	69
Lone mother with:			
1 dependent child	2	3	4
2 or more dependent children	5	7	7
Lone father with:			
1 dependent child	–	1	1
2 or more dependent children	1	1	1
Sample size (= 100%) (numbers)	9474	8216	5966

Source: General household survey

3.3.4 Education

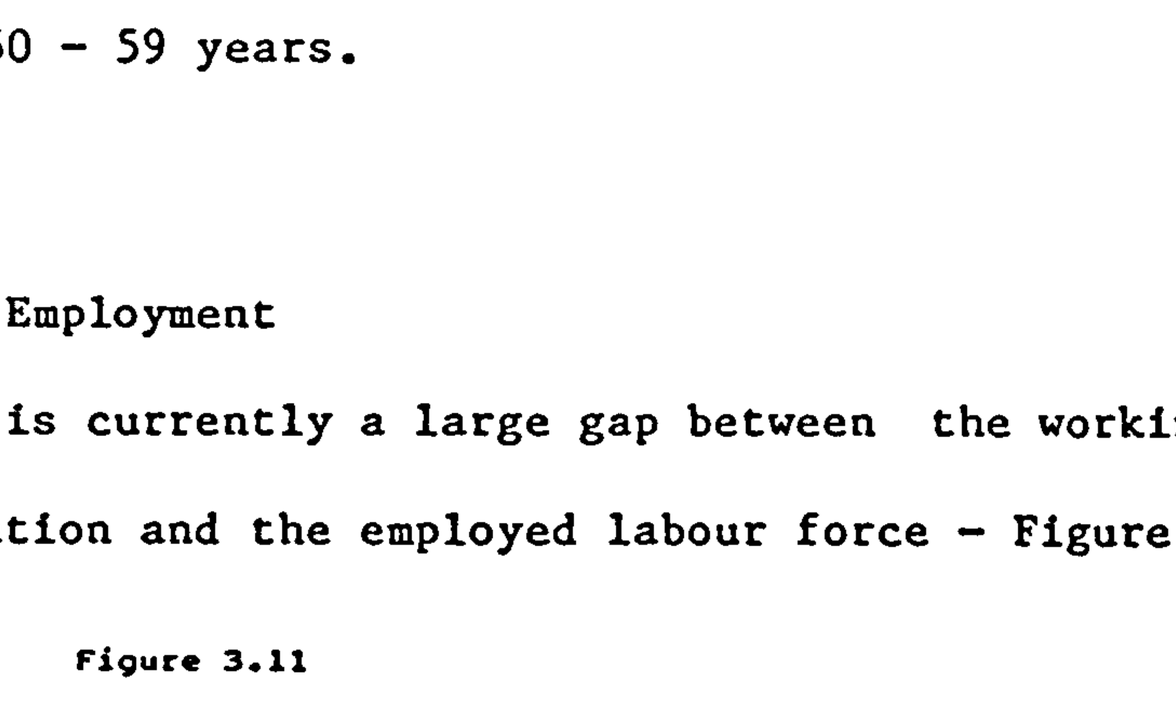
It is difficult to assess changing educational standards as the emphasis on formal qualifications and examinations has changed considerably over the last 40 years, there are however, many more people who leave the educational system today holding educational qualifications of some kind. It is easier to compare attainment of Higher Education qualifications although this involves a smaller proportion of the population. In 1985, 11% of those in the 25 - 29 year age group held a degree compared to only 6% of those aged 50 - 59 years.

3.3.5 Employment

There is currently a large gap between the working population and the employed labour force - Figure 3.11.

Figure 3.11

Working Population and Employed Working Force.



Source: Department of Employment

The total working population has itself increased over the last 25 years (Figure 3.12).

Figure 3.12

Civilian labour force and population of working age
Great Britain

Millions

	Civilian labour force			Population of working age
	Males	Females	Total	
Estimates				
1971	15.6	9.3	24.9	31.7
1976	15.6	10.1	25.7	31.9
1979	15.6	10.4	26.0	32.6
1981	15.6	10.6	26.2	32.9
1983	15.3	10.6	25.9	33.3
1984	15.5	11.0	26.4	33.6
1985	15.5	11.1	26.6	33.7
1986	15.5	11.2	26.7	33.9
Projections				
1987	15.6	11.3	26.9	34.1
1991	15.7	11.5	27.2	34.3

The number of men in the civilian labour force has remained steady since 1971 but the number of women has increased to account for the parallel increase in people available for work.

Attitudes to working mothers were investigated by the Social and Community Planning Research Centre and some of the results are detailed in Figure 3.13.

Figure 3.13

Attitudes to parental working

Percentage considering that the best arrangements for families with children under five were:

Both parents working	1.0%
Father working full time, mother at home	76.3%
Father working full time, mother part time	16.9%
Other	5.8%

It is apparent from these results that women with young children, are still expected by most people, to leave the working population. The economic activity of married couples is summarised in Figure 3.14.

Figure 3.14

Employment status of married couples

Percentage of couples in which:	1973	1979	1983
Wife working -full time	25	26	27
Wife working -part time	29	34	32
Wife unemployed	1	2	4
Wife economically inactive	44	38	37

Source: General Household Survey.

The working habits of women (particularly married women) have had a significant effect on the demand for consumer products both durable and fast moving goods.

3.3.6 Income and Wealth

Disposable income is increasing as shown in Table 3.15 below. After allowing for inflation, the total household disposable income has risen by 30% between 1976 and 1986. Real disposable income per person has risen on average, 2.5% per year over the same period.

Figure 3.15

Household income in the United Kingdom.

	1976	1978	1980	1982	1984	1986
Total household income (billions of pounds)	100.4	128.2	180.6	219.3	255.6	306.2
Total household disposeable income (billions of Pounds)	78.3	103.0	146.3	175.3	202.6	243.9
Real disposeable income per head (1980=100)	89	93	100	99	104	114

Source: Central Statistical Office

Over half of the wealth in the UK was owned by 10% of the population in 1986 (Figure 3.16).

Figure 3.16

Distribution of wealth

United Kingdom	Percentages			
	1971	1976	1981	1985
Marketable wealth				
Percentage of wealth owned by:				
Most wealthy 1%	31	24	21	20
Most wealthy 5%	52	45	40	40
Most wealthy 10%	65	60	54	54
Most wealthy 25%	86	84	77	76
Most wealthy 50%	97	95	94	93
Total marketable wealth (billions of pounds)	140	263	546	863

This table however, also indicates that wealth is more widely distributed in 1986 20% of wealth was owned by the most affluent 1% of the population compared to 31% in 1971. Over the same time, the most wealthy 50% of the population dropped from owning 97% of wealth to 93%. At the other end of the spectrum, this means that the least wealthy 50% of the population own only 7% of the country's wealth.

3.3.7 Consumer Expenditure

Expenditure at current prices is summarised in Figure 3.17 for a number of goods and services.

Figure 3.17

Percentage of consumers expenditure on food, housing and transport.

	1978	1980	1982	1984	1986
Food	17.9	16.6	15.3	14.6	13.8
Housing	13.2	13.7	15.5	15.0	14.9
Transport and Communication	15.4	16.4	16.5	16.6	16.5

Source: Central Statistical Office

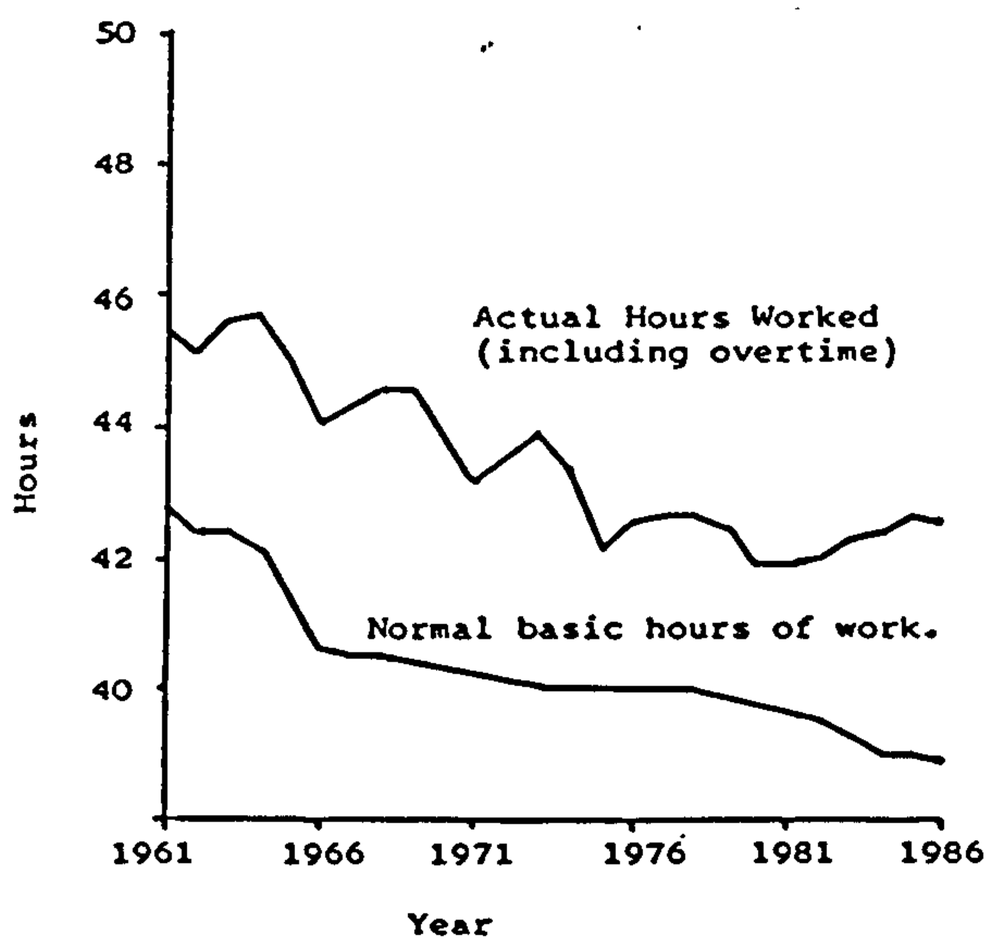
This table shows that expenditure on food represents a smaller proportion of total expenditure than it did in 1978. The main categories of expenditure which have increased over the period are housing and transport.

3.3.8 Leisure

The amount of leisure time has increased over recent years. Figure 3.18 shows the decrease in hours worked by manual workers since 1961.

Figure 3.18

Weekly hours of work : United Kingdom.



Source: Department of Employment.

The amount of leisure time available has a direct influence on demand for consumer goods and services as it is a fundamental factor in life-style patterns. The implications for the food market are that with increased leisure time, there is more opportunity to entertain or to eat for pleasure rather than to satisfy primary needs.

3.3.9 Consumer Goods

There are many durable goods available to consumers in the 1980's, Figure 3.19 shows the household penetration of a number of these products.

Figure 19

Households with durable goods

Great Britain	Percentages All households
Percentage of households with:	
Refrigerator	95
Deep-freeze	66
Washing machine	82
Tumble drier	34
Dishwasher	6
Telephone	82
Television	
Colour	86
Black and white only	11
Video	32
Home computer	13

Source: General Household Survey, 1985

Ownership of some of these goods tells us a great deal about consumer life-styles and their expectations. Owenership of freezers, for example, has made convenience food consumption commonplace for many families and is also an important influence on shopping patterns.

3.4 Summary

This chapter has given a picture of the subject of this research-the consumer-both in terms of the individual consumer and the population of consumers.

As a whole, section one of this thesis has dealt with the key aspects of food, health and the consumer.

Chapter one described the development of food and health as an issue and the background to these concerns.

Chapter two described the environment in which the subjects of this research live.

Chapter three has described the subjects themselves.

Having introduced the issues, the environment and the subjects, part two goes on to deal with the actual research methods and to describe the results of this research.

PART TWO.

RESEARCHING CONSUMER HABITS AND ATTITUDES.

CHAPTER FOUR

DATA COLLECTION

This chapter reviews the techniques available to the researcher for data collection, at both the secondary and primary stages of a research programme, and continues to describe the methods used in this particular programme.

Choice of method is dependent upon the extent of current knowledge, the advantages and disadvantages of each approach as they relate to the particular research objectives and on the budget constraints of the research programme.

In an early edition of Marketing Management: Analysis, Planning and Control (Kotler, 1966) a definition of marketing research was proffered as follows:

> "Marketing research is systematic problem analysis model building and fact finding for the purpose of improved decision making and control in the marketing of goods and services".

4.1 Exploratory Research

This kind of research is the foundation of marketing information and so it is important that it is based on a set of assumptions which are relevant to the research environment. Therefore the exploratory stage of the programme is vital and may include some or all of the following activities (Crimp,1981).

Secondary data search:	Internal sources
	External sources
Consulting experts	
Observational studies	
Consulting the market place:	Group discussions
	Depth interviews
Omnibus surveys	

4.1.1 Secondary Data

Internal sources are often more comprehensive and useful than they are given credit for. They consist of previous research and internal records of a company or an organisation. Previous research may be out of date but will often provide a valuable insight into long term changes which cannot be evaluated during current research.

In order to utilise this kind of research, its design and content should be considered in the present programme.An example of a particularly useful kind of internal secondary data, in a commercial environment, is the information about the customer base, previous sales trends, costs and distribution.

There is a third kind of internal resource and that is information from external sources collected for previous research. This is useful in itself but also provides a starting point for an external search for updated information and for related or referenced sources.

External sources of information are of three main types: Government statistics, other published sources and syndicated services.

The Government Statistical Service (Central Statistical Office) collates statistics from the Business Statistics Office, the Office of Population Censuses and Surveys, the statistics divisions of all major government departments and the Central Statistical Office itself which co-ordinates the whole service.

The Government is the largest, but certainly not the only source of published information; trade and professional associations, local government and banks often produce economic or business reviews. There are also organisations such as the Economist Intelligence Unit, Keynotes and Business Monitor which are themselves based on secondary data and as such are often a useful collation of market information.

Syndicated sources are useful to those interested in consumer markets (and who can afford the service). Organisations can subscribe to trend data supplied by research agencies which organise retail audits and consumer panels. This kind of information is not only useful in itself but also as a validation or comparison with internal data. Syndicated information includes trends in volume and value of consumer purchases, demographic profiles, consumer buying habits and seasonal trends. The information does not usually include how products or brands are used or the attitudes and perceptions of consumers.

4.1.2 Consulting Experts

This is a useful process particularly if the research area is technical or very specific. There are usually a number of people within the researcher's own organisation with whom they would be advised to discuss the programme in order to make realistic assumptions when designing primary data collection. It may also be the case that this programme could be used to generate information which would be useful to other individuals in the same organisation. This phase of exploratory research is usually done on a number of levels both formally and informally, internally and externally.

4.1.3 Observational Studies

Observation in the market place can help with two things, to identify the kind of variables it would be useful or interesting to include in a survey and also to assess how appropriate a venue is regarding target sampling. The value of observation depends on the kind of product or service and the personal experience of the researchers.

4.1.4 Consulting the Market Place

The consultation phase is the one during which qualitative research is used to contribute to survey design and content. Qualitative research is often underestimated as it does not lend itself to rigorous statistical analysis. It is, however, a valuable research tool serving two main purposes - to identify key areas for further investigation and to keep the researcher personally in touch with both the market and the consumer. By the time the survey itself is administered, a relatively small number of key factors have usually become the focus of the research. Qualitative research, although it can be designed to be narrow, usually covers a wider range of issues than quantitative research, the key ones being identified by the respondents rather than the researcher (Smith,1982).

4.1.5 Qualitative Research

Qualitative research can be undertaken both at the exploratory stage and the primary stage of the programme. It is included here in the exploratory stage as arguably its most useful function is the way in which it generates ideas, provides detail and keeps the researcher in touch with currently relevant issues. In performing these functions, it gives valuable input into the design of the primary stage of the research. Qualitative research should not be seen as

less valuable or reliable than quantitative research, rather it is an invaluable partner and has an important place throughout a research programme.

There are essentially two approaches to qualitative research: group discussions and individual interviews. The main difference between this stage of research and the survey stage is that here, the researcher takes the role of the listener rather than the questioner (Crimp, 1981). Having listened to the consumer's accounts of their behaviour and/or attitudes a survey can be used to analyse in a quantitative way how many, and what kind of consumers behave and think in the ways indicated in the qualitative research.

Depth interviews are less efficient than group discussions in terms of the necessary time needed to establish the views of a number of consumers. They also lack the inspiration and interaction generated in groups. One situation in which individual interviews are extremely useful is when the subject area could be considered personal and the presence of others might inhibit open discussion

Careful consideration must be given to the construction of groups, they can either be homogeneous or heterogeneous. Homogeneous groups may be more at ease more quickly whilst heterogeneous groups provide a greater wealth of experience and attitudes to stimulate discussion.

Group discussions are best analysed through the transcription of tape recorded conversations and using the respondents phraseology whenever possible. There are a number of advantages and disadvantages to using qualitative methods.

Disadvantages:-	Respondents may not be representative of the market.
	The researcher or interviewer may unduly influence the progress and outcome of discussion and interviews.
	The analysis, which is necessarily subjective, may not be an accurate representation of the respondents views.
Advantages:-	Key issues can be identified for inclusion in surveys that follow.
	They can establish which terminology is familiar and used by respondents
	Attitude statements can be generated for quantification by survey.

4.1.6 Omnibus Surveys

These surveys are administered by a research organisation which sells space on a questionnaire to a number of clients. Questions on such surveys can be used to establish general market characteristics or used to establish a consumer profile. They are often based on a very large sample which may otherwise be impractical for the researcher to undertake as a specialist survey because of the prohibitive costs involved.

The major disadvantage of an omnibus survey is that it is likely to cover a range of subjects or products, it is possible to subscribe to a specialist omnibus but this will still represent the interests of a number of clients.

The exploratory stage of a research programme may vary in degree, largely depending on the level of familiarity of the researcher with the market in question. Whatever the level of familiarity however, it is always a useful exercise to analyse each component of exploratory research in order to consolidate existing information and to aid the assessment of the need for further secondary or the initiation of primary research.

4.2 Primary Research

There are two main types of approach to collecting primary data, by observations or by questions.

Observations can be made by the research team, by using diaries or measurements from instruments.

Questioning can be undertaken using a number of methods: personal interview, telephone interview, postal questionnaire or computer survey.

4.2.1 Observational Studies

The major advantage of observation is its objectivity.

Whether the researcher or the respondents themselves are recording details, these details are facts - which kind of facilities are used at different times, or what foods are eaten on different occasions.

This kind of data can result only in the answers to such questions as - How often? or How many? It is the major limitation of observational data that it cannot answer the question "Why?" Observation can be an extremely objective and reliable method of data collection when collected by instrumentation or well briefed researchers. There are more problems however with diaries completed by participants which are open to human error and good diary design is essential.

4.2.2 Survey (Questioning) Studies

The choice of survey method depends upon the subject matter of the research, the nature of the population and sampling method and the budget available for the research (Chisnall, 1973).

4.2.2.1 Personal Interviews

If a questionnaire is lengthy or complicated in its structure, it can be most effectively completed by personal interview. Well trained and well briefed interviewers can lead a respondent through a series of questions which might otherwise confuse. Since it is often important that surveys are completed in a particular order - personal interviews remove the temptation to read the last page first. They also reduce the risk of non-response to questions and of partially completed questions. In some instances it is the responsibility of the interviewer to select suitable respondents (those fitting the sampling frame); this can be very helpful in limiting the cost of completed and acceptable cases.

The standard of the interview (and thus the training and briefing of the interviewer) is vital to this technique and central to its success. The Market Research Society sets out to maintain the standards of interviewers in its code of conduct (Market Research Society, 1988) and in 1979 introduced the idea of the 'MRS Interviewer Card Scheme' for use by bona fide researchers. (Market Research Society, 1981).

The design of an interview, the form of questions and techniques of administration are well documented (Payne, 1951; Oppenheim, 1970; Wolfe, 1973) but in a sense are incidental until the choice of survey method is made.

4.2.2.2 Telephone Interviews

Most households (82%) now have a telephone (Central Statistical Office, 1988) and so a telephone survey would be appropriate for many consumer goods. It would be an unusual company that does not have a telephone and so telephone interviews may be useful when surveying a sample of businesses.

Regarding consumer surveys, there is evidence that households with a telephone have similar behaviour patterns and attitudes to those without a telephone (Hyatt and Allan, Milne and Steward-Hunter, 1976). Telephone interviewing requires care and skill skilful and indeed there are

agencies specialising in this kind of work, since it is more difficult to establish a rapport and maintain respondent interest on the telephone than it is in a personal interview. It is, however, useful in obtaining a random sample of consumers (telephone numbers taken from a directory) and cost effective if a large geographical area is to be covered and the interviewer is adept at maintaining a good response rate.

For business respondents, the telephone interview is useful in identifying relevant personnel and in the administration of simple surveys. For more complex or detailed information however it is unlikely that all respondents will be available at the time of the telephone call or that if they are, they will have detailed information to hand. In these cases the telephone is at its most useful as a precursor to a personal interview.

4.2.2.3 Postal Surveys

The response rate from a postal survey is likely to be relatively low - between 30% and 40% (Milleto, 1981) although some techniques can be used to improve on this, such as incentives and reminder letters. It is however less costly in terms of both finance and researcher time than either telephone or personal interviews. The drawbacks of a postal questionnaire are that there is no researcher or representative present when the survey is completed. This means that the survey may be read through before it is completed and this may bias response to earlier questions. It may also not be completed on the same occasion or more than one person may have a hand in its completion.

4.2.2.4 Computer Surveys

Computer surveys are not nearly so widely used as other methods of data collection but they warrant mention here as their use is likely to become more popular with the onset of more available and cost effective technology. They can be used on any occasion where people from the appropriate population are gathered or where computer terminals can be established in a situation where a personal interview would normally be carried out.

By responding to prompts on a computer, responses can be coded, directly input into the data file enabling analysis and interpretation of the data to be completed more quickly than would normally be the case.

4.3 The Components of this Research Programme

The following is a description of the data collection methods used in this programme of research at both the exploratory and primary stages. The possible techniques are discussed with specific reference to the needs and constraints of this programme.

The exploratory research is described in this chapter as it is essentially background research and does not provide results which can be presented in a formal manner. Chapters Five to Seven describe three separate pieces of research.

4.4 Exploratory Research

4.4.1 Secondary Data

4.4.1.1 Internal Resources

Within the University there proved to be a wealth of internal secondary data which is listed below.

(i) Copies of reports suggesting dietary changes with the object of improving health, in particular the COMA Report "Diet and Cardiovascular Disease" (1984), The NACNE Report (1983) and the British Medical Association Report on Diet, Nutrition and Health (1986).

(ii) Food Policy Research Briefing Papers (Appendix 1) which covered a range of topics including the implications of dietary recommendations for the food industry and the development of local health authority food policies. The medium of these Briefing Papers has also been instrumental in the communication of the intermediate results of this reseach programme (as has presentations at conferences and publication in journals) to interested parties (Appendix 2).

(iii) The National Food Survey reports from which data was analysed regarding food consumption trends and the contribution of individiual foods and nutrients to the national diet (Ministry of Agriculture Fisheries and Food, 1988).

(iv) A varied collection of publications and literature concerning consumer interest in diet and health and the communication of dietary recommendations, these include:

(a) Reports of research commissioned by food retailers and manufacturers, (Birds Eye Walls, 1987; Findus, 1987; Presto, 1986; Presto Stores, 1985)

(b) Literature produced by retailers and manufacturers providing diet and health information for the public, (Sainsbury, undated; Dairy Produce Advisory Service, 1985; Chemical Industries Association, undated; Marvel, 1986; Flora Project for Heart Disease prevention, undated; The Sugar Bureau, undated; Fresh Fruit and Vegetables Information Bureau, 1986; Pasta Foods, 1986; Findus, 1984; Tesco stores, undated; Safeway Nutrition Advisory Service, 1986; Mars incorporated, 1986; Mars Confectionery, 1986)

(v) A number of Trade Journals relating to the food industry.

(vi) The most valuable internal information relating to consumer behaviour and attitudes was a market research study commissioned by the Food Policy Research Unit in 1985, the results of which required analysis. This research was undertaken by a commercial research organisation - Survey

Research Associates (SRA) - and was administered by personal interview. The questionnaire used on this occasion is reproduced in Appendix 4. This survey (sponsored by the Milk Marketing Board for England and Wales) covered milk usage, milk purchasing habits , knowledge of the fat content of milk and attitudes towards milk and towards some diet and health issues. This particular piece of work formed background to the research programme described in this thesis which began with screening and analysis of the SRA data. The study was then expanded into a two year comparative study by re-contacting the original respondents (recruited in 1985) in 1986 and asking them to complete a postal questionnaire. This is described in detail in Chapter Five.

4.4.1.2 External Sources

The two most useful sources of information on UK food consumption trends are the National Food Survey and the Consumption Level Estimates, (MAFF, 1987).

Sources of information on food and health issues are produced by commercial organisations which provide useful background information, (The Economist Intelligence Unit, 1988; Market Assessment Publications Ltd., 1988; Retail Business, 1986,1987 and 1988; D'Arcy, Masius, Benton and Bowles, 1986 and 1987; The Research Business 1985).

The external sources of information were identified by writing to over 200 companies in the food industry and asking them which sources they would use to identify issues relating to food and health.

4.4.2 Consulting Experts

This area of research is by its nature interdisciplinary, it was therefore essential to speak with a number of people about food policy issues including nutrition, economic and polical and communication aspects. This process included both people within the Food Policy Research Unit and those from other organisations, both academic and commercial.

4.4.3 Observational Studies

Exploratory observation is an ongoing process and largely informal. It includes in this instance monitoring retailer and manufacturer's portrayal of food and life-style associations and observing the kind of promotions they undertake. The media frequently cover food and health related issues which can influence consumer attitudes and is very likely to do so.

4.4.4 Consulting the Market Place

This is really a formalised version of observational studies. The qualitative part of this programme takes the form of group discussions. Most people are happy to talk

about food and have something to say or think they have something to learn about issues concerning diet and health.

This stage of the research was ongoing throughout the programme and the results have been invaluable in the assessment of consumer reaction to food and health issues. The individual interviews would have been very time consuming and it would have been difficult to encourage people to discuss their habits or their own understanding of diet and health associations. The interaction between participants in group discussions provided impetus for the lively exchange of views and 'knowledge' about diet and health. A detailed description of this stage in contained in Chapter Seven.

4.4.5 Omnibus Surveys

The use of an omnibus survey was rejected as disproportionately expensive as the general content of the survey work was decided on by other means. The format used was largely determined by the 1985 survey and the extra issues were identified by qualitative research. As such a wealth of information about current concerns was available, use of an omnibus survey was inappropriate.

4.5 Primary Research: Observation or Survey

The type of information required by the primary research answers the questions: "What do people do?" and "Why?", "What do people think?" and "Why?" These questions ending in "Why" cannot be answered by observational techniques. Having decided that survey methods were more appropriate than observation, there were a number of types of survey available.

Personal interviews would have been difficult because they would have been extremely demanding on resources in terms of both time and money. In the 1985-1986 survey (Chapter 5) the respondents had already been interviewed on one occasion and were re-contacted by post. Telephone interviewing was considered but this would have posed problems of finding respondents at home at a convenient time. The content of the questionnaire was such that it would not suffer from self-completion - it was easy to understand and the results could not be devalued by completing the questionnaire in the wrong order or pre-reading of the later sections.

4.6 The Research Programme

The research programme consisted of a series of both quantitative and qualitative methods. The following outline gives details of the various phases of the programme placed in chronological order. These phases will be detailed in subsequent Chapters.

DATE	DESCRIPTION	TYPE OF RESEARCH
March 1985	Pilot Survey	Quantitative
May 1986	Phase one of main consumer survey	Quantitative
May 1986	Phase one of group discussions	Qualitative
June 1986	Phase two of main consumer survey	Quantitative
September 1986	Phase two of group discussions	Qualitative
May 1987	Healthy eating exhibition survey	Quantitative

There are three main components to this research programme:

(1) A two year survey regarding attitudes towards diet and health using liquid milk as a case study (Chapter Five)

(2) A survey of consumer's attending a healthy eating exhibition organised by Tameside Metropolitan Borough Council in Ashton-under-Lyne (Chapter Six)

(3) A series of group discussions designed to assess trends in changing areas of diet and health concern (Chapter Seven).

The following chapters detail each of these components.

CHAPTER FIVE

MILK AND THE CONSUMER

A TWO YEAR STUDY OF DIET AND HEALTH ATTITUDES USING LIQUID MILK AS A CASE STUDY

This chapter describes a two year consumer survey using milk as a case study to examine behavioural and attitudinal reactions to concern about diet and health. The background section discusses the role of milk in the diet and the effect of increasingly widely available low fat products on the market for liquid milk.

The respondent profile is described for phase one and phase two (1985 and 1986) of this survey. Two types of results are presented:

- A descriptive analysis of milk purchasing habits and attitudes.

- A cluster analysis dividing respondents into homogenous groups on the basis of attitudes.

5.1 Background

The food industry is now beginning to accept that healthy eating is not a fad, and that consumers demand a range of "healthy" foods from which to choose.

Milk has traditionally been an important and significant constituent of the British diet. It was, for many years, provided in all schools as a dietary supplement and has a unique distribution system which can reach almost every household in the country.

Typically milk contains 3.8% total fat and has a high proportion of saturated fatty acids. The ratio of saturated to polyunsaturated fatty acids is 26:1 (Dairy Facts and Figures, 1987).

The National Food Survey suggests that milk contributes 12% of fat to the average British diet (DHSS 1988). This implies that substituting low fat milks for whole milk can be a useful way of reducing fat intake. Changing from full fat to a low fat milk is a relatively straightforward way of responding to the dietary recommendation to reduce fat intake, without changing consumption of milk as a product.

Since whole milk is a significant contributor to the dietary fat intake (especially of saturated fat) sales are particularly vulnerable as people become increasingly aware of diet and health issues. The total market for liquid milk has, in fact, been in decline for some years. This trend has been arrested, largely due to the increased availability of low fat milks as alternatives to whole milks (this is particularly true with respect to doorstep deliveries of low fat varieties of milk). In removing the fat, the mineral nutrients such as calcium are retained, although most of the fat soluble vitamins A and D are lost in the process.

This leaves low fat milks with a high nutritional profile, the calcium levels of low fat milks are higher than whole and as such they are acceptable to those making changes to their diet in a health conscious way.

Liquid milk was a particularly appropriate case study as at the time, demand was shifting considerably towards a preference for low fat products, there was much interest in determining hoe far this trend would go and the implications of this for surpluses.

The term low fat milk is used throughout this thesis to refer to skimmed and semi-skimmed milks. The fat content of skimmed milk is 0.1%, and of semi-skimmed milk is 1.8%. Full fat milk is referred to as 'whole milk' and contains an average of 3.8% fat.

At the time of the study low fat milks had been widely available for some three years from both the milkman and from the shop. As the initial surge in low fat sales had subsided it was considered relevant to assess the motivation

behind continued milk purchase with particular reference to health consciousness as a component of demand. Therefore, the Food Policy Research Unit, with co-operation from the Milk Marketing Board for England and Wales decided to study the relationship between liquid milk usage and attitudes to the diet and health issue.

This two year study was designed to investigate changes in milk consumption, attitudes and knowledge over the trial period. This chapter reports the findings of the research.

5.2 Methodology

The first phase was carried out in May 1985 after pilot work had been refined into a full scale survey (Fallows and Gosden,1985). The results of this pilot study were published as a briefing paper "Does the Consumer Really Care?" (Fallows and Gosden, 1985). The pilot study was used to identify issues warranting further scrutiny and which were incorporated into Phase One.

The actual data collection was undertaken by a commercial market research agency - Survey Research Association (SRA), a subsidiary of National Opinion Polls (NOP). The sampling frame was designed to obtain respondents from representative households within the area covered by the Milk Marketing Board for England and Wales. The questionnaire (Appendix 2) was administered by personal interview at sixty-three sampling points throughout England and Wales (A list of sampling points in given in Appendix 3). Twenty-four contacts were targeted for each sampling point giving a total of 1512 potential contacts from which 1458 completed interviews were obtained.

In summary respondents were asked:

- What types of milk they had purchased over the previous four weeks

- How much milk, of what types and from which sources they had purchased over the previous seven days

- How much fat they believed to be in a pint of whole milk

- Their reaction to a series of statements on a scale ranging from strongly agree to strongly disagree

In order that the survey could be repeated the following year, respondents were asked during this interview if they would agree to being recontacted to participate in a similar exercise and they were also asked to give their names and addresses.

Following data collection, SRA provided a computer tape of the punched data, compatible with the University of Bradford's mainframe computer. This data was screened and subsequently analysed using the Statistical Package for the Social Sciences (SPSS-X).

The second phase of the research was carried out in June 1986. The questionnaire was redesigned to make it suitable for self completion by respondents. It was also considerably extended to include a wider range of attitudinal statements and questions about sources of information on diet and health. This questionnaire is reproduced in Appendix 4. The questionnaire was mailed to all those respondents who had agreed to be recontacted with a covering letter and an addressed prepaid return envelope. This was followed after a period of three weeks by a reminder letter to non-respondents.

As an incentive to respond to the survey, participants were, in both 1985 and 1986, told that their names would be entered into a draw for gifts of one hundred, fifty and twenty-five pounds in appreciation of their co-operation. Some of the results of these surveys are published in the Special Report "Milk and the Consumer"(Wright, 1986).

5.3 Respondent Profile

The samples for 1985 and 1986 are described in the following Figures, in terms of:

- Socio-eonomic group
- Age groups
- Households with and without children
- Size of Household

Figure 5.1

Sample construction by socio-economic group

	Socio-economic group				
	AB	C1	C2	DE	Total
1985 Number of Households	214	317	437	490	1458
% total	15	22	30	33	100
1986 Number of Households	117	137	174	148	576
% total	20	24	30	26	100

Figure 5.2

Sample construction by Age Group

	Age Group						
	16-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65+ years	Total
1985 Number of Households	198	276	264	219	221	280	1458
% total	14	19	18	15	15	19	100
1986 Number of Households	64	119	123	96	85	89	576
% total	11	21	21	17	15	15	100

Figure 5.3

Sample construction by Households with and without children

	With children	Without children	Total
1985 Number of Households	1308	150	1458
% total	90	10	100
1986 Number of Households	526	50	576
% total	91	9	100

Figure 5.4

Sample construction by size of household

	Number of People					
	One	Two	Three	Four	Five or more	Total
1985 Number of Households	194	532	282	305	145	1458
% total	13	37	19	21	10	100
1986 Number of Households	61	215	116	133	51	576
% total	11	38	20	23	9	100

5.4 Results

There are three main elements to this survey:

A - Purchase behaviour
B - Knowledge
C - Attitudes

The following sections detail the results of each of these elements.

Reference to "pasteurised" milk throughout should be taken to mean pasteurised whole milk as this was the descriptive system presented to respondents.

The details of the data concerning the subgroups of Socio-economic groups, Age Groups, Households with and without children, and Size of household can be found in Appendix 5.

The tables of data throughout this Chapter and Appendix 5 include a number of 'significance' values. For ordinal data, (milk consumption expressed in number of pints) these values are calculated from t-tests, and for all other data, from Chi-squared tests. The critical level of significance is taken to be 0.05, where values above this figure are considered to be not significant. This measure of significance describes the differences between groups or over the time period of the surveys.

All of the significance tests referring to data over the two year period were carried out between respondents who had replied on both occasions.

The first analysis undertaken on the data was an examination of those who responded in 1985.

There are, in effect, three groups of respondents in this year :

1. The total respondents (n=1458)
2. Those who only replied in 1985 (n=882)
3. Those who also replied in 1986 (n=576)

There was no statistically significant differences between groups 2 and 3 above.

The 576 sample obtained in 1986 was thus considered to be representative of the original 1458 respondents in 1985. This exercise also validated the decision to use only the 576 respondents in significance tests over the two years.

5.4.1 Purchase Behaviour

Purchase details were obtained for a variety of types of milk:

Pasteurised

Channel Island

Homogenised

Sterilised

Untreated

Semi-skimmed

Skimmed

The kinds of milk purchased are described in Figure 5.5.

Figure 5.5

Respondents having purchased different types of milk over the previous four weeks - Total Respondents

Units : Number of Respondents (%)
Sample : n = 1458 (1985) 576 (1986)

Type of Milk	1985	1986	Significance
Pasteurised	1187 (81)	445 (77)	0.0062
Channel Island	23 (2)	11 (2)	0.0987
Homogenised	68 (5)	21 (4)	0.0300
Sterilised	139 (10)	59 (10)	0.0908
Untreated	21 (2)	14 (2)	0.0820
Semi Skimmed	213 (15)	166 (29)	0.0000
Skimmed	315 (22)	151 (26)	0.0000
Any low fat milk	486 (33)	281 (49)	0.0000

It is apparent from this table that most of the milk purchased by these respondents was pasteurised, semi-skimmed or skimmed. It is also these types of milk which show the most fluctuations in the incidence of purchase. The rest of this Chapter concentrates on the results concerning pasteurised, semi-skimmed and skimmed milks reflecting the importance of their combined market share and influence on the structure of the liquid milk market.

Overview of Whole, Pastuerised Milk

There was a smaller proportion of respondents in the second half of the survey who had recently purchased milk - a drop of four percentage points.

Overview of Low Fat Milks

The greatest change, between 1985 and 1986, was in the proportion of semi-skimmed milk users - an increase of fourteen percentage points, skimmed milk usage also increased, but by only four percentage points.

Milk Consumption

Figure 5.6

Average weekly milk consumption per household - Total Respondents

Units : Pints of milk per week
Sample : n = 1458 (1985) 576 (1986)

Source of Milk

	1985			1986			
Type of milk	Milk-man	Elsewhere	Total	Milk-man	Elsewhere	Total	Significance
Pasteurised	8.1	1.4	9.5	6.7	1.5	8.2	0.001
Semi-skimmed	0.8	0.1	0.9	1.8	0.4	2.2	0.000
Skimmed	0.6	0.4	1.0	1.0	0.5	1.5	0.145
Total low fat	1.4	0.5	1.9	2.8	0.9	3.7	0.000
Total milk	10.5	2.1	12.6	10.4	2.6	13.0	0.868

Total milk consumption did not change between 1985 and 1986. There were however, changes in the types of milk that made up this total. The average number of pints per week of pasteurised milk decreased whilst the number of pints of low fat milks increased although the increase in skimmed milk was not significant. For all types of milk, there has also been a change in purchase behaviour, with a general trend away from doorstep delivery to supermarket and other sources.

Types of milk purchased by Socio-economic group*

In both years, socio-economic grouping had a significant effect on low fat milk usage, (Figures 5.7 and 5.8)). In 1986, the range of usage of semi-skimed milk was from 39% (AB group) to 19% (DE group) and of skimmed milk from 32% (C1 group) to 22% (C2 group).

Figure 5.7

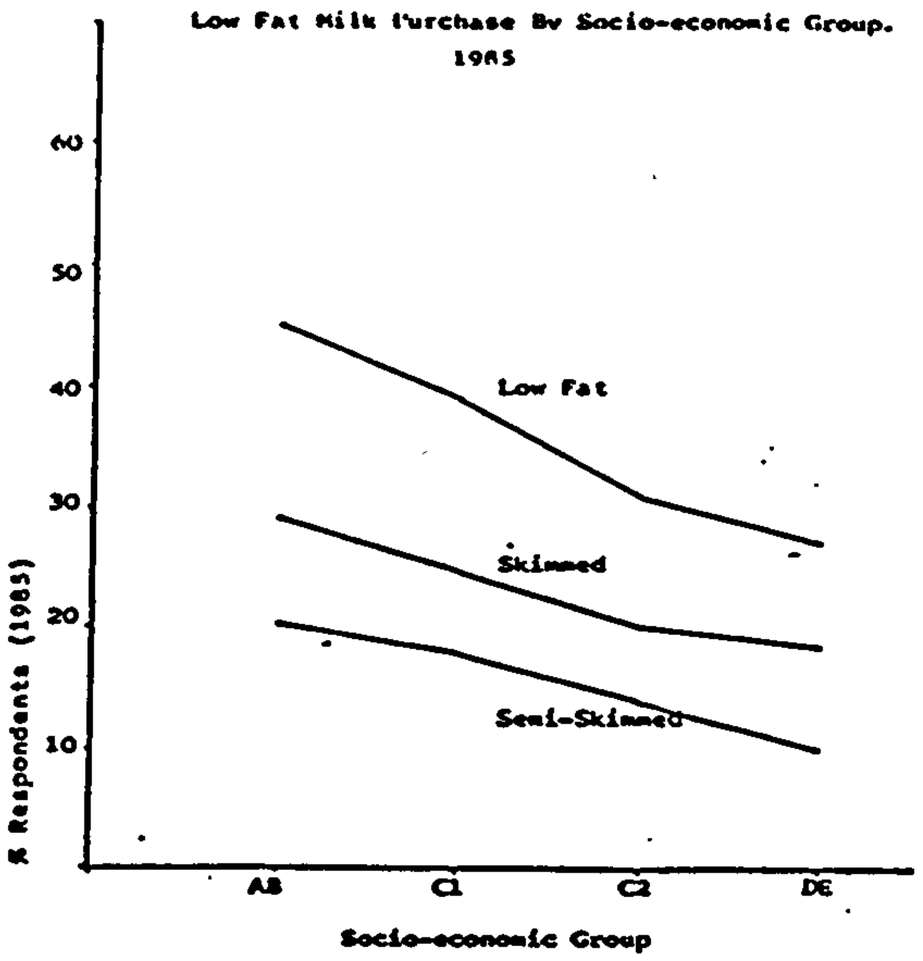
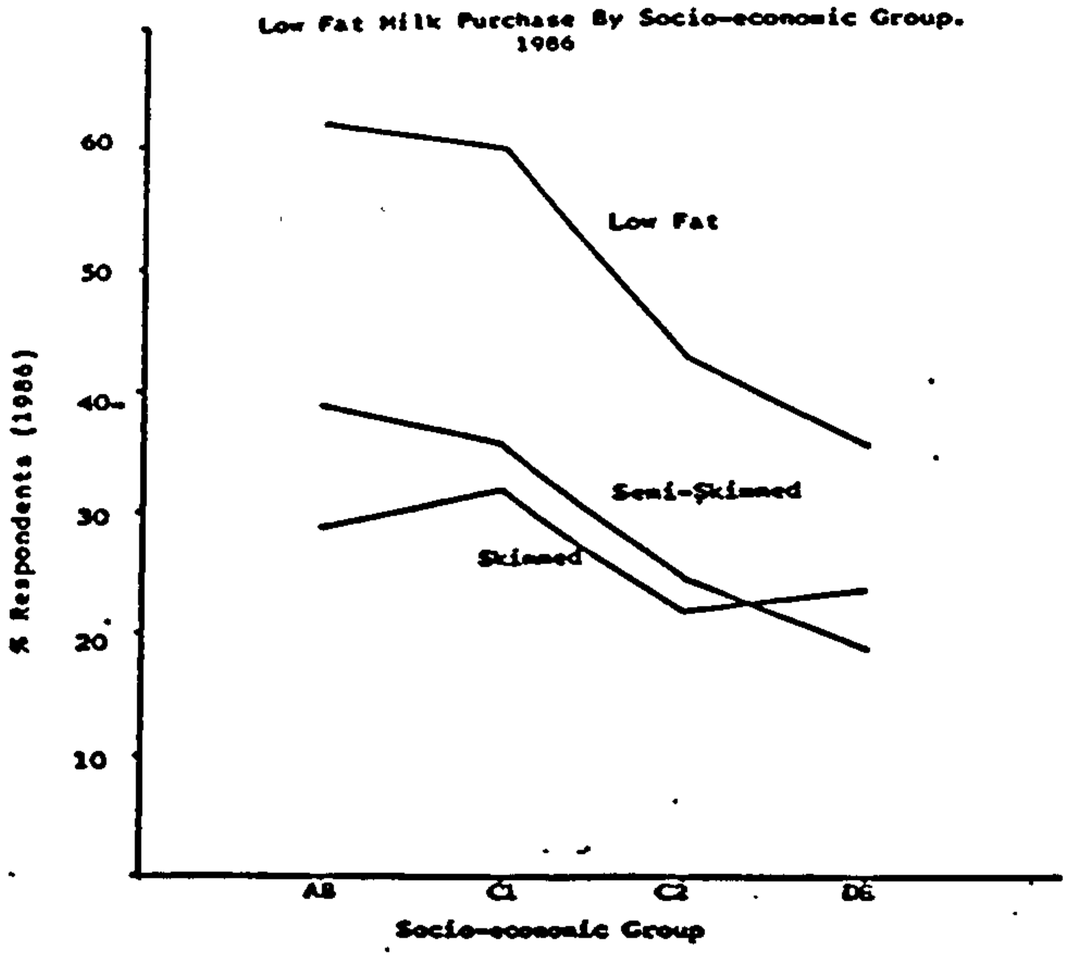


Figure 5.8



*For further information see Appendix 5, Figure 5.25

In both 1985 and 1986 socio-economic grouping did not have a significant effect on use of pasteurised milk. These groups did have an effect, however, on use of low fat milks (with the exception of skimmed milk in 1986, when socio-economic grouping did not affect purchase). In each group, there were significant changes between 1985 and 1986 for purchase of all kinds of milk, the only exception to this was that in the socio-economic group AB, there was no change over the year in the use of skimmed milk.

It is interesting to note that in the AB groups, the increase in low fat milk usage was confined to semi-skimmed milk which rose by nine percentage points whilst the penetration of skimmed milk usage in this group remained static. In all other socio-economic groups, there was a rise in both semi-skimmed and skimmed usage.

Milk Consumption by Socio-economic Group*

Each socio-economic group reflected the overall trend of stability in total milk consumption but differences in the way in which this consumption is made up. The only divergence from the general trend of the total sample is in the socio-economic group C2, which is the only instance in which skimmed milk consumption increases significantly (from 0.9 pints in 1985 to 1.4 pints in 1986). The largest swing from doorstep delivery to other sources is in the DE group which increased from 2.2 pints per week in 1985 to 3.2 pints per week (from sources other than the milkman) in 1986

*For further information see Appendix 5, Figure 5.29

Types of milk purchased by age group*

Within the different age groups, the highest level of penetration of a low fat milk was amongst the 25 - 34 year olds, 40% of whom had purchased semi-skimmed milk in the previous four weeks in 1986. This was offset however by a decrease in the use of skimmed milk by this age group, from 23% in 1985 to 19% in 1986, this was the only age group in which any type of low fat milk showed a decrease over the year, (Figures 5.9 and 5.10)).

Figure 5.9

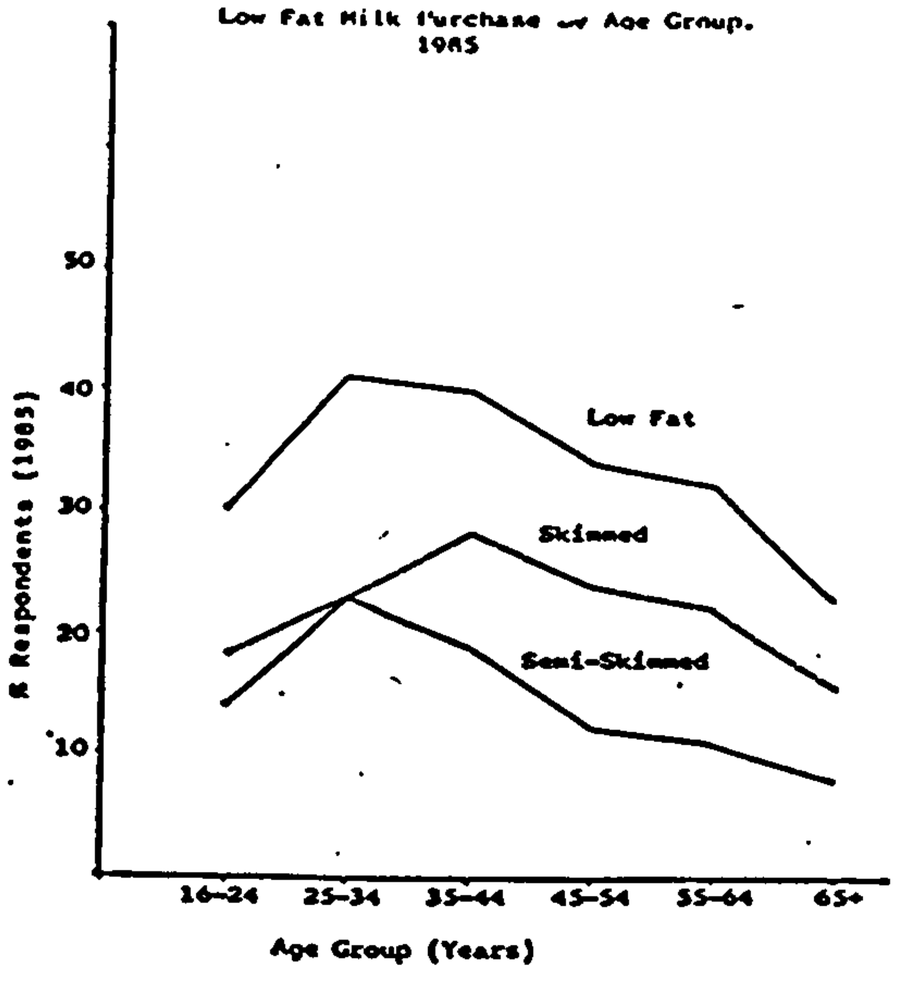
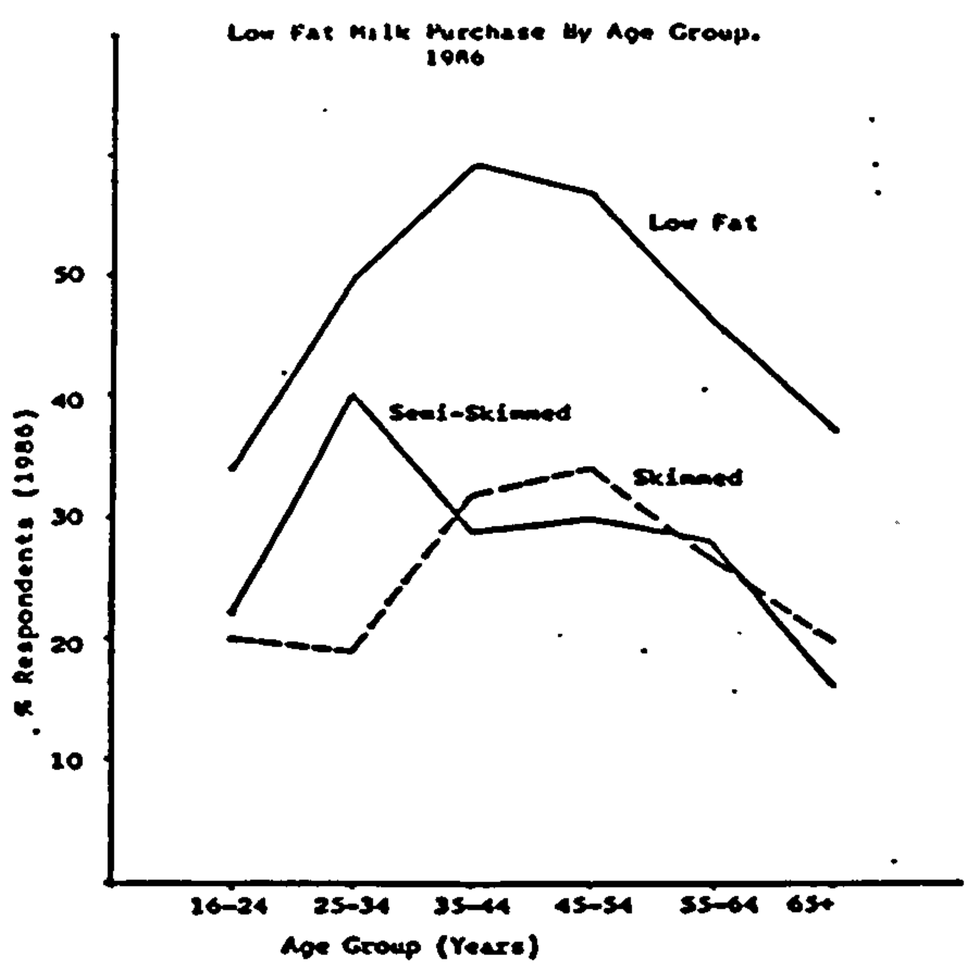


Figure 5.10



*For further information see Appendix 5, Figure 5.26

The 45 - 54 year group showed the greatest overall changes in milk purchase over the year. This group had the largest decrease in usage of pasteurised milk (from 84% to 69%) along with the largest increase in low fat milk usage (from 34% to 57%). This increase was primarily in semi-skimmed usage (from only 12% in 1985 to 30% in 1986) although skimmed milk usage also increased (from 24% in 1985 to 34% in 1986).

The mid age groups (35-44 years and 45-54 years) had the highest usage of low fat milk whilst the groups at the two extremes of the age scale (16-24 years and 65+ years) showed the lowest levels of usage of low fat milks

Two age groups (16-24 years and 55-64 years) showed a swing towards semi-skimmed from skimmed milk. In 1985, in both of these age groups, a higher proportion had recently purchased skimmed than semi-skimmed milk, in 1986 this trend had reversed and more had recently purchased semi-skimmed than skimmed milk.

Use of pasteurised milk was not affected by age group in either 1985 or 1986 whilst the use of low fat milks was influenced by age group in both years. There were changes over the time, in all age groups for each type of milk.

Milk Consumption by Age Group*

Two age groups (35-44 and 45-54 years) showed a significant decrease in pasteurised milk consumption, a different trend from that of the total sample. The youngest age group, the 16-24 year olds showed no significant difference in their consumption of any type of milk between 1985 and 1986, although their general trend was towards a decrease in pasteurised milk and an increase in low fat milks. In two groups (25-34 years and 55-64 years) the only significant trend was the increase in consumption of semi-skimmed milk. Those respondents who were 65 years and older were the only group who showed a significant increase in their total milk consumption.

*For further information see Appendix 5, Figure 5.30

Types of milk purchased by household with and without children*

Households without children showed a larger decrease in pasteurised milk usage (from 85% to 68%) than did households with children (from 81% to 78%). Households without children also showed the largest increase in their use of low fat milks, they had a greater purchasing incidence of both semi-skimmed and skimmed milks as well as their overall low fat milk use, (Figures 5.11 and 5.12).

The only type of milk which indicated a significant influence by households with or without children, was semi-skimmed milk in 1985. In all other cases, this division of respondents did not affect purchase behaviour regarding the different types of milk. In both groups of respondents and for all types of milk however, there was a significant change over the time of the survey.

Figure 5.11

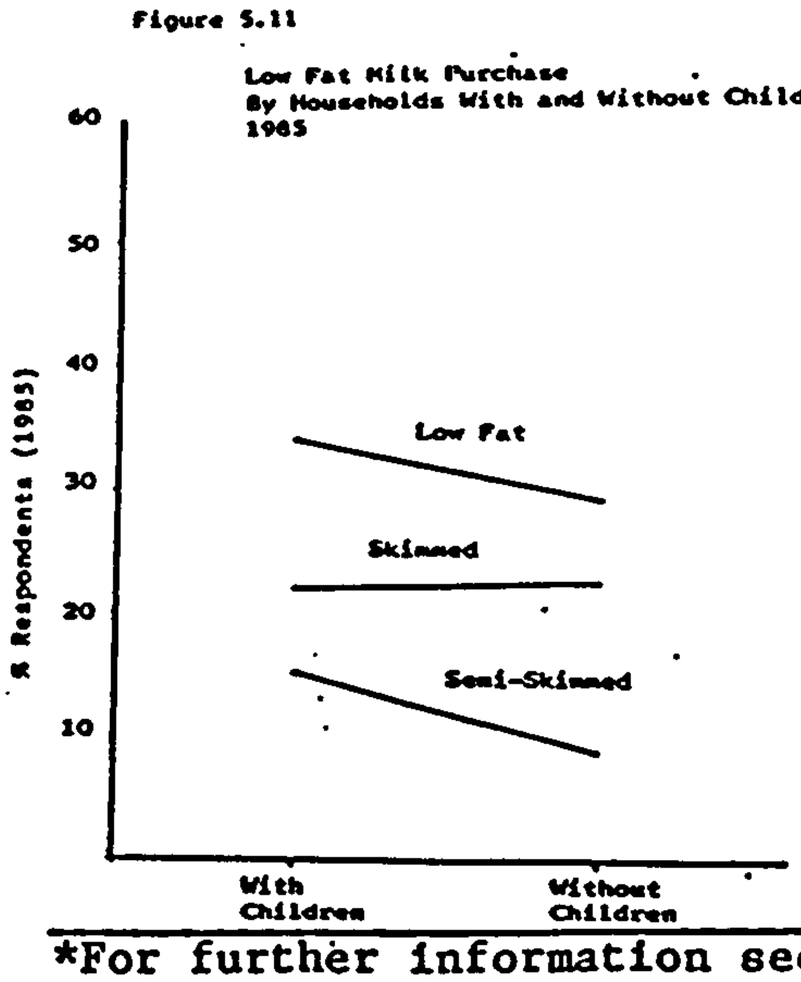
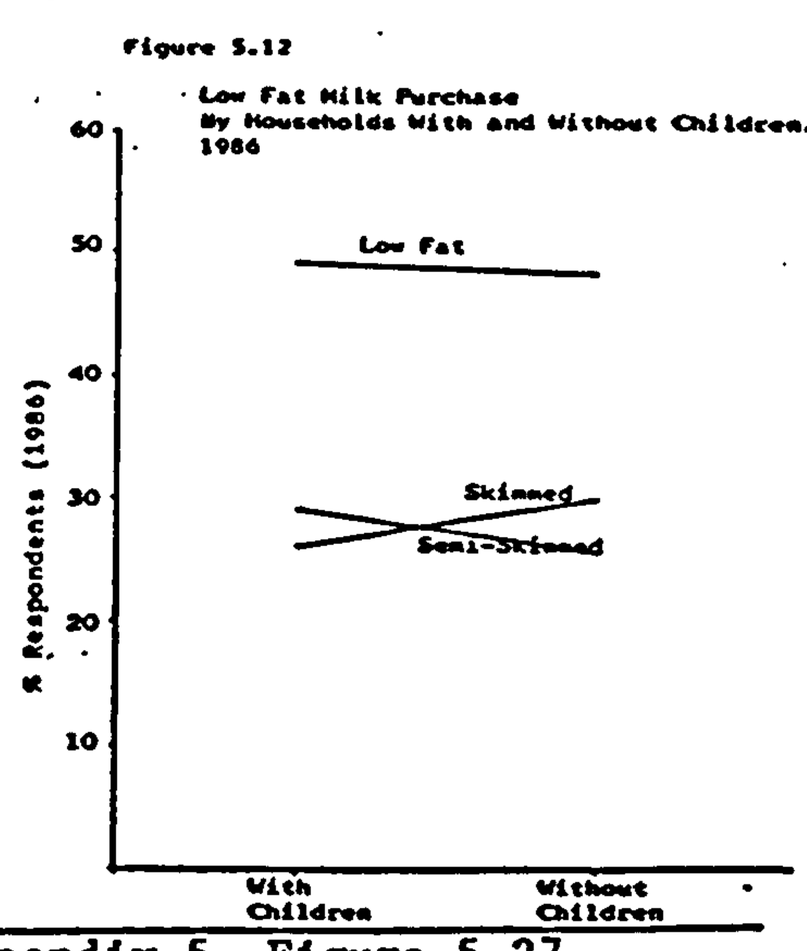


Figure 5.12



*For further information see Appendix 5, Figure 5.27

Milk Consumption in households with and without children*

Neither group indicated any change in total milk consumption. Those households with children had a significant decrease in pasteurised milk consumption although both groups did follow this trend. There was no significant change in skimmed milk consumption in either group but there was a difference in both semi-skimmed and total low fat consumption.

*For further information see Appendix 5, Figure 5.31

Types of milk purchased by different sized houesholds*

Pasteurised milk consumption increased in two sizes of households - the single person and the five or more person households. It is interesting that despite this increase the single person group still have the lowest usage of pasteurised milk. The greatest decrease in pasteurised milk usage was in three person households which showed a decrease of ten percentage points (from 85% to 75%). Single people showed the smallest increases in low fat milk consumption (from 25% in 1985 to 30% in 1986). The largest increases in low fat milk usage were in the two and four person households (20 and 21 percentage points respectively).

Figure 5.13

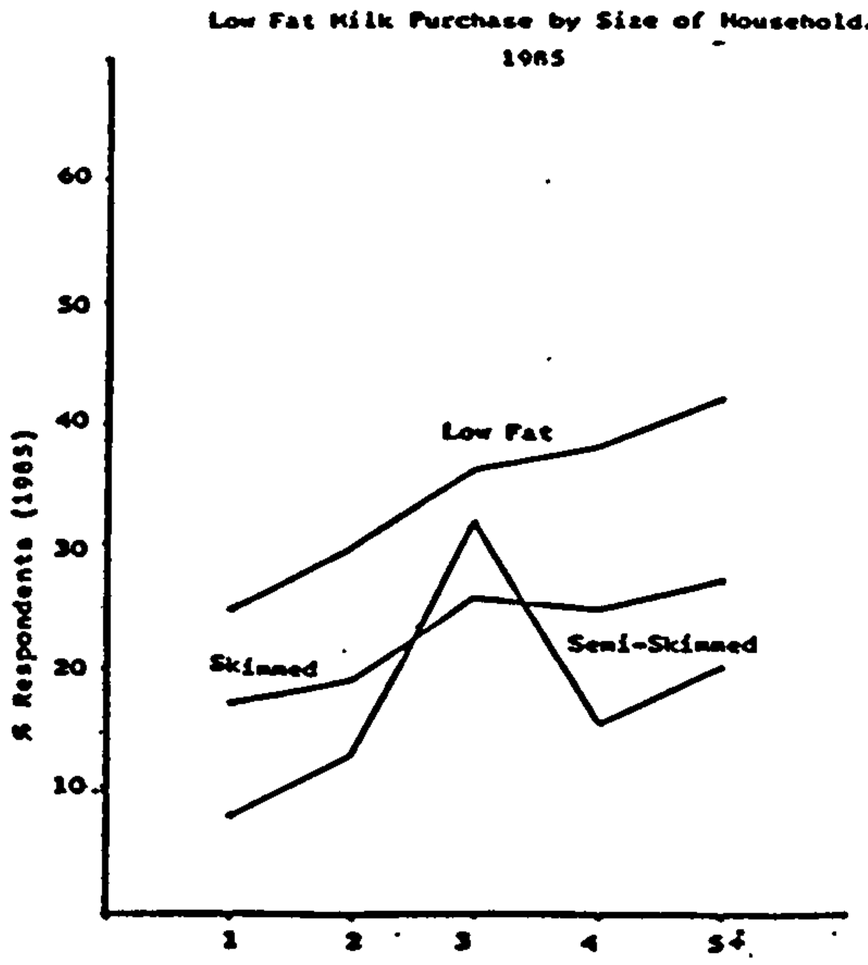
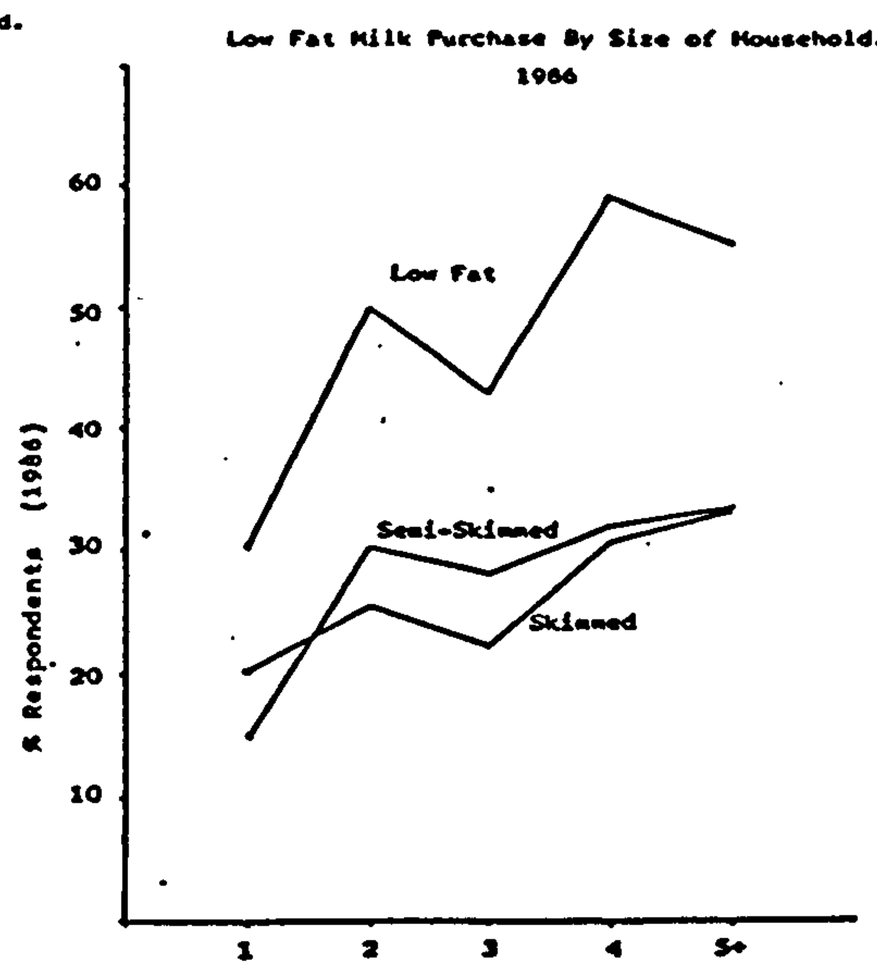


Figure 5.14



*For further information see Appendix 5, Figure 5.28

Household size had an effect on pasteurised milk use in 1985 but not in 1986. This can be explained largely by the increase in usage by single people which, when offset by the decrease in other groups, evens out the use of pasteurised milk in 1986.

In 1985, household size affected use of both skimmed and semi-skimmed milk whilst in 1986, it did not. The use of any low fat milks was affected in both 1985 and 1986 by household size, (Figures 5.13 and 5.14)).

Milk Consumption by size of household*

Single people were the only group whose total milk consumption increased significantly. Two, four and five or more person households demonstrated a change in pasteurised milk consumption. The two person households had changed the balance of their consumption of all types of milk but this still did not affect their total consumption.

*For further information see Appendix 5, Figure 5.32

Sources of Purchase

There has been a considerable shift in purchases between doorstep delivery and other sources. In general, there has been a decline in purchases from the milkman and an increase in purchases from other sources. Whilst pasteurised milk shows a decrease in purchases from the milkman and an increase from other sources, low fat milks showed an increase in purchases from all sources. This is a general trend which is demonstrated within all the different sub-groups of the total sample.

Low Fat Milk purchasing behaviour

Changes can not only be seen with the consumption of total milk but also within the low fat sector itself. Total consumption of both semi-skimmed and skimmed milk has increased although semi-skimmed has grown by more than skimmed milk (1.3 pints of semi-skimmed and 0.5 pints of skimmed milk).

In some groups there has been a movement from skimmed milk towards semi-skimed. Within the AB group, for example, semi-skimmed milk has increased from 1.4 pints to 3.0 pints per household per week, whilst skimmed milk has fallen from 1.9 to 1.8 pints per week. This trend suggests a compromise such that those who initially switched to skimmed milk as a

low fat alternative to whole milk, finding the taste and consistency too different, have now moved to another low fat product - semi-skimmed milk. It is interesting to note that they have not reverted to their previous habitual purchase of whole milk. Generally speaking, however, most sub-groups show an increase in purchase of both semi-skimmed and skimmed milk with a greater increase in semi-skimmed milk.

5.4.2 Knowledge regarding the fat content of whole, pasteurised milk

There is now a great deal of information available to consumers about both their diet and about their food. With current concern regarding the links between diet and health, fat (particularly saturated fat) in food has become an important issue. With so many sources of information providing a variety of health messages, it is not surprising that consumers are often confused and that some issues are misunderstood. Liquid milk, along with other dairy products, has suffered considerably from negative publicity about its fat content. This part of the research sought to examine the consumers' perception of the fat content of whole milk.

Figure 5. 15

Amount of fat thought to be in a pint of whole, pasteurised milk - Total Respondents

Units : Number of respondents - Total (%)
Sample : n = 1458 (1985) 567 (1986)

% Fat	1985	1986	Significance
0.1-0.3	16 (1)	22 (4)	0.0000
0.4-1.5	52 (4)	37 (5)	
1.6-5.0	150 (10)	92 (16)	
6 - 10	182 (12)	81 (14)	
11 - 20	200 (14)	79 (14)	
21 - 30	218 (15)	74 (13)	
31 - 50	126 (9)	32 (5)	
Over 50	28 (2)	15 (3)	
No Idea	486 (33)	149 (26)	

Overview of Response

Whole milk contains an average of 3.8% fat and so the "correct" response is 1.6% - 5.0%. Only 16% of respondents in the second phase of the survey were correct in their choice of response although this had increased by 6 percentage points over the previous year. Also in the second phase, 12% less people said that milk contained over 10% total fat.

Perception of the fat content of whole milk by socio-economic group*

Those giving the most accurate response declined through the socio-economic groups. Twenty-one percent of AB's were correct compared with 20% of C1's, 15% of C2's and 9% of DE's. The incidence of correct answers had doubled amongst the AB and C1 groups, slightly increased amongst the C2's and remained the same amongst the DE's. A large proportion of each group replied that they had "no idea". The AB and C1's were less likely to say they had no idea than other groups, the highest response in this breakdown being the DE's with 38% saying they had "no idea". The DE group were the only group whose responses did not change significantly over the period.

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*For further information see Appendix 5, Figure 5.33

Perception of the fat content of whole milk by age group*

The mid-age groups (35-44 years and 45-54 years) were most likely to be correct in their response. The older the respondents the more likely they were to admit that they had no idea in answer to this question. Two groups (35-44 and 55-64 years) had changed their response to this question between 1985 and 1986.

Perception of the fat content of milk by households with and without children**

The presence of children in the household did not affect the proportion of people who gave the correct response although more households without children said that they had "no idea". Over the period studied, it was households with children who had changed their response to this question.

Perception of the fat content of whole milk by size of household***

Single people were most likely to say that they had "no idea" of the answer to this question. Those in two person and five or larger households were most likely to be correct whilst the single people were least likely to be correct. Those in two, three and four person households had all significantly changed their response between 1985 and 1986.

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*For further information see Appendix 5, Figure 5.34
**See Appendix 5, Figure 5.35
***See Appendix 5, Figure 5.36

5.4.3 Attitudes Towards Milk

The following statements have been grouped together to demonstrate reaction to liquid milk.

- Milk is a very versatile food
- Milk is full of natural goodness
- Milk is good value for money
- I could do without milk in the house at all

Reaction to these statements is detailed in Figure 5.8 below.

Figure 5.16

Reaction to statements about milk.

Units: % Respondents

Sample: Total respondents n = 1458 (1985) 576 (1986)

	Strongly Agree	Slightly Agree	Dont Know No oninion	Slightly Disagree	Strongly Disagree
Milk is a very versatile food					
1985	79%	19%	1%	1%	-
1986	75%	20%	2%	2%	1%
Milk is full of natural goodness					
1985	70%	25%	1%	3%	1%
1986	54%	33%	4%	8%	1%
Milk is good value for money					
1985	74%	22%	-	3%	1%
1986	77%	18%	2%	2%	1%
I could do without milk in the house at all					
1985	5%	2%	1%	6%	86%
1986	3%	4%	2%	10%	81%

General Comments

The general conclusion can only be that milk is still very popular amonst consumers. There have been some shifts, however, in the extent to which consumers have agreed or disagreed with some statements. This is particularly noticeable in reaction to the statement "Milk is full of natural goodness" in which there has been a definite shift towards "slightly agree" from "strongly agree". The concept of milk as "natural" has emerged in group discussion as being of some importance to consumers (Chapter 7). Milk contamination after the Chernobyl incident was a cause for consumer concern in 1986, although this was not, in most cases, translated into changes in their purchasing habits.

Milk as a versatile food

Most people in all demographic groups consider that milk is a very versatile food. About a fifth of respondents however, only slightly agree with the statement, presenting an opportunity for further promotion of the potential of milk for an extended range of uses. With a shift towards slight agreement from strong agreement, steps could be taken now to reverse this movement in opinion.

None of the demographic indicators affected response to this statement in either 1985 or 1986 although there were changes within some groups over the period, these groups are: AB, C1, 25-34 year olds, those with children and households with five or more people.

Milk as full of "natural goodness"

The total who agree with this statement either slightly or strongly decreased from 95% in 1985 to 87% in 1986. The image of milk as being "full of natural goodness" has declined in the perception of each group of respondents. This shift has, in general, been towards slight agreement but there has also been an increase in the overall number of those disagreeing with the statement.

The groups who changed their response to this statement between 1985 and 1986 were: AB, C1, 16-24 years, 25-34 years, 35-44 years, households with and without children, two, three and four person households.

Milk as good value for money

Despite the trends away from milk as a versatile food and a food full of natural goodness, it is still considered to be very good value for money. Although few people in 1985 disagreed with this statement, even less people in 1986 disagreed. Amongst those people who agreed, there was a general trend towards strongly agree from slightly agree amongst many groups.

Milk as a necessity

The majority of respondents felt that they could not be without milk in their house although there was some movement from strong to slight disagreement with the statement.

Those groups who had not changed their response to this statement were: AB, DE, 25-34 years, 55-64 years, 65 years and over, households without children, single people and three person households. In both years, the size of household was a significant factor in determining response to this statement.

5.4.4. Attitudes towards Low Fat Milks

The following statements have been grouped together to demonstrate attitudes towards low fat milks:

- Skimmed milk tastes worse than whole milk
- Skimmed milk is just a poorer pint of milk than whole milk
- Semi-skimmed milk has plenty of body in it
- Whole milk has less flavour than semi-skimmed milk
- If low fat milks were more expensive than whole milk, people would still buy them

Reactions to these statements are detailed in Figure 5.17 below

Figure 5.17

Reaction to statements about low fat milks

Units: % Respondents
Sample: Total respondents n = 1458 (1985) 576 (1986)

	Strongly Agree	Slightly Agree	Dont Know No opinion	Slightly Disagree	Strongly Disagree
Skimmed milk tastes worse than whole milk					
1985	29%	22%	14%	13%	12%
1986	31%	32%	13%	10%	15%
Skimmed milk is just a poorer pint of milk than whole milk					
1985	23%	27%	17%	18%	17%
1986	15%	16%	15%	20%	34%
Semi-skimmed milk has plenty of body					
1985	6%	18%	40%	19%	17%
1986	16%	25%	29%	22%	9%
Whole milk has less flavour than semi-skimmed milk					
1985	7%	9%	25%	21%	38%
1986	7%	8%	14%	23%	49%
If low fat milks were more expensive than whole milk, people would still buy them.					
1985	30%	38%	14%	10%	8%
1986	31%	37%	18%	8%	5%

General Trends

The most noticeable general trend is that the image of low fat milks has improved.

Skimmed milk has improved in terms of image - the number of those agreeing to some extent that skimmed milk is a poorer pint of milk than whole milk has fallen from 50% to 31%. In terms of taste, however, more people now think that skimmed milk tasted worse than whole milk -an increase of 10 percentage points, those strongly agreeing have remained the same.

Semi-skimed milk produced a more favourable reaction however, those strongly disagreeing that semi-skimmed milk has plenty of body fell from 17% to 9% whilst those agreeing to some extent increased form 24% to 41%. The taste of semi-skimmed milk was not considered comparable to whole milk with increases in those who disagree with the statement "whole milk has less flavour than semi-skimmed milk". Regarding the comparative pricing of whole milk and low fat milks, most people still feel that demand for low fat milks, is not dependent upon the price being equal to or less than that of whole milk.

Taste of Skimmed Milk*

The AB socio-economic group contains the highest proportion in agreement with the statement that skimmed milk tastes worse than whole milk and an interesting shift had occurred within the C1 group where there was a general reduction in those replying that they had no opinion or did not know about the taste of skimmed milk. The 16-24 year olds shifted from don't know/no opinion (20 to 7%) to slightly agree (17% to 39%) whilst strongly agree remained the same. There was also a movement amongst the 55-64 year olds from disagreement and not knowing to a slight agreement that skimmed milk tastes worse than whole milk.

Socio-economic group, age and size of household were all influential factors in 1985 but not in 1986 reflecting a general increase in the trial and consumption of low fat milks in all sub-groups and hence an increased likelihood for respondents to have formed opinions in the second year.

The only sub-groups whose reaction had not changed over the period were: 16-24 year olds, 55-64 year olds and those without children.

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*For further information see Appendix 5, Figure 5.41

Quality of Skimmed Milk*

The perceived quality of skimmed milk was higher in the second phase of the survey. Within the socio-economic groups, the percentage of AB's agreeing that skimmed milk is a poorer pint of milk than whole milk fell from 23% to 5% and those disagreeing rose from 44% to 67%. Although this was the largest movement of this kind, it is representative of the type of shift throughout the other socio-economic groups.

Only the 65+ years respondents and those without children in the household showed an increase in the proportion who said they strongly agreed with this statement. There were only three groups who had not changed their response to this statement: the 55-64 year olds, those without children and single person households. Each method of dividing respondents into sub-groups influenced response in both years with the only exception being the presence of children in 1986.

*For further information see Appendix 5, Figure 5.43

Consistency of Semi-skimmed Milk

The consistency of semi-skimmed milk was most acceptable to the AB and C1 groups although the genereal trend was towards more agreement that semi-skimmed milk has plenty of body in it. The C2 and DE socio-economic groups, the two youngest and oldest age groups, those with children and one and three person households were all more likely to have no opinion than the other groups. Most sub-groups showed a shift in opinion over the year (towards liking the consistency of semi-skimmed milk) with the exception of: DE, 16-24 year age group, 55-64 year age group, 65 years and over, those without children and single person households.

Taste of Semi-skimmed milk

Few respondents thought that semi-skimmed milk had as much flavour as whole milk. The AB group disagreed most (87%) and the DE group had the lowest level of disagreement (58%), the DE group was also most likely to have no opinion.

Cost of low fat milk*

Age group and size of household both influenced response to this statement in both 1985 and 1986. There was a general trend towards more people responding that they had no opinion and corresponding decreases in those who disagreed. The proportion who agreed to some extent remained the same from one year to the next.

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*For further information see Appendix 5, Figure 5.46

5.4.5 Attitudes towards Diet and Health

The following statements have been grouped together to demonstrate attitudes towards diet and health:

- I don't think fat is any good for you at all
- Even if fat was no good for you I would still eat it
- If milk was the main source of fat in my diet, I should buy less of it
- Saturated fat is better for you than polyunsaturated fat
- People are a lot more conscious of health these days
- If you are worried about your health then you have to cut down a little on everything

Reaction to these statements is detailed in Figure 5.18 below.

Figure 5.18

Response to statements about diet and health

Units: % Respondents

Sample: Total respondents n = 1458 (1985) 576 (1986)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
I don't think fat is any good for you at all					
1985	26%	30%	5%	30%	9%
1986	17%	25%	6%	37%	15%
Even if fat was no good for you I would still eat it					
1985	16%	42%	5%	16%	21%
1986	9%	40%	10%	17%	24%
If milk was the main source of fat in my diet should buy less of it					
1985	13%	24%	10%	30%	23%
1986	20%	30%	14%	22%	13%
Saturated fat is better for you than polyunsaturated fat					
1985	3%	9%	43%	14%	31%
1986	5%	3%	26%	13%	53%
People are a lot more conscious of health these days					
1985	81%	16%	1%	1%	1%
1986	80%	18%	1%	1%	0%
If you are worried about your health then you have to cut down a little on everything					
1985	29%	40%	8%	15%	8%
1986	23%	29%	6%	23%	19%

General Comments

In general, the respondents have become more knowledgeable, indicating that people are assimilating more of the information which is available to them and are understanding the messages correctly, particularly with regard to the role of fat in the diet.

There was an interesting change in attitudes towards dietary fat. Less people agreed in 1986 that fat is a bad thing, than in 1985. This may indicate a better understanding of dietary recommendations and of the place of fat in a balanced diet.

There was also an increase of 22% in respondents who strongly disagree that saturated fat is better for you than polyunsaturated fat. There was a large decrease in those who said that they strongly agreed that they would continue to eat fat even if it was bad for them, along with an increase in those who would buy less milk if it was the main source of fat in their diet.

All but a very few people agreed that people are a lot more conscious of health these days and fewer people in 1986 than in 1985 agreed that health worries mean cutting down a little on everything.

Dietary Fat

It was the AB and C1 socio-economic groups who shifted most from strong agreement towards strong disagreement that fat is no good at all. The C2's showed a similar shift from slight agreement towards slight disagreement. Younger age groups shifted opinion from strong agreement to slight agreement and slight disagreement, whilst the older age groups shifted from slight disagreement towards strong disagreement that fat is no good at all. The 25-34 year age group had the highest level of those slightly disagreeing that fat is no good at all. The households with three people and those without children were the only households showing an increase in slight agreement with this statement.

Overall the proportion of people who said they would still eat fat even if it was no good for them had fallen between 1985 and 1986 whilst those who disagreed had increased. Response to this statement was influenced by socio-economic group, size of household and to a lesser extent, by age group.

Those who agreed to some extent that if milk was the main source of dietary fat they should eat less of it, had increased between 1985 and 1986. There was also a corresponding decrease in those who disagreed.

Saturated and Polyunsaturated fat

There was a better understanding throughout the entire spread of the sample regarding the merits of saturated and polyunsaturated fats. Less people said that they did not know which was best, and a higher proportion said that they strongly disagreed that saturated fat was better than polyunsaturated fat.

General health

There is no doubt that respondents are convinced of the increased interest which people are taking in general health issues. If any change occurred between 1985 and 1986, it was a movement from slight agreement to strong agreement. There was more change however in response to the notion that health worries mean cutting down a little on everything, all socio-economic groups showed a reduced level of agreement and a higher level of disagreement with this idea.

The 55-64 year age group and the 65 and over group, households without children and single person households were the groups in which strong agreement increased between 1985 and 1986.

5.4.6 Cluster Analyses based on groups of attitudes

In 1986 a number of attitude statements were added to the questionnaire which had not been included in the 1985 version. These statements reflected areas of concern or interest which were identified during discussion groups (Chapter 7).

For the purpose of the cluster analyses these attitudes were divided into three groups regarding:

(1) Food production

(2) Diet and Health

(3) Food knowledge

Each group of attitudes was analysed separately. On the basis of their reaction to each of these groups of statements, the respondents were divided into three groups with similar response profiles. These three groups, homogenous in terms of their attitudes, were then examined in terms of their demographic profiles to assess whether it is possible to identify groups of consumers who are likely to have similar viewpoints on particular topics.

This section takes each of the three types of statement in turn, describes the response of the three groups and then describes each of these groups according to their demographic characteristics.

(i) Attitudes to food quality and food production

The attitude statements used in this analysis were:

Natural foods are useful if you are trying to make your diet healthy.

I prefer to buy natural foods whenever possible.

There are too many additives in food.

Additives in food can be harmful.

Food should be labelled to say if it has been treated with pesticides.

Insecticides used in farming can remain on food and be harmful when eaten.

Irradiation is an affective way of preserving food.

Food can safely be exposed to radiation to make it last longer.

There is increasing concern about the way meat is produced.

More people are not eating meat because of worries about hormone residues.

People are becoming vegetarian because of concern for animal welfare.

Figure 5.19 describes the reaction of three homogenous groups of respondents to these statements and Figure 5.20 describes the demographic profiles of these three groups.

Figure 5.19

Reaction to attitudes regarding food production

Units: % Respondents

Sample: Group 1 n = 211
Group 2 n = 209
Group 3 n = 156
Total n = 576

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Natural foods are useful if you are trying to make your diet healthy					
Group 1	74	23	1	1	1
Group 2	49	37	7	4	3
Group 3	77	21	-	1	1
Total	66	27	4	2	1
I prefer to buy natural foods whenever possible					
Group 1	74	26	-	-	-
Group 2	37	29	18	11	5
Group 3	72	25	1	2	-
Total	61	27	6	4	2
There are too many additives in food					
Group 1	86	14	-	-	-
Group 2	56	24	8	6	6
Group 3	90	10	-	-	-
Total	77	16	3	2	2
Additives in food can be harmful					
Group 1	71	28	1	-	-
Group 2	30	30	20	16	4
Group 3	76	20	4	-	-
Total	59	26	9	5	1
Food should be labelled to say if it has been treated with pesticides					
Group 1	84	15	1	-	-
Group 2	60	19	11	3	1
Group 3	90	9	1	-	-
Total	80	15	4	1	-

Figure 5.19 (continued)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Insecticides used in farming can remain on food and be harmful when eaten					
Group 1	51	29	19	1	-
Group 2	28	23	21	22	6
Group 3	62	32	6	-	-
Total	46	28	16	8	2
Irradiation is an effective way of preserving food					
Group 1	14	22	58	3	3
Group 2	9	16	65	5	5
Group 3	8	11	27	10	34
Total	11	17	47	6	13
Food can safely be exposed to radiation to make it last longer					
Group 1	13	17	69	1	-
Group 2	9	13	48	8	18
Group 3	-	-	2	30	68
Total	8	11	45	11	25
There is increasing concern about the way meat is produced					
Group 1	52	31	15	2	-
Group 2	31	35	23	6	5
Group 3	63	31	5	1	-
Total	48	32	15	3	2
More people are not eating meat because of worries about hormone residues					
Group 1	15	33	61	11	2
Group 2	12	24	39	17	8
Group 3	26	26	24	17	7
Total	17	28	34	15	6
People are becoming vegetarian because of concern for animal welfare					
Group 1	12	40	16	26	6
Group 2	17	36	21	18	8
Group 3	21	37	15	25	2
Total	16	38	16	23	6

Figure 5.20

Demographic profiles of the cluster groups based on attitudes to food production

Units: Number of respondents (% of group)(% of sub-group)

Sample: Group 1 n = 211
Group 2 n = 209
Group 3 n = 156
Total n = 576

Group	Group 1		Group 2		Group 3	
Demographic indicator						
Socio-economic Group						
AB	53	(25%)(45%)	33	(16%)(28%)	31	(20%)(27%)
C1	64	(30%)(47%)	37	(18%)(27%)	36	(23%)(26%)
C2	51	(24%)(29%)	68	(33%)(39%)	55	(35%)(32%)
DE	43	(24%)(29%)	71	(34%)(48%)	34	(22%)(23%)
Significance	0.0004					
Age Group						
16-24	13	(6%)(20%)	33	(16%)(52%)	18	(12%)(28%)
25-34	50	(24%)(42%)	37	(18%)(31%)	32	(21%)(27%)
35-44	47	(22%)(38%)	40	(19%)(33%)	36	(23%)(29%)
45-54	40	(19%)(42%)	29	(14%)(30%)	27	(17%)(28%)
55-64	26	(12%)(31%)	33	(16%)(39%)	26	(17%)(31%)
65+	35	(17%)(39%)	37	(18%)(42%)	17	(11%)(19%)
Significance	0.0655					
Households with and without children						
With	192	(91%)(37%)	189	(90%)(36%)	145	(93%)(28%)
Without	19	(9%)(28%)	20	(10%)(40%)	11	(7%)(22%)
Significance	0.6843					
Size of Household						
One	20	(10%)(33%)	25	(12%)(41%)	16	(10%)(26%)
Two	71	(34%)(33%)	78	(37%)(36%)	66	(42%)(31%)
Three	37	(18%)(32%)	46	(22%)(40%)	33	(21%)(38%)
Four	61	(29%)(46%)	42	(20%)(32%)	30	(19%)(23%)
Five +	22	(10%)(43%)	18	(9%)(35%)	11	(7%)(22%)
Significance	0.2884					

Group 1

These people have a positive attitude to natural foods useful in a healthy diet and prefer them whenever possible. This group is likely to agree strongly that there are too many additives in food but less strongly that additives are harmful.

They strongly agree that pesticides should be labelled but are less sure that insecticides can remain on food and be harmful when eaten.

Most do not know if irradiation is an effective method of preservation but those who have an opinion believe it to be effective. Most are also unsure about the safety of irradiation, in fact, more people are unsure about the safety than about the effectiveness of this form of food preservation.

Regarding meat production, most agree that today's meat production methods are a cause for concern. People either agreed that hormone residues might discourage meat consumption, or they had no opinion about this subject. Most people in this group believe that concern about animal welfare is a factor in a descision not to eat meat.

This group is characterised by people from the AB and C1 socio-economic groups who are in the mid-age range.

Group 2

These are the people most likely to disagree that natural foods are useful in a healthy diet and to disagree with the statement "I prefer to buy natural foods when possible".

They are least likely to think that there are too many additives in food and they are the only group likely to disagree that there are too many food additives used. They are likely to either not know if additives are harmful or to say that they are not.

Although most of this group think that pesticides should be labelled, they feel less strongly about this than either of the other groups. They are unsure about the harmful effects of insecticides and many do not think that insecticides remain on food and are harmful when eaten.

Most people in this group do not know if irradiation is an effective way of preserving food but those with an opinion tend to agree. Most are unsure whether radiation is a safe treatment for food, those who have an opinion are split between "agrees" and "disagrees".

People in this group are not sure whether concern about meat production is increasing, they feel less strongly about this subject than either of the other groups. The majority of the group do not know whether concern about hormone residues has stopped people eating meat, or they do not agree that this has occurred. They tend to agree that concern for animal welfare had a greater effect in discouraging meat consumption.

These people are in the C2 and DE socio-economic groups, at the extremes of the age groups (youngest and oldest respondents) and are members of smaller households - one, two and three person households.

Group 3

The majority of people in this group strongly agree that natural foods are useful in a healthy diet and that they would prefer to buy natural foods.

There is a strong feeling that there are too many additives in food and that these additives can be harmful.

Feeling that pesticides used in food production should be labelled was very strong but less people were agreed that insecticide residues could prove harmful.

Most people did not agree that irradiation is an effective way of preserving foods and most felt strongly that it is not a safe way of treating food. This group expressed the strongest feelings on the subject of irradiation.

This group also showed the most interest in concerns about meat production, they were most likely to have an opinion about hormone residues (most agreed that concern has affected meat consumption) and this group, more than other groups, agreed that animal welfare is a factor in people becoming vegetarian.

People in Group 3 were from all socio-economic groups and all age groups, although respondents of sixty-five years old or more, were least likely to fall in this group. These respondents tend to live in smaller households (one, two or three person households).

(ii) Attitudes to diet and health

The attitude statements used in this analysis were:

My current diet is healthy and well balanced.

I have started eating somethings because I think they are healthy.

Healthy eating is expensive.

If you are worried about your health then you have to cut down a little on everything.

It is easy to have a healthy diet at home but more difficult when you eat out.

Canteen meals are usually as good for you as the meals you have at home.

Fast foods such as hamburgers and pizzas cannot be considered healthy meals.

Grilling foods takes some of the goodness out of it.

Natural foods are usesful if you are trying to make your diet healthy.

It is necessaary to include meat for a meal to be well balanced.

A healthy diet does not contain red meat.

All animal fats are bad for you.

I don't think fat is any good for you at all.

Even if fat was no good for you I would still eat it.

If milk was the main source of fat in my diet I should eat less of it.

On food labels, calories and energy are different ways of giving the same information.

Figure 5.21 describes the reaction of three homogenous groups of respondents to these statements and Figure 5.22 describes the demographic profiles of these three groups.

Figure 5.21

Reaction to attitudes regarding diet and health

Units: % Respondents

Sample: Group 1 n = 145
Group 2 n = 188
Group 3 n = 243
Total n = 576

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
My current diet is healthy an well balanced					
Group 1	32	54	4	9	1
Group 2	42	47	2	8	1
Group 3	37	51	4	7	1
Total	37	50	4	8	1
I have started eating somethings because I think they are healthy					
Group 1	51	36	8	4	1
Group 2	37	27	9	13	14
Group 3	58	34	5	2	1
Total	50	32	7	6	5
Healthy eating is expensive					
Group 1	24	37	1	22	16
Group 2	10	18	7	26	39
Group 3	27	26	3	16	28
Total	21	26	5	20	28
If you are worried about your health then you have to cut down a little on everything					
Group 1	28	33	9	17	13
Group 2	6	15	2	38	39
Group 3	32	37	5	17	9
Total	23	29	6	23	19

Figure 5.21 (continued)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
It is easy to have a healthy diet at home but more difficult when you eat out					
Group 1	28	42	6	19	5
Group 2	18	35	4	30	13
Group 3	32	41	3	16	8
Total	27	39	4	21	9
Canteen meals are usually as good for you as the meals you have at home					
Group 1	3	22	13	33	29
Group 2	8	30	16	28	18
Group 3	7	23	13	29	28
Total	6	25	14	30	25
Fast foods such as hamburgers and pizzas connot be considered healthy meals					
Group 1	33	29	5	28	5
Group 2	18	26	8	41	7
Group 3	49	27	1	18	5
Total	36	27	4	28	5
Grilling foods takes some of the goodness out of it					
Group 1	8	19	12	30	31
Group 2	1	10	5	31	53
Group 3	4	15	8	23	50
Total	4	15	8	27	46
Natural foods are useful if you are trying to make your diet healthy					
Group 1	68	27	4	1	-
Group 2	54	36	4	4	2
Group 3	74	21	2	1	2
Total	66	27	4	2	1
It is necessary to include meat for a meal to be well balanced					
Group 1	15	35	4	29	17
Group 2	6	13	1	30	50
Group 3	11	21	3	25	40
Total	10	22	3	28	37

Figure 5.21 (continued)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
A healthy diet does not contain red meat					
Group 1	5	16	9	44	26
Group 2	7	8	8	42	35
Group 3	30	31	10	18	11
Total	16	20	10	32	22
All animal fats are bad for you					
Group 1	10	20	13	38	9
Group 2	4	22	13	44	17
Group 3	33	27	19	18	3
Total	18	59	17	5	1
I don't think fat is any good for you at all					
Group 1	5	16	7	54	18
Group 2	4	17	5	51	23
Group 3	34	36	6	18	6
Total	17	25	6	37	15
Even if fat was no good for you I would still eat it					
Group 1	9	48	11	17	15
Group 2	8	46	12	20	14
Group 3	10	30	9	15	36
Total	9	40	10	17	24
If milk was the main source of fat in my diet I should eat less of it					
Group 1	14	31	16	26	13
Group 2	8	22	12	37	21
Group 3	34	34	15	10	7
Total	20	30	15	22	13
On food labels, calories and energy are different ways of giving the same information					
Group 1	20	20	36	17	7
Group 2	26	21	24	16	13
Group 3	32	22	28	8	10
Total	27	21	29	13	10

Figure 5.22

Demographic profiles of the cluster groups based on attitudes to diet and health

Units: Number of Respondents (% of group)(% of sub-group)

Sample: Group 1 n = 145
Group 2 n = 188
Group 3 n = 243
Total n = 576

Group	Group 1		Group 2		Group 3	
Demographic Indicator						
Socio-economic Group						
AB	42	(29%)(36%)	45	(24%)(38%)	30	(12%)(26%)
C1	26	(18%)(19%)	42	(22%)(31%)	30	(28%)(50%)
C2	41	(28%)(24%)	59	(31%)(34%)	74	(31%)(42%)
DE	36	(25%)(24%)	42	(22%0(28%)	70	(29%)(47%)
Significance	0.0021					
Age Group						
16-24	20	(14%)(31%)	22	(12%)(34%)	22	(9%)(34%)
25-34	29	(20%)(24%)	41	(22%)(35%)	49	(20%)(41%)
35-44	31	(21%)(25%)	31	(17%)(25%)	61	(25%)(50%)
45-54	22	(15%)(23%)	31	(17%)(32%)	43	(18%)(45%)
55-64	17	(12%)(20%)	29	(15%)(34%)	39	(16%)(46%)
65 +	26	(18%)(29%)	34	(18%)(38%)	29	(2%)(32%)
Significance	0.3781					
Households with and without children						
With	134	(92%)(26%)	169	(90%)(32%)	223	(92%)(42%)
Without	11	(8%)(22%)	19	(10%)(38%)	20	(8%)(40%)
Size of household						
One	14	(10%)(23%)	23	(12%)(38%)	24	(10%)(38%)
Two	53	(37%)(25%)	77	(41%)(36%)	85	(35%)(40%)
Three	32	(22%)(28%)	31	(17%)(27%)	53	(22%)(46%)
Four	34	(23%)(26%)	41	(22%)(31%)	58	(24%)(44%)
Five +	12	(8%)(24%)	16	(9%)(31%)	23	(10%)(45%)
Significance	0.8572					

Group 1

The majority of people in this group strongly agree that they have begun eating some things because they believe them to be healthy and of those that do not agree strongly, most do slightly agree with this statement. Most people agree that healthy eating is expensive and that those concerned about their health should cut down a little on everything.

The tendency in this group was to agree (more slightly than strongly) that having a healthy diet is more difficult when eating out, and not to agree that canteen meals are as good for you as meals eaten at home. Fast foods were not considered healthy by this group and natural foods (it was agreed) were useful in a healthy diet.

Respondents in this group were split regarding the necessity of meat in the balance of a meal but most did not agree that a healthy diet does not contain red meat.

This group were most unsure whether animal fats are bad for you, and most people did not agree that fat and sugar are no good at all. Most slightly agreed that they would still eat fat even if it was no good for them at all.

People in the socio-economic group AB and at the two extremes of the age scale, are likely to be in this group.

Group 2

The people in this group are more likely to say that they have not begun eating some food products they consider them to be healthy. Most did not agree that healthy eating is expensive and also did not agree that you should cut down a little on everything if you are concerned about your health.

There were an equal number who slightly agreed and slightly disagreed that eating out makes it more difficult to have a healthy diet. This group had the most positive attitude towards canteen meals, although the majority still did not agree that canteen meals are as good as those eaten at home.

The majority of these respondents slightly agreed that fast foods can be healthy and this group was also least likely to feel strongly about the merits of natural foods.

These people strongly disagreed that meat is necessary to the balance of a meal but disagreed less strongly that a healthy diet does not contain red meat.

This group disagreed that all animal fats are bad and also that fat and sugar are no good at all. They also agreed that they would still eat fat even if it was not good for them.

Those in socio-economic groups AB and C2 are most likely to be in this group, and those in the mid age groups are least likely to be. Smaller households (one or two people) tend to fall into this group.

Group 3

As with Group 1, this group agree that they have started eating some things because they are healthy, that healthy eating is expensive and that health concern means cutting down a little on everything. In their reaction to all these issues, this group tended to agree more than members of Group 1.

Most people agreed that eating out makes a healthy diet difficult to achieve, and did not agree that canteen meals could be as good as those eaten at home. This group felt strongly that fast foods cannot be considered healthy and also that natural foods are useful in a healthy diet.

Most agreed (more strongly than slightly) that a balanced meal should include meat and the majority agreed that a healthy diet does not contain red meat.

These people generally felt that animal fats are bad for you and that fat and sugar are no good at all. They were undecided whether they would still eat fat if it was not good for them. This was the only group that said they would have less milk if it was the main source of fat in the diet.

Households in the socio-economic groups C1 and DE tended to be in this group. People in the mid age range and those from larger households (three, four and five people) also were found predominantly in this group.

(iii) Statements regarding food knowledge

The statements used in this analysis were:

The way food is cooked can affect how good it is for you.

Grilling food takes some of the goodness out of it.

Animal fats are bad for you.

I don't think fat is any food for you at all.

Animal fat is saturated fat.

Vegetable fat is always polyunsaturated.

Saturated fat is better for you than polyunsaturated.

It is necessary to include meat for a meal to be balanced.

A healthy diet does not contain red meat.

Sugar is a good source of energy.

Brown sugar is better for you than white sugar.

I don't think sugar is any good for you at all.

Skimmed milk contains less vitamins than whole milk.

Cutting out milk would be cutting out the main source of fat in my diet.

Milk contributes only a small proportion of fat to the total diet.

Figure 5.23

Reaction to attitudes regarding food knowledge

Units: % Respondents

Sample: Group 1 n = 176
Group 2 n = 160
Group 3 n = 240
Total n = 576

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
The way food is cooked can affect how good it is for you					
Group 1	78	16	1	3	2
Group 2	72	21	2	4	1
Group 3	85	12	2	1	-
Total	79	16	2	3	1
Grilling food takes some of the goodness out of it					
Group 1	3	5	5	28	59
Group 2	5	28	13	29	25
Group 3	5	13	4	26	52
Total	4	15	8	27	46
Animal fats are bad for you					
Group 1	4	18	16	47	15
Group 2	20	25	24	23	8
Group 3	25	27	17	25	6
Total	18	24	18	31	9
I don't think fat is any good for you at all					
Group 1	4	13	1	54	28
Group 2	22	32	10	30	6
Group 3	23	28	7	31	11
Total	17	25	6	37	15
Animal fat is saturated fat					
Group 1	41	17	38	3	1
Group 2	35	14	43	5	3
Group 3	57	11	27	2	3
Total	47	14	34	3	2
Vegetable fat is always polyunsaturated					
Group 1	7	9	46	14	24
Group 2	17	18	51	12	4
Group 3	15	13	39	17	16
Total	13	13	44	15	15

Figure 5.23 (continued)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Saturated fat is better for you than polyunsaturated fat					
Group 1	2	2	23	17	56
Group 2	9	6	37	13	35
Group 3	5	3	20	9	63
Total	5	3	26	13	53
It is necessary to include meat for a meal to be well balanced					
Group 1	6	17	1	36	40
Group 2	21	37	7	17	18
Group 3	7	15	1	29	48
Total	10	22	3	28	37
A healthy diet does not contain red meat					
Group 1	6	14	2	41	37
Group 2	23	20	15	25	17
Group 3	19	25	9	31	16
Total	16	20	10	32	22
Sugar is a good source of energy					
Group 1	35	42	4	16	3
Group 2	37	48	5	8	2
Group 3	20	31	5	22	22
Total	29	39	6	16	10
Brown sugar is better for you than white sugar					
Group 1	31	25	13	11	20
Group 2	38	25	19	10	8
Group 3	26	20	14	13	27
Total	31	23	16	11	19
I don't think sugar is any good for you at all					
Group 1	1	6	5	62	26
Group 2	17	30	6	37	10
Group 3	38	39	5	15	3
Total	21	27	5	35	12
Skimmed milk contains less vitamins than whole milk					
Group 1	8	12	35	15	30
Group 2	16	26	38	12	8
Group 3	8	13	17	16	36
Total	10	16	33	15	26

Figure 5.23 (continued)

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Cutting out milk would be cutting out the main source of fat in my diet					
Group 1	6	7	8	41	38
Group 2	37	36	18	7	2
Group 3	5	13	8	41	33
Total	15	18	9	32	26
Milk contributes only a small proportion of fat to the total diet					
Group 1	39	46	5	7	3
Group 2	28	45	11	13	3
Group 3	37	37	9	13	4
Total	35	42	9	11	3

Figure 5.24

Demographic profiles of the cluster groups based on attitudes regarding food knowledge

Units: Number of Respondents (% of group)(% of sub-group)

Sample: Group 1 n = 176
Group 2 n = 160
Group 3 n = 240
Total n = 576

Group	Group 1			Group 2			Group 3		
Demographic Indicator									
Socio-economic group									
AB	42	(24%)	(36%)	25	(16%)	(21%)	50	(21%)	(43%)
C1	44	(25%)	(32%)	31	(19%)	(23%)	62	(26%)	(45%)
C2	50	(28%)	(29%)	54	(34%)	(31%)	70	(29%)	(40%)
DE	40	(23%)	(27%)	50	(31%)	(34%)	58	(24%)	(39%)
Significance	0.2117								
Age Group									
16-24	23	(13%)	(36%)	22	(14%)	(34%)	19	(8%)	(30%)
25-34	37	(21%)	(31%)	26	(16%)	(22%)	56	(23%)	(47%)
35-44	41	(23%)	(33%)	21	(13%)	(17%)	61	(25%)	(50%)
45-54	25	(13%)	(26%)	29	(18%)	(30%)	42	(18%)	(44%)
55-64	22	(13%)	(26%)	23	(14%)	(27%)	40	(17%)	(47%)
65 +	28	(16%)	(32%)	39	(24%)	(44%)	22	(9%)	(25%)
Significance	0.0009								
Households with and without children									
With	163	(93%)	(31%)	136	(85%)	(26%)	227	(95%)	(43%)
Without	13	(7%)	(26%)	24	(15%)	(48%)	13	(5%)	(26%)
Significance	0.0029								
Size of household									
One	20	(11%)	(33%)	20	(13%)	(23%)	21	(9%)	(34%)
Two	66	(38%)	(31%)	64	(40%)	(30%)	85	(35%)	(40%)
Three	33	(19%)	(28%)	36	(23%)	(31%)	47	(20%)	(41%)
Four	39	(22%)	(29%)	28	(18%)	(21%)	66	(28%)	(50%)
Five +	18	(10%)	(35%)	12	(8%)	(24%)	21	(9%)	(41%)
Significance	0.4765								

Group 1

The majority of people in this group did not agree that grilling food takes some of the goodness out of it. They also tend not to agree that animal fats are bad and that fat is not good at all.

This group were likely to disagree that vegetable fat is always polyunsaturated and strongly agree that saturated fat is better than polyunsaturated fat. They did not agree that meat is necessary for a meal to be balanced and also that a healthy diet does not contaiin red meat.

Most people thought that sugar is a good source of energy, that brown sugar is better than white and did not agree that sugar is no good at all.

Regarding milk, most people disagreed that skimmed milk is deficient in vitamins, that cutting out milk would remove the main source of fat from their diet but they tended to agree that milk contributes little fat to their diet.

The people in this group tended to be from the AB socio-economic group, the younger age groups and from either small or large (one, two or five person) households.

Group 2

Some members of this groups agree that grilling food takes some of the goodness out of it but the majority disagree.

The group is also split when considering attitudes to fat and animal fats, some agree that fats are no good at all and that animal fats are bad, while others disagree with both these statements.

This group were the people most likely not to know if animal fat is saturated, if vegetable fat is always polyunsaturated and if saturated fat is better than polyunsaturated (there was, however, a considerable number in all of the groups who did not know these things). There was a feeling that meat is necesary in a balanced meal but opinion was split regarding the place of meat in a healthy diet.

There was strong feeling that sugar is a good source of energy, that brown sugar is better than white but opinion was split as to whether sugar is no good at all.

This group agreed that skimmed milk contains less vitamins than whole milk and agreed that cutting out milk would be cutting out their major source of dietary fat.

These people were from the C2 and DE socio-economic groups, the youngest and the oldest age groups, they tend not have children and live in small (one and two person) households.

Group 3

This group do not agree that grilling food takes some of the goodness out of it. They are most likely to agree that animal fats are bad and that fats are no good at all.

These people most strongly agreed that animal fat is saturated, but were undecided as to whether vegetable fat is always polyunsaturated and very strongly disagreed that saturated fat is better than polyunsaturated. The opinions of this group on meat tended to be that meat is not necessary in a balanced meal with some feeling that meat is needed in a healthy diet and others feeling that it is not.

Opinions about sugar were diverse although most did agree that sugar is no good for you at all.

Most were opposed to the idea that skimmed milk has less vitamins than whole milk and that reducing their milk consumption would reduce their fat intake. At the same time they thought that milk only contributes a small amount of fat to the diet as a whole.

Most people in this group were in the AB or C1 socio-economic groups, in the mid age ranges, did have children in their homes and tended to come from the larger households.

Comments

Statements regarding saturated and polyunsaturated fat revealed that a large proportion of people in all groups did not know whether the statements were correct. There was a similar amount of confusion about the vitamin content of skimmed milk when compared with whole milk.

The statements which showed the highest level of confusion were also those which contained the most "technical" language (eg polyunsaturated, vitamin) and this may illustrate a widespread difficulty in understanding such terminology. This finding is important in that the use of such language in health education material may reduce its value and may be a barrier to following dietary recommendations for a large proportion of the public.

The factors which had the greatest influence on the compostion of the groups were the age of the respondent and the presence or absence of children in the household.

Summary

This Chapter has presented the results of a two year survey undertaken in 1985 and 1986. Analysis of the implications of these results are included in Part 3.

CHAPTER SIX

A two year study of shopping habits, eating patterns and attitudes undertaken at the "Thameside Healthy Eating Exhibition", Ashton-under-Lyne.

This chapter describes a two year study undertaken amongst visitors to a "Healthy Eating" exhibition held at Ashton under Lyne Town Hall. The background section describes the exhibition and the venue, the methodology and goes on to describe the content and administration of the survey. The results are presented as a descriptive analysis and as cluster analyses designed to define respondents as homogeneous groups.

6.1 Tameside Healthy Eating Exhibition

In May 1987 a "Healthy Eating" exhibition was held by Tameside Metropolitan Borough Council in the town hall at Ashton-under-Lyne near Manchester. This exhibition consisted of a number of stands (Appendix 6) one of which was provided by the Food Policy Research Unit and depicted the links between diet and some health problems.

As this was the first occasion on which such an event had taken place, the organisers had little idea of the number of people they expected to attend. The Town Hall at Ashton opens onto the market square, and as the exhibition took place on two market days, it seemed reasonable to expect a

throughput representative of Ashton's usual shoppers. This presented an ideal opportunity to survey a sample of the public with regard to their interest in diet and health. The sample, of course, had all shown some initial interest in food and health in that they had been attracted to the exhibition.

6.2 Methodology

A self completed questionnaire (see Appendix 7) was designed to establish:

- shopping habits in terms of frequency and location of shopping

- specific food choices

- reaction to a series of attitudinal statements on a scale ranging from strongly agree to strongly disagree

- reaction to available sources of information on diet and health

Five hundred of these questionnaires were distributed at the exhibition along with reply paid envelopes. The incentive of inclusion in a draw for three gifts of one hundred, fifty and twenty five pounds was offered to those who returned their questionnaires.

6.3 Respondent Profile

The samples for 1987 and 1988 are described in the following tables, in terms of:

- Socio-economic group
- Age Group
- Household with and without children
- Size of household

Figure 6.1

Sample construction by Socio-economic group

	Socio-economic group				
	AB	C1	C2	DE	Total
1987 Number of Households	8	35	48	64	155
% Total	5%	23%	31%	41%	100%
1988 Number of Households	6	31	39	43	119
% Total	5%	26%	33%	36%	100%

Figure 6.2

Sample construction by Age Group

	Age Group						
	16-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65+ years	Total
1987 Number of Households	10	46	38	24	14	25	157
% Total	6%	29%	24%	15%	9%	16%	100%
1988 Number of Households	5	34	22	17	21	19	118
% Total	4%	29%	19%	14%	18%	16%	100%

Figure 6.3

Sample construction by households with and without children

	With children	Without children	Total
1987 Number of Households	70	87	157
% Total	45%	55%	100%
1988 Number of Households	34	85	119
% Total	29%	71%	100%

Figure 6.4

Sample construction by size of household

	Number of People					
	One	Two	Three	Four	Five or more	Total
1987 Number of Households	20	43	32	38	22	155
% Total	13%	28%	21%	24%	14%	100%
1988 Number of Households	24	43	20	22	10	119
% Total	20%	36%	17%	19%	8%	100%

6.4 Results

There are three main elements to this survey:

A - Shopping behaviour

B - Eating habits

C - Attitudes

This section details the results of each of these elements. The details of the data concerning the subgoups of Socio-economic group, Age group, Household size and Households with and without children, can be found in Appendix 8.

The tables of data throughout this Chapter and Appendix 8 include a number of 'significance' values; these values are calculated from Chi-squared tests. The critical level of significance is taken to be 0.05, where values above this figure are considered to be not significant.

6.4.1 Shopping Habits

Regarding their general shopping habits respondents were asked:

- where they do most of their food shopping
- where do they supplement their food shopping
- do they use the same supermarket regularly
- how often do they shop for food

More specifically, they were asked where they shopped for:

- Vegetables
- Bread
- Meat
- Fish
- Milk

Figures 6.5 - 6.8 describe the general shopping habits of the total sample.

Figure 6.5

Response to "Where do you do most of your shopping?" - total respondents.

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

Source	1987	1988	Significance
Supermarket	140 (89)	112 (95)	0.3853
Market	11 (7)	4 (3)	
Corner shop	2 (1)	1 (1)	
Other	4 (3)	1 (1)	

Figure 6.6

Response to "Where do you supplement your food shopping?" - total respondents.

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

Source	1987	1988	Significance
Markets	71 (46)	63 (54)	0.1127
Corner shops	29 (19)	27 (23)	
Supermarkets -other than your regular	41 (27)	17 (15)	
Other	13 (8)	9 (8)	

Figure 6.7

Response to " Do you use the same supermarket regularly?" - total repondents.

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

	1987	1988	Significance
Yes	127 (83)	99 (84)	0.6771
No	26 (17)	19 (16)	

Figure 6.8

Response to "How often do you shop for food?" - total respondents

Units: Number of people (%)

Sample: n = 158 (1987) n = 119 (1988)

Frequency of Shopping	1987	1988	Significance
Every day	24 (15)	20 (17)	0.6438
2-3 times a week	70 (45)	53 (45)	
Once a week	46 (29)	37 (31)	
Once a fortnight	12 (8)	4 (3)	
Once a month	5 (3)	5 (4)	

Most respondents did the bulk of their shopping at a supermarket although a few chose markets and other sources. This pattern did not change between 1987 and 1988. They were, however, more diverse in their choice for their supplementary shopping.

In both years most preferred a market for supplementary shopping but corner shops and supermarkets were also popular each year. Between 1987 and 1988 there had been some shift from supermarkets to corner shops for supplementary shopping but this trend, although worthy of note, was not significant.

The majority of respondents did use the same supermarket regularly although in both years, almost one fifth did not. The most poplular responses about frequency of shopping were two to three times a week and once a week, the general picture was of frequent rather than infrequent shopping habits.

The picture that emerges is of a consumer who shops at a regular supermarket, probably weekly whilst supplementing this shopping from a variety of sources - markets, corner shops and other supermarkets.

These trends were reflected throughout the demographic analyses although some groups do stand out as exceptions:

- The youngest and the oldest age groups of respondents were least likely to cite supermarkets as their main source of food.

- The 25 - 34 years age group switched form supermarkets to corner shops as their second most poplular venue for supplementary shopping.

- Older age groups were less likely to use the same supermarket regularly, as were households without children and smaller households.

Figures 6.9 - 6.13 Describe the more specific shopping habits of the total population regarding: Vegetables, Bread, Meat, Fish and Milk.

Figure 6.9

Main sources of Vegetables - Total respondents

Units: Number of respondents (%)

Sample: 158 (1987) 119 (1988)

Source	1987	1988	Significance
Supermarket	38 (25)	26 (22)	0.6715
Greengrocer	61 (39)	44 (37)	
Market	53 (34)	48 (40)	
Don,t buy Vegetables	3 (2)	1 (1)	

Supermarkets were the least popular source of vegetables, most people preferred a market or a greengrocer, a trend which was evident throughout all the sub-groups and which did not change between 1987 and 1988.

There were some differences in preferences for greengrocers and markets however, AB and C1 socio-economic groups tended to prefer greengrocers. The 35 - 44 year and the 65 years and over age groups also preferred to buy their vegetables from greengrocers.

Figure 6.10

Main sources of Bread - total respondents.

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

Source	1987		1988		Significance
Supermarket	80	(52)	83	(70)	0.0101
Bakery	70	(45)	35	(29)	
Don,t buy bread	4	(3)	1	(1)	

There was a shift between 1987 and 1988 regarding bread purchases, away from bakers shops and in favour of supermarkets. The exception to this trend was in the 16 - 24 year age group in which the opposite trend was evident.

Figure 6.11

Main sources of Meat - total respondents

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

Source	1987		1988		Significance
Supermarket	14	(26)	37	(31)	0.6099
Butcher	85	(55)	56	(47)	
Market	13	(9)	11	(9)	
Don't buy meat	16	(10)	15	(13)	

The majority of respondents preferred to buy their meat from a butchers shop although there was a slight but not significant trend towards supermarkets over the year. There was also an increase in the number of people who did not buy meat from 1987 to 1988. These trends were both most noticeable in the AB and C1 socio-economic groups.

Figure 6.12

Main sources of fish - total respondents.

Units: Number of respondents (%)

Sample: n = 158 (1987) n =119 (1988)

Source	1987		1988		Significance
Supermarket	24	(16)	23	(20)	0.4182
Fishmonger	75	(49)	48	(41)	
Market	17	(11)	19	(16)	
Don't buy fish	37	(24)	28	(23)	

Fishmongers were the most popular source of fish, although almost a quarter of all respondents said that they did not buy fish. The younger age groups were least likely to buy fish and the older age groups were those with the strongest preference for fishmongers. Three and four person households tended not to buy fish, three person households were the only group not to prefer fishmongers and the larger households were equally split in their preference for supermarkets and fishmongers.

Figure 6.13

Main source of milk - total respondents

Units: Number of respondents (%)

Sample: n = 158 (1987) n = 119 (1988)

Source	1987		1988		Significance
Supermarket	31	(21)	33	(28)	0.3404
Milkman	120	(78)	85	(71)	
Don't buy milk	2	(1)	1	(1)	

Most people still have their milk delivered by their milkman although there was a shift (not significant) over the year towards supermarkets. This shift was most pronounced in the C2 socio-economic group and the 55 - 64 year age group.

There were, however, some sub-groups in which doorstep delivery increased in popularity over the year: the AB and C1 socio-economic groups, the 16-24 and 25-34 year age groups, households with children and three and four person households.

6.4.2 Eating Habits

Respondents were asked to estimate the frequency of their use of 43 different food products. The 1988 responses were analysed using a cluster analysis procedure based upon three homogenous groups. Figure 6.14 details the results of this analysis, and Figure 6.15 decribes the demographic profiles of the three groups of respondents.

Figure 6.14

Eating habits of respondents based on three homogenous clusters.

Units: % Respondents

Sample: Group 1 n = 49
Group 2 n = 47
Group 3 n = 23
Total n =119

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Food					
Cornflakes					
Group 1	17	15	10	24	34
Group 2	65	3	8	15	10
Group 3	61	17	17	6	-
Total	47	12	9	17	16
Significance	0.0002				
Meusli					
Group 1	56	10	7	20	7
Group 2	30	15	5	15	35
Group 3	72	11	11	6	-
Total	46	13	7	15	19
Significance	0.0072				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
High Bran Cereal					
Group 1	37	2	10	20	32
Group 2	38	10	-	18	35
Group 3	89	-	6	6	-
Total	47	6	5	15	27
Significance	0.0029				
Cream Crackers					
Group 1	15	17	24	32	12
Group 2	40	23	13	20	5
Group 3	50	22	22	6	-
Total	32	21	20	20	7
Significance	0.0487				
Ryvita					
Group 1	34	22	12	24	7
Group 2	50	10	8	18	15
Group 3	89	-	6	6	-
Total	50	14	8	18	10
Significance	0.0144				
Biscuits					
Group 1	7	12	10	37	34
Group 2	10	13	23	45	10
Group 3	28	17	22	17	17
Total	18	11	16	34	21
Significance	0.0494				
Chocolate Biscuits					
Group 1	27	17	15	32	10
Group 2	38	30	15	10	8
Group 3	56	17	11	17	-
Total	39	22	13	19	8
Signicance	0.1803				
Cream Cakes					
Group 1	17	29	22	27	5
Group 2	53	28	10	8	3
Group 3	39	28	28	6	-
Total	37	30	15	15	3
Significance	0.0265				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Confectionery (eg. Mars Bars)					
Group 1	15	34	5	29	17
Group 2	43	13	18	23	5
Group 3	67	-	17	17	-
Total	35	19	12	25	9
Signiciance	0.0003				
Wholemeal Bread					
Group 1	5	7	9	32	46
Group 2	3	-	3	15	80
Group 3	28	28	11	17	17
Total	8	8	7	22	56
Signicance	0.0000				
White Bread					
Group 1	22	2	5	22	49
Group 2	58	8	13	13	10
Group 3	11	6	11	22	50
Total	38	6	8	20	28
Significance	0.0013				
Pasta					
Group 1	37	22	24	17	-
Group 2	45	13	15	28	-
Group 3	78	11	6	6	-
Total	46	16	20	18	-
Significance	0.0604				
Wholemeal Pasta					
Group 1	63	15	17	5	-
Group 2	60	8	18	15	-
Group 3	94	6	-	-	-
Total	65	11	15	10	-
Significance	0.0797				
White Rice					
Group 1	22	12	29	37	-
Group 2	43	18	15	25	-
Group 3	44	33	11	11	-
Total	35	21	20	25	-
Significance	0.0560				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Brown Rice					
Group 1	71	10	12	7	-
Group 2	40	5	25	30	-
Group 3	89	11	-	-	-
Total	59	9	18	14	-
Significance	0.0011				
Lentils					
Group 1	61	20	10	7	2
Group 2	50	18	18	15	-
Group 3	83	6	11	-	-
Total	56	15	15	11	2
Significance	0.2956				
Red Meat					
Group 1	7	7	15	66	5
Group 2	28	3	15	53	3
Group 3	17	11	22	50	-
Total	19	7	15	57	3
Significance	0.3508				
Sausages					
Group 1	24	32	20	24	-
Group 2	45	30	18	8	-
Group 3	39	33	22	6	-
Total	37	32	19	13	-
Significance	0.2427				
Bacon					
Group 1	10	7	24	51	7
Group 2	33	28	18	23	-
Group 3	33	6	28	33	-
Total	26	13	24	35	3
Significance	0.0051				
Poultry					
Group 1	-	12	24	59	5
Group 2	18	13	8	60	3
Group 3	33	17	28	22	-
Total	14	13	20	50	3
Significance	0.0073				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Tinned Fish					
Group 1	17	20	27	37	-
Group 2	23	20	30	28	-
Group 3	39	22	17	22	-
Total	24	21	27	28	-
Significance	0.6094				
White Fish					
Group 1	12	12	22	51	2
Group 2	15	8	13	65	-
Group 3	22	33	11	28	6
Total	15	15	15	52	3
Significance	0.0929				
Fish Fingers					
Group 1	34	29	17	20	-
Group 2	75	5	13	8	-
Group 3	72	22	6	-	-
Total	56	20	13	11	-
Significance	0.0030				
Low Fat Spread (eg. Gold)					
Group 1	39	2	7	7	44
Group 2	43	-	3	13	43
Group 3	67	-	6	6	22
Total	44	3	5	12	36
Significance	0.5211				
Polyunsaturated Margarine					
Group 1	24	-	10	17	49
Group 2	25	3	10	10	53
Group 3	72	6	-	11	11
Total	30	2	9	14	46
Significance	0.0105				
Butter					
Group 1	29	2	10	12	46
Group 2	80	5	-	8	8
Group 3	39	11	-	17	33
Total	53	5	5	12	24
Significance	0.0002				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Whole (Full Fat) Milk					
Group 1	20	2	5	9	63
Group 2	85	5	5	-	5
Group 3	44	6	6	6	39
Total	49	5	5	7	34
Significance	0.0000				
Skimmed Milk					
Group 1	44	12	10	2	32
Group 2	-	3	3	5	90
Group 3	78	6	-	-	17
Total	30	7	4	4	55
Significance	0.0000				
Eggs					
Group 1	5	10	17	51	17
Group 2	3	10	15	68	5
Group 3	17	22	6	44	11
Total	7	11	14	57	12
Significance	0.1745				
Cottage Cheese					
Group 1	29	17	12	32	10
Group 2	18	10	18	50	5
Group 3	67	28	-	6	-
Total	31	17	12	32	8
Significance	0.0018				
Yogurt - Fruit					
Group 1	27	7	17	32	17
Group 2	28	15	10	28	20
Group 3	67	11	17	-	6
Total	34	10	19	22	16
Significance	0.0468				
Yogurt - Natural					
Group 1	59	17	2	15	7
Group 2	45	5	10	33	8
Group 3	83	11	6	-	-
Total	53	13	9	18	7
Significance	0.0336				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Baked Beans					
Group 1	5	24	20	46	5
Group 2	5	20	28	47	-
Group 3	33	33	22	11	-
Total	10	25	24	40	2
Significance	0.0079				
Potatoes (all kinds)					
Group 1	-	-	2	42	56
Group 2	-	5	3	53	40
Group 3	11	-	-	50	39
Total	3	3	3	46	45
Significance	0.0732				
Baked Potatoes					
Group 1	5	7	24	54	10
Group 2	3	8	20	68	3
Group 3	33	11	28	22	6
Total	8	8	23	51	10
Significance	0.0060				
Crisps					
Group 1	15	17	20	37	12
Group 2	30	35	10	18	8
Group 3	67	6	22	6	-
Total	32	20	17	24	8
Significance	0.0007				
Chips					
Group 1	10	12	17	54	7
Group 2	33	25	25	15	3
Group 3	28	22	11	39	-
Total	24	20	19	35	3
Significance	0.0151				
Frozen Peas					
Group 1	24	12	17	46	-
Group 2	20	15	13	50	3
Group 3	39	28	17	17	-
Total	24	14	16	44	2
Significance	0.3421				

Figure 6.14 (continued)

Frequency	Never	Once a month	2-3 times a month	Every week	Every day
Tomatoes					
Group 1	5	2	15	59	20
Group 2	5	3	5	58	30
Group 3	17	6	17	50	11
Total	7	3	13	55	23
Significance	0.4308				
Brown Sugar					
Group 1	56	15	7	12	10
Group 2	65	13	8	5	10
Group 3	89	-	11	-	-
Total	61	13	9	9	8
Significance	0.2906				
White Sugar					
Group 1	20	12	2	12	54
Group 2	85	13	3	-	-
Group 3	28	11	-	6	56
Total	47	10	3	9	31
Significance	0.0000				
Diet Lemonade					
Group 1	59	7	5	15	15
Group 2	63	8	13	5	13
Group 3	83	6	6	-	6
Total	59	10	10	10	11
Significance	0.4432				
Lemonade					
Group 1	27	17	20	29	7
Group 2	60	23	8	8	3
Group 3	83	6	6	6	-
Total	50	18	12	17	4
Significance	0.0024				

Figure 6.15

Demographic profiles of the cluster groups based on eating habits

Units: Number of Respondents (% of group)(% of sub-group)

Sample: Group 1 n = 49
Group 2 n = 47
Group 3 n = 23

	Group 1	Group 2	Group 3
Demographic Indicator			
Socio-economic Group			
AB	- (-) (-)	6 (13%)(100%)	- (-) (-)
C1	19 (39%)(61%)	12 (26%)(39%)	- (-) (-)
C2	19 (39%)(49%)	15 (41%)(38%)	5 (22%)(13%)
DE	11 (22%)(26%)	14 (30%)(33%)	18 (78%)(42%)
Significance 0.0001			
Age Group (years)			
16-24	4 (8%)(80%)	- (-) (-)	1 (4%)(20%)
25-34	16 (33%)(47%)	15 (32%)(44%)	3 (13%)(24%)
35-44	10 (20%)(45%)	10 (21%)(45%)	2 (9%)(45%)
45-54	8 (16%)(47%)	6 (13%)(35%)	3 (13%)(18%)
55-64	6 (12%)(29%)	11 (23%)(52%)	4 (17%)(19%)
65+	5 (10%)(26%)	5 (11%)(26%)	9 (39%)(48%)
Significance 0.0199			
Households with and without children			
With children	20 (41%)(59%)	13 (8%)(38%)	1 (4%)(3%)
Without children	29 (59%)(34%)	34 (72%)(40%)	22 (96%)(26%)
Significance 0.0113			
Size of household			
1 person	4 (8%)(17%)	11 (33%)(46%)	9 (39%)(27%)
2 people	18 (37%)(42%)	14 (30%)(33%)	11 (48%)(25%)
3 people	9 (18%)(45%)	9 (19%)(45%)	2 (9%)(10%)
4 people	11 (22%)(50%)	11 (23%)(50%)	- (-)(-)
5 or more	7 (14%)(70%)	2 (4%)(20%)	1 (4%)(10%)
Significance 0.0407			

Group 1

Breakfast Cereal - Prefer cornflakes or a high bran cereal such as All Bran.

Biscuits - Prefer cream crackers to Ryvita and were most likely to eat chocolate biscuits, cream cakes and sweets on a regular basis.

Bread - This group eat a mixture of wholemeal and white bread.

Pasta, Rice and Lentils - Pasta, rice and lentils are eaten by members of this group who also prefer white to brown rice.

Meat and Fish - These respondents eat all types of meat and fish regularly and are the group most likely to eat fish fingers.

Dairy Products - This group are equally likely to use butter, polyunsaturated margarine and low fat spreads and prefer whole milk to skimmed milk. They prefer fruit yogurts to natural yogurts.

Vegetables - These people eat more crisps and chips than other groups although they also regularly eat baked potatoes as well as baked beans, frozen peas and tomatoes.

Sugar - Respondents prefer white to brown sugar and drink both "diet" and ordinary lemonade.

Description of Respondents

Respondents in this group tend to come from the C1 and C2 socio-economic groups and from the younger age groups. Most are from larger households with children.

Group 2

Breakfast Cereal - This group prefer meusli and high fibre cereals.

Biscuits - They rarely eat either Ryvita or cream crackers but prefer Ryvita.

Bread - Most people eat wholemeal bread everyday and those who do not have some wholemeal bread each week.

Pasta, Rice and Lentils - These people are the most likely to eat wholemeal pasta, brown rice and lentils of all groups.

Meat and Fish - This group eat red meat, sausages and bacon less frequently than other groups. They eat poultry regularly. They also eat tinned and white fish more than other respondents but do not tend to eat fish fingers.

Dairy Products - Few people in this group eat butter prefering polyunsaturated margarine or low fat spreads. The vast majority use skimmed rather than full fat milk. They eat cottage cheese regularly and eat both natural and fruit yogurt.

Vegetables This group rarely eat chips or crisps, favouring baked potatoes, they eat baked beans, frozen peas and tomatoes regularly.

Sugar - They rarely use either brown or white sugar, but those that do use sugar show a preference for brown, they also prefer "diet" lemonade to other lemonade although they drink neither very regularly.

Description of Respondents

This group comprises people from a range of socio-economic groups but is more likely to contain respondents from the AB groups than either of the other groups. They are in the mid age range and from one, three or four person households.

Group 3

Breakfast cereal - This groups tend not to eat breakfast cereals.

Biscuits - Most respondents do not eat either cream crackers or the Ryvita type biscuits more often than once a week, most eat them monthly or neither. They are unlikely to eat chocolate biscuits or sweets but occasionally indulge in cream cakes.

Bread - There was a tendency to eat white rather than wholemeal bread in this group.

Pasta, Rice and Lentils - These people were unlikely to eat pasta, rice or lentils.

Meat and Fish - Although this group eat both meat and fish, they tend to prefer meat and meat products to fish. They are the least likely group to eat fish or fish products.

Dairy Products -This group prefer butter to either low fat spread or polyunsaturated margarine. They do not use skimmed milk but many do not use whole milk either (this implies that semi-skimmed milk may be popular in this group).

This group occasionally eat fruit yogurts but not natural yogurts or cottage cheese.

Vegetables - There is a tendency to eat potatoes as chips rather than as baked potatoes, most do not eat crisps. They are less likely to eat baked beans and frozen foods.

Sugar - Very few people used brown sugar but many also said that they did not use white. They were unlikely to drink either lemonade or sugar-free lemonade.

Description of Respondents

These people are from the C2 and DE socio-economic groups, in the older age groups and live in smaller households without children.

6.4.3 Cluster Analyses based on groups of attitudes

A number of attitude statements were included in the questionnaire. These statements reflected areas of concern or interest which were identified during discussion groups (Chapter 7).

For the purpose of the cluster analyses these attitudes were divided into three groups regarding:

(1) Food production

(2) Diet and Health

(3) Food knowledge

Each group of attitudes was analysed separately. On the basis of their reaction to each of these groups of statements, the respondents were divided into three groups with similar response profiles. These three groups, homogenous in terms of their attitudes, were then examined in terms of their demographic profiles to assess whether it is possible to identify groups of consumers who are likely to have similar viewpoints on particular topics.

This section takes each of the three types of statement in turn, describes the response of the three groups and then describes each of these groups according to their demographic characteristics.

(i) Attitudes to food quality and food production

The attitude statements used in this analysis were:

I prefer to buy natural foods whenever possible.

Additives in food can be harmful.

Food should be labelled to say if it has been treated with pesticides.

Insecticides used in farming can remain on food and be harmful when eaten.

Irradiation is an affective way of preserving food.

Food can safely be exposed to radiation to make it last longer.

There is increasing concern about the way meat is produced.

More people are not eating meat because of worries about hormone residues.

People are becoming vegetarian because of concern for animal welfare.

Figure 6.16 describes the reaction of three homogenous groups of respondents to these statements and Figure 6.17 describes the demographic profiles of these three groups.

Figure 6.16

Reaction to attitudes regarding food production

Units: % Respondents

Sample: Group 1 n = 45
Group 2 n = 27
Group 3 n = 4
Total n = 119

	Strongly Agree	Sightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Statement					
I prefer to buy natural foods whenever possible					
Group 1	60	27	9	4	-
Group 2	70	26	-	4	-
Group 3	17	19	5	6	-
Total	67	24	4	5	-
Significance 0.6608					
Additives in food can be harmful					
Group 1	31	33	25	9	2
Group 2	59	11	15	15	11
Group 3	81	17	0	2	-
Total	57	22	10	8	3
Significance 0.0000					
Food should be labelled to say if it has been treated with pesticides					
Group 1	56	16	24	2	2
Group 2	92	4	-	4	-
Group 3	98	2	-	-	-
Total	82	8	7	2	1
Significance 0.0001					
Insecticides used in farming can remain on food and be harmful when eaten					
Group 1	24	20	45	2	9
Group 2	74	26	-	-	-
Group 3	89	11	-	-	-
Total	62	18	16	1	3
Significance 0.0000					

Figure 6.16 (continued)

	Strongly Agree	Sightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Irradiation is an effective way of preserving food					
Group 1	4	27	51	7	11
Group 2	30	41	3	19	7
Group 3	9	2	64	4	21
Total	12	20	46	8	14
Significance	0.0000				
Food can be safely exposed to radiation to make it last longer					
Group 1	4	16	52	4	24
Group 2	26	19	3	26	26
Group 3	2	6	41	6	45
Total	8	13	36	10	33
Significance	0.0000				
There is increasing concern about the way meat is produced					
Group 1	20	38	38	-	4
Group 2	67	33	0	-	-
Group 3	68	32	0	-	-
Total	50	35	13	-	2
Significance	0.0000				
More people are not eating meat because of concern about hormone residues					
Group 1	7	18	55	18	2
Group 2	30	41	7	15	7
Group 3	9	23	32	21	15
Total	13	25	34	19	9
Significance	0.0005				
People are becoming vegetarian because of concern for animal welfare					
Group 1	16	38	18	24	4
Group 2	33	33	11	19	4
Group 3	21	53	7	15	4
Total	22	43	12	19	4
Significance	0.4203				

Figure 6.17

Demographic profiles of the cluster groups based on attitudes to food production

Units: Number of Respondents (%)

Sample: Group 1 n = 49
Group 2 n = 47
Group 3 n = 23

	Group 1		Group 2		Group 3	
Demographic Indicator						
Socio-economic group						
AB	2	(4%)(33%)	-	(-) (-)	4	(9%)(67%)
C1	7	(16%)(23%)	9	(33%)(29%)	15	(32%)(48%)
C2	19	(42%)(49%)	7	(26%)(18%)	13	(28%)(33%)
DE	17	(38%)(40%)	11	(41%)(26%)	15	(32%)(35%)
Significance	0.2382					
Age Group						
16-24	2	(5%)(40%)	-	(-) (-)	3	(6%)(60%)
25-34	13	(30%)(38%)	6	(22%)(18%)	15	(32%)(44%)
35-44	10	(23%)(46%)	6	(22%)(27%)	6	(13%)(27%)
45-54	6	(14%)(35%)	6	(22%)(35%)	5	(11%)(29%)
55-64	6	(14%)(29%)	3	(11%)(14%)	12	(26%)(57%)
65+	7	(16%)(37%)	6	(22%)(32%)	6	(13%)(32%)
Significance	0.5366					
Households with and without children						
With children	14	(31%)(41%)	5	(19%)(15%)	15	(32%)(44%)
Without children	31	(69%)(37%)	22	(82%)(26%)	32	(68%)(38%)
Significance	0.4196					
Size of household						
1 person	9	(20%)(38%)	4	(15%) (17%)	11	(23%)(46%)
2 people	19	(42%)(44%)	10	(37%) (23%)	14	(30%)(33%)
3 people	3	(7%)(15%)	7	(26%) (35%)	10	(21%)(50%)
4 people	8	(18%)(36%)	4	(15%) (18%)	10	(21%)(46%)
5 or more	6	(13%)(60%)	2	(7%) (20%)	2	(4%)(20%)
Significance	0.3448					

Group 1

This group are not sure if pesticides should be labelled but prefer natural foods and do not know if insecticides remain on food and could be harmful when eaten.

They are least sure if foods should be labelled regarding pesticides and whether they can remain on foods and be harmful. They agree that irradiation is effective but are less sure whether or not it is safe, although the majority don't know about either of these things.

Regarding meat production and factory farming, this group were the least likely to have any opinion as to whether animal welfare and hormone residues were affecting meat consumption.

The people in this group tended to be form the C2 and DE socio-economic groups and the younger age groups.

Group 2

This groups are the least likely to agree that food additives can be harmful but neverthless, prefer natural foods. They believe insecticies in food should be labelled and that they can remain on food and be harmful when eaten.

They tend to agree that irradiation is effective in food preservation but are less sure about its safety. This group think that meat production methods are a cause for concern and specifically both hormone residues and animal welfare are issues which are affecting whether or not people eat meat.

These people are from the entire range of socio-economic groups and ages but tend to live in three person households.

Group 3

This group think that additives in food can be harmful but buying natural foods is no more important to this group than to other groups.

They believe that insecticides should be labelled and that they can remain on food and be harmful when eaten. The majority were not sure about the safety and effectiveness of irradiation but those who did express an opinion said that it was neither effective or safe.

Although this group agree that there is increasing concern about meat production methods, this concern was centred around welfare rather than hormone residues.

This group are in the AB and C1 socio-economic groups, are under 35 years of age and over 55 years of age, they tend to either live alone or in three or four person households with children.

(ii) Attitudes to diet and health

The attitude statements used in this analysis were:

My current diet is healthy and well balanced.

Healthy eating is expensive.

It is easy to have a healthy diet at home but more difficult when you eat out.

Canteen meals are usually as good for you as the meals you have at home.

Fast foods such as hamburgers and pizzas cannot be considered healthy meals.

Restaurants should be more specific about the ingredients in their dishes.

Grilling foods takes some of the goodness out of it.

It is necessaary to include meat for a meal to be well balanced.

A healthy diet does not contain red meat.

I don't think fat is any good for you at all.

There are too many additives in food.

It is difficult to avoid processed food in todays eating habits.

Food is more highly processed than it used to be.

Modern food production methods have led to a general decline in the quality of food.

People do not take the health risk of a poor diet seriously enough.

Figure 6.18 describes the reaction of three homogenous groups of respondents to these statements and Figure 6.19 describes the demographic profiles of these three groups.

Figure 6.18

Reaction to attitudes regarding diet and health

Units: % Respondents

Sample: Group 1 n = 71
Group 2 n = 31
Group 3 n = 17
Total n = 119

	Strongly Agree	Slightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Statement					
My current diet is healthy and well balanced					
Group 1	38	38	7	11	6
Group 2	48	39	-	13	-
Group 3	29	41	12	18	-
Total	40	39	5	13	3
Significance 0.5080					
Healthy eating is expensive					
Group 1	13	24	5	21	37
Group 2	45	39	-	10	7
Group 3	18	35	5	18	24
Total	22	29	4	18	27
Significance 0.0032					
It is easy to have a healthy diet at home but more difficult when you eat out					
Group 1	39	35	7	16	3
Group 2	26	39	6	19	10
Group 3	24	29	23	24	-
Total	34	36	8	18	4
Significance 0.2465					
Canteen meals are usually as good for you as the meals you have at home					
Group 1	14	30	14	24	18
Group 2	7	19	6	29	39
Group 3	6	18	35	29	12
Total	11	25	16	26	22
Significance 0.0714					

Figure 6.18 (continued)

	Strongly Agree	Sightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
Fast foods such as hamburgers and pizzas cannot be considered healthy meals					
Group 1	27	25	6	39	3
Group 2	68	5	22	5	-
Group 3	12	35	41	12	-
Total	35	24	10	29	2
Significance 0.0000					
Restaurants should be more specific about the ingredients in their dishes					
Group 1	55	27	6	6	6
Group 2	71	26	-	3	-
Group 3	35	29	18	12	6
Total	56	27	7	6	4
Significance 0.2103					
Grilling food takes some of the goodness out of it					
Group 1	4	16	11	25	44
Group 2	36	45	-	13	7
Group 3	6	12	29	35	18
Total	13	23	9	24	31
Significance 0.0000					
It is necessary to include meat for a meal to be well balanced					
Group 1	16	17	4	18	45
Group 2	13	26	-	13	48
Group 3	6	18	23	29	24
Total	13	19	6	19	43
Significance 0.0367					
A healthy diet does not contain red meat					
Group 1	17	27	2	30	24
Group 2	19	29	3	39	10
Group 3	6	29	12	47	6
Total	16	28	3	35	18
Significance 0.2946					
I don't think fat is any good for you at all					
Group 1	30	24	6	27	1
Group 2	52	32	-	13	3
Group 3	29	6	24	41	-
Total	36	24	6	25	9
Significance 0.0047					

Figure 6.18 (continued)

	Strongly Agree	Sightly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
There are too many additives in food					
Group 1	69	23	4	4	-
Group 2	87	13	-	-	-
Group 3	59	18	29	6	6
Total	73	20	3	3	1
Signficance 0.0906					
It is difficult to avoid processed food in todays eating habits					
Group 1	38	41	1	10	10
Group 2	45	48	-	7	-
Group 3	6	18	52	18	6
Total	36	40	7	10	7
Significance 0.0000					
Food is more highly processed than it used to be					
Group 1	65	30	1	3	1
Group 2	93	7	1	-	-
Group 3	-	6	82	12	-
Total	63	20	13	3	1
Significance 0.0000					
Modern food production methods have led to a general decline in the quality of food					
Group 1	39	28	9	21	3
Group 2	48	39	-	7	7
Group 3	6	35	29	24	6
Total	37	32	9	18	4
Significance 0.0080					
People do not take the health risk of a poor diet seriously enough					
Group 1	66	23	4	4	3
Group 2	81	10	3	3	3
Group 3	47	35	6	12	-
Total	68	21	3	5	3
Significance 0.4321					

Figure 6.19

Deomgraphic profiles of the cluster groups based on attitudes to diet and health

Units: Number of respondents (% of group)(% of sub-group)

Sample: Group 1 n = 71
Group 2 n = 31
Group 3 n = 17

	Group 1			Group 2			Group 3		
Demographic Indicator									
Socio-economic group									
AB	2	(3%)	(33%)	1	(3%)	(17%)	3	(18%)	(50%)
C1	23	(32%)	(74%)	7	(23%)	(23%)	1	(1%)	(3%)
C2	22	(31%)	(56%)	12	(39%)	(31%)	5	(29%)	(13%)
DE	24	(34%)	(56%)	11	(36%)	(26%)	8	(47%)	(19%)
Significance 0.0800									
Age Group (years)									
16-24	4	(6%)	(80%)	1	(3%)	(20%)	-	(-)	(-)
25-34	23	(33%)	(68%)	6	(19%)	(18%)	5	(29%)	(15%)
35-44	16	(23%)	(73%)	2	(7%)	(9%)	4	(24%)	(18%)
45-54	9	(13%)	(53%)	5	(16%)	(29%)	3	(18%)	(18%)
55-64	10	(14%)	(48%)	10	(32%)	(48%)	1	(6%)	(4%)
65+	8	(11%)	(42%)	7	(23%)	(37%)	4	(24%)	(21%)
Significance 0.1729									
Households with and without children									
With	22	(31%)	(65%)	5	(16%)	(15%)	7	(41%)	(21%)
Without	49	(69%)	(58%)	26	(84%)	(30%)	10	(59%)	(12%)
Significance 0.1439									
Size of Household									
1 person	17	(24%)	(71%)	4	(13%)	(17%)	3	(18%)	(12%)
2 people	20	(28%)	(47%)	16	(52%)	(37%)	7	(41%)	(16%)
3 people	12	(17%)	(60%)	8	(26%)	(40%)	-	(-)	(-)
4 people	13	(18%)	(59%)	3	(10%)	(14%)	6	(35%)	(27%)
5 or more	9	(13%)	(90%)	-	(-)	(-)	1	(6%)	(10%)
Significance 0.0270									

Group 1

The diet of this group is considered (by them) to be healthy and well balanced. They strongly agree that it is easier to have a healthier diet at home than when eating out and think restaurants should provide more information about the meals that they serve. They are divided in their opinion on the quality of canteen meals and fast foods.

They strongly disagree that meat is necessary for a meal to be well balanced but are split in their opinion about whether a healthy diet contains red meat and about whether fat is any good at all.

They agree that food is more highly processed today, that it is difficult to avoid highly processed food and that there are too many additives in food. This group consider that todays production methods have led to a decline in food quality. They do not think that diet and health is taken seriously enough.

This group came from the C1, C2 and DE socio-economic groups, they are in the younger age groups, single or large households.

Group 2

This group has the highest opinion of their own diet and most strongly agree that healthy eating is expensive. They strongly agree that canteen meals are expensive. They strongly agree that canteen meals are as good as the meals they might have at home and also that fast foods cannot be considered healthy. They were strongly in favour of restaurants being more specific about the content of the meals that they provide.

This group disagreed that meat is necessary in a meal and are split on the place of red meat in a healthy diet. Most agree that fat is not any good for you at all.

They agree very strongly that there are too many additives in food, that food is more highly processed than it used to be and that today's eating habits make it difficult to avoid highly processed foods. They also agree that modern food production methods have led to a decline in food quality. The majority of this group feel that diet and health are not taken seriously enough, most agreeing strongly.

These people are in the C2 socio-economic group, the older age groups, do not have children and live in two or three person households.

Group 3

This group are least happy that their current diet is healthy and well balanced and are divided in their opinion as to whether healthy eating is expensive. They are the people most likely to have no opinion on the merits of food eaten outside home including both canteen meals and fast foods.

They are not sure whether meat is needed in a balanced meal but tend to slightly disagree that a healthy diet does not contain red meat. They tend to disagree that fat is not any good for you at all.

This group are least strong in their opinion that there are too many additives in food, that it is difficult to avoid highly processed foods and they do not know if food is more highly processed than it used to be. They also do not know if modern food production methods have led to a decline in food quality. They agree that the health risk of a poor diet is not taken seriously enough.

This group are from the AB socio-economic group, have children and are likely to live in four person households.

(iii) Statements regarding food knowledge

The statements used in this analysis were:

The way food is cooked can affect how good it is for you.

Grilling food takes some of the goodness out of it.

Animal fat is saturated fat.

Vegetable fat is always polyunsaturated.

I don't think fat is any good for you at all.

It is necessary to include meat for a meal to be balanced.

A healthy diet does not contain red meat.

Figure 6.20

Reaction to statements regarding food knowledge

Units: % Respondents

Sample: Group 1 n = 36
Group 2 n = 67
Group 3 n = 16
Total n =119

The way food is cooked can affect how good it is for you

Group 1	67	22	-	8	3
Group 2	93	6	1	-	-
Group 3	94	6	-	-	-
Total	85	11	-	3	1
Significance	0.0209				

Grilling food takes away some of the goodness

Group 1	17	11	19	31	22
Group 2	8	24	8	18	42
Group 3	25	44	-	31	-
Total	13	23	9	24	31
Significance	0.0022				

Animal fat is saturated fat

Group 1	-	3	83	3	11
Group 2	84	10	-	6	-
Group 3	81	13	-	6	-
Total	58	8	25	5	3
Significance	0.0000				

Vegetable fat is always polyunsaturated

Group 1	-	22	61	11	6
Group 2	12	10	25	16	37
Group 3	-	6	31	25	38
Total	7	14	35	16	28
Significance	0.0003				

Figure 6.20 (continued)

Statement	Slightly Agree	Strongly Agree	Don't Know No opinion	Slightly Disagree	Strongly Disagree
I don't think fat is any good for you at all					
Group 1	22	22	17	28	11
Group 2	45	21	3	25	6
Group 3	25	38	5	19	13
Total	36	24	6	25	9
Significance	0.1195				
It is necessary for a meal to include meat to be well balanced					
Group 1	11	28	11	22	28
Group 2	3	12	5	19	61
Group 3	63	31	-	6	-
Total	13	19	6	19	43
Significance	0.0000				
A healthy diet does not contain red meat					
Group 1	11	39	5	39	6
Group 2	16	18	5	33	28
Group 3	25	44	-	31	-
Total	15	25	5	34	19
Significance	0.0205				

Figure 6.21

Demographic profiles of the cluster groups based on reaction to statements regarding food knowledge

Units: Number of respondents (% of group)(% of sub-group)

Sample: Group 1 n = 36
Group 2 n = 67
Group 3 n = 16

	Group 1	Group 2	Group 3
Demographic Indicator			
Socio-economic group			
AB	2 (6%)(33%)	4 (6%)(67%)	- (-) (-)
C1	5 (14%)(16%)	21 (31%)(18%)	5 (31%)(16%)
C2	9 (25%)(23%)	25 (37%)(64%)	5 (31%)(13%)
DE	20 (56%)(47%)	17 (25%)(39%)	6 (38%)(14%)
Significance	0.0921		
Age Group			
16-24	1 (3%)(20%)	2 (3%)(40%)	2 (13%)(40%)
25-34	9 (26%)(26%)	20 (30%)(59%)	5 (31%)(15%)
35-44	6 (17%)(27%)	13 (19%)(59%)	3 (19%)(14%)
45-54	5 (14%)(29%)	10 (15%)(59%)	2 (12%)(12%)
55-64	7 (20%)(33%)	13 (19%)(62%)	1 (6%) (5%)
65+	7 (20%)(37%)	9 (13%)(47%)	3 (19%)(16%)
Significance	0.8657		
Households with and without children			
With	11 (31%)(32%)	18 (27%)(53%)	5 (31%)(15%)
Without	25 (69%)(29%)	49 (73%)(58%)	11 (69%)(13%)
Significance	0.8953		
Size of household			
1 person	9 (25%)(38%)	12 (18%)(50%)	3 (19%)(12%)
2 people	13 (36%)(30%)	24 (36%)(56%)	6 (37%)(14%)
3 people	5 (14%)(25%)	12 (18%)(60%)	3 (19%)(15%)
4 people	6 (17%)(27%)	14 (21%)(64%)	2 (13%) (9%)
5 or more	3 (8%) (30%)	5 (8%) (50%)	2 (13%)(20%)
Significance	0.9852		

Group 1

This group tend to agree that the way food is cooked can affect it's healthiness and disagree that grilling food takes some of the goodness out of it.

Regarding fat - they do not know if animal fat is saturated fat, or if vegetable fat is always polyunsaturated. They are split in their opinion about whether fat is any good for you at all. They are also split about the necessity of meat in the diet and in balanced meals.

These people are in the AB or DE socio-economic groups, in the older age groups and smaller households.

Group 2

This group strongly agree that cooking methods affect how good food is for you and disagree (most strongly) that grilling food takes some of the goodness out of it.

They strongly agree that animal fat is saturated fat, disagree that vegetable fat is always polyunsaturated and strongly agree that fat is no food for you at all. They do not think that individiual meals need meat in order to be balanced but disagree that a healthy diet does not contain red meat.

This group are from the AB, C1 or C2 socio-economic groups, the mid-age groups and three or four person households.

Group 3

This group strongly agree that the way food is cooked can affect how good it is for you and tend to agree that grilling food takes some of the goodness out of it.

They strongly agree that animal fat is saturated fat and disagree that vegetable fat is always polyunsaturated fat. They tend to slightly agree that fat is no good for you at all. They strongly agree that balanced meals do contain meat and also agree that a healthy diet does not contain red meat.

They are in the youngest age group and live in two person, three person or large households.

Summary

This Chapter has presented the results of a two year survey undertaken in 1987 and 1988. Analysis of these results is included in Part 3.

CHAPTER SEVEN

DISCUSSION GROUPS

7.1 Introduction

This chapter describes a series of group discussions carried out through 1986 and 1987. The results are presented in the format of a comment on the general response to a range of issues followed by representative comments from participants.

7.2 Methodology

The qualitative element of this research programme consists of a series of group discussions held amongst consumers.

The series of group discussions began as a result of involvement with Wm Morrison Supermarkets Plc (Morrisons) in their preparation of a healthy eating campaign. This campaign consisted of a series of booklets, backed up with posters, shelf-talkers on product groups and dietary elements and shelf edges describing individual foods and their dietary roles. The Food Policy Research Unit was approached for help and advice in preparing this campaign. It was also suggested that the Food Policy Research Unit provide an analysis of the effectiveness of the campaign. As a result, it was decided to undertake a series of group discussions.

The first set of discussion groups was planned to take place shortly before the launch of the campaign in May 1986. Participants were recruited by personal contact in Morrisons supermarkets, six groups were organised, two at each of three locations - Sheffield, Bradford and Rochdale. This exercise was repeated in September 1986 after the campaign had been running in-store for five months. All discussion sessions were tape recorded. Each participant attending the group discussions was given a five pound Morrisons shopping voucher as a token of appreciation for their co-operation. The results of these group discussions were published in the special reports "Talking about Healthy Eating" (Wright and Slattery, 1986) and "The Consumer Reaction to a Healthy Eating Initiative" (Slattery and Wright, 1986).

7.3 Implimentation

7.3.1 Discussion Group Format

The discussions were informal and relaxed. There was no pre-planned structure and participants were encouraged to introduce topics of conversation which they felt to be interesting. The groups were held in the supermarket's training rooms and light refreshments were offered.

When a subject of general concern arose, conversation developed naturally on that topic. Only occasionally was it necessary to introduce topics of conversation.

Each discussion was recorded and transcribed soon afterwards. The general areas of discussion could be divided into: links between diet and ill-health, attitudes to foods and nutrients, information sources and needs.

7.3.2 Respondent Profile

	May	September	Age Group
Bradford	2 women	5 women	25 - 34 years
	2 women	14 women	35 - 54 years
		7 women	55 + years
	1 man	2 men	25 - 34 years
		2 men	35 - 54 years
		1 man	55 + years
Sheffield	4 women	6 women	25 - 34 years
	6 women	10 women	35 - 55 years
	4 women	6 women	55 + years
	1 man	1 man	35 - 54 years
		3 men	55 + years
Rochdale	5 women	3 women	25 - 34 years
	7 women	6 women	35 - 54 years
	3 women	1 women	55 + years
		1 man	25 - 34 years
		1 man	55 + years

7.4 Results

7.4.1 General Summary

First Set of Discussions

Many aspects of healthy eating were discussed. There were a number of respondents with a particular dietary interest relating to the specific health requirements of family or close friends. These people had, in general, taken steps to find information on the aspects of diet and health about which they were especially concerned. This kind of respondent was well informed on basic dietary issues. Most respondents related the concept of diet and health to slimming diets, most issues eventually reverted to this topic.

The feeling of the groups generally was:

"I don't think healthy eating is another fly by night idea and that people will soon forget, people will make changes and stick to them, especially when they see what effect food can have on some people"

"People know that with some illnesses such as a bad heart, food can definitely make it worse. Most people learn the lesson the hard way at the moment but this will change over the next few years."

Second Set of Discussions

There seemed to be less interest in discussing specific health concerns although there was still an overriding preoccupation with overweight and reducing diets. It was clear that most respondents had a keen interest in acquiring information if it was easily available, particularly from television programmes. As a result of this, the range of topics discussed was far wider in these sessions.

The general feeling of these discussions is highlighted in the following quotations:

"It's just a case of being sensible. Nothing is bad for you if you don't overdo it"

"There is now more emphasis on all aspects of food, from quality to appearance, to healthiness. Presentation can make people more adventurous and generally increase their awareness of food"

"The more you eat the better the industry likes it and they don't care what you eat"

"We don't know enough about what we are eating to be able to understand what we should eat"

"It took a long time to realise the effect diet can have on my health. I need to be told and although I don't really understand, I accept what I've been told"

7.4.2 Diet related diseases

First Set of Discussions

A range of health problems were discussed including heart disease, diabetes, obesity, arthritis, cancer, dental problems and allergies, especially in relation to children.

Concern about heart disease had led to some avoidance of what were considered high fat, high cholesterol foods, moving away from red meat and towards poultry or fish and changing from butter to polyunsaturated margarines or low fat spreads. Weight loss was assumed to be the objective of these dietary changes. Some foods were thought of as difficult to give up, particularly butter.

> "Our family only have vegetable fat ever since my father had a stroke and the doctor said that animal fats could make it happen again. I don't even use any animal fats in baking any more"

> "I try to cut out fat or change to "Flora" but butter is still the tastiest and so it's difficult to change completely"

There was a general belief in the link between diet and arthritis and food mentioned in this context were dairy products, salt, peas and tomatoes.

Some food specific allergies were mentioned but of more concern was allergy to additives and preservatives. Yellow food colouring causing hyperactivity was often mentioned.

"Colourings aren't really necessary in foods, they're only there to make it look better and they can be very dangerous for children and if parents don't realise what causes things like hyperactivity, their lives can be really miserable"

Obesity was a consistent topic throughout the sessions, although there was some interest in healthy eating as part of an overall life-style rather than merely in relation to weight loss. Respondents described their own experiences with slimming diets - doctors advice, dietitians advice, slimming clubs, problems of vitamin deficiency on a diet were all of interest. The point was also made on several occasions that you can look very ill on a diet and may regain lost pounds very quickly. Common sense was thought to be the best guide, with smaller portions or smaller plates. Sugar, cheese, chocolates and fat were all declared enemies of the slimmer. Popular measures taken to lose weight were: eating less sugar, bread, chips and eating jacket potatoes in place of chips.

"Most people need to slim at some time or another and this makes them aware of what they are eating and the sort of meals they give their families"

Second Set of Discussions

Discussion of health problems was generally only initiated by those who had personal experience or who had friends or relatives who had made significant dietary changes. These were often discussed in detail.

Health problems in the elderly often mean re-education in basic cooking skills, and a move away from convenience foods which many have come to rely on in recent years.

Arthritis was thought to be helped by cutting out dairy products and meat. One case was described of arthritis in the knee being completely cured as a result of dietary changes.

> "Stopping eating meat is very good if you've got arthritis - it works for some people - just like cutting out milk and eggs works for others"

One man who had suffered a mild heart attack had had to lose weight to prevent similar incidents in the future. One respondent's mother had changed her diet following a heart attack, this did not affect the rest of the family who continued eating as before - it was stated that if they were going to have any adverse effects from their diets, they would worry about it at the time. (This illustrated a general feeling that dietary alterations were relevant only to the already sick - there was a lack of recognition of the place of dietary measures in preventing illness in healthy individuals).

Duodenal ulcers were said to require drastic dietary changes. One woman had heard that ulcers were caused by hot tea.

It was said that asthma could be aggravated by many foods, especially those containing "E numbers".

Allergies were said to make shopping very difficult for some people especially those allergic to meat products and those with children sensitive to food.

Cancer was mentioned, but dietary links were uncertain.

Migraine was associated closely with foods by some participants, cheese and chocolate were mentioned in this context.

It was said that sufferers from hiatus hernia need to be careful of their diets, although exact dietary measures were not indicated.

One or two group members expressed interest in psoriasis and diet, although this was disputed by other participants who felt that this disease was more likely the product of an inheritance factor.

Diabetes was discussed in most of the groups, most sufferers wanting a larger, more reasonably priced range of special diabetic products to be made available. It was also pointed out that products are not usually labelled sufficiently regarding their carbohydrate content for sufferers of this illness.

Again there was a great emphasis on weight reducing programmes. Slimming clubs, doctors and various other sources of published information were cited, much of which was felt to be contradictory. One lady in the older age group said that she could breathe better and exercise better after losing weight.

Cutting down on fat and sugar was thought the best way to lose weight, but it was acknowledged that metabolic differences between individuals could make the task very difficult for some people.

"There's sometimes a conflict between what the doctor says and slimming club advice, since going to a slimming club, I now eat up to 1000 calories a day made up of any kind of foods"

"Crash diets are all wrong and micro diets are ludicrous if you can't find a diet that suits you these days there's something wrong with you"

There was an overpowering trust in the notions of balance and moderation - it is just a case of being sensible - nothing is bad for you as long as you don't overdo it.

> "It's better to eat sensibly than to go to Weight Watchers which is too expensive"

There was a feeling of over-exposure to "scare stories" about health concerns:

> "If you listen to all these wonderful fads that are in newspapers and magazines, you wouldn't eat, you wouldn't drink, you wouldn't breathe any air, you wouldn't do anything you would just sit in a corner and shrivel up and die. Somebody, somewhere always has a point to sell and they want to make a lot of money out of it. It's just a matter of common sense and finding out what suits you and what doesn't".

This sort of feeling was expressed in various ways by many members of these discussion groups.

7.4.3 Types of Food

7.4.3.1 Meat, Poultry and Fish

First Set of Discussions

Chicken and fish were widely thought to be preferable in a healthy diet to red meat. Although fish was generally liked, it was considered too expensive for family meals. Quality is important in meat - most said "You get what you pay for". There was also the idea that some cuts are better from the butchers shop and some better from the supermarket. Joints, and bacon were mentioned as being good value from the supermarket as small joints are available for small families. The kind of cuts of meat available are changing and there is a move towards less fatty meat.

> "You can get very good quality red meat but you have to pay for it and so it makes family meals very expensive"

> "You can get cuts of meat now that you wouldn't have heard of 20 years ago, some of these don't have much fat on and make you think they're better for you"

There was much discussion concerning meat products. Reference was frequently made to the television programme which examined the composition of sausages. It was thought that a very poor quality meat would be used in meat products. Cooked meat from a delicatessen counter was considered to have a fresher and more natural image than

pre-packed products. At the same time, however, it was thought that the labelling of meat on the delicatessen counter was not satisfactory regarding preservatives, water, polyphosphates and colourings. (Most such products are required to be labelled by law, but many respondents had not noticed this labelling).

> "Cooked meats on delicatessen counters don't really tell you what's in them, you know that there's a lot of added water but no-one can tell exactly how much"

> "The meat that butchers and supermarkets can't sell is the sort that goes into pies and sausages. You'd never buy these things if you saw the ingredients first. They're made to taste all right by using additives".

Second Set of Discussions

Again, it was thought that white meat and fish were healthy alternatives to red meat.

Meat production methods were a prominent part of the discussions. There was a great deal of criticism of hormone treatment of livestock, factory farming and methods of incorporating usually unacceptable parts of animals into meat products.

> "Meat isn't the same quality now as it used to be, it doesn't have any taste in it. Chicken isn't a luxury now and is better for you than red meat although it still has all the hormones in it that red meat has"

These problems were thought less prevalent in poultry, but poultry were believed to have another inherent problem - carrying the bacteria that cause food poisoning. It was also declared that fish, although containing as much goodness as meat, might also contain unknown pollutants from sea water.

Most respondents claimed to be eating more fish and chicken than they used to - they are now more readily available than in the past.

> "Fish has just as much goodness as meat and less fat, but what is in fish? the sea is full of pollution"

> "Chickens are more economical than joints of meat, you can get more meals out of it"

Chicken used to be expensive, but it is now more of an every day meal. It is thought more economical than red meat as there is less waste. There was some debate as to whether meat and poultry is best bought from the butchers shop or from the supermarket. Some said you could see what you are buying at the butchers shop, but this was countered by the fact that the higher turnover of a supermarket will ensure that meat is fresh.

Respondents felt that they were being exploited for the sake of the profits of the meat producers and retailers. They felt that the use of hormone treatments, additives and use of polyphosphates was far beyond their control.

"It's impossible to tell what is in many products but you still buy them for the sake of convenience"

This was a sentiment often declared.

"The only parts of animals that don't go for consumption go to a cosmetic factory"

"Butchers deliberately mislead people about the quality and ingredients of mince, we're not told and therefore not given the choice of what to accept"

It was felt that there should be more specific explanations about content. A product might be labelled "meat" or "beef" but this could mean different things (ie, could mean any part of the animal, not specifically lean meat).

"If you saw what went into sausages you wouldn't even pick one up, never mind eat it"

Many group members felt that the meat product industry is advancing so much in terms of its technological capability that this makes products such as meat pies prohibitively expensive as family meals. It is as economical to buy a piece of meat to feed a family, although this doesn't seem to be of the same quality and have the same taste that it did some years ago.

7.4.3.2 Dairy Products

First Discussions

Milk - low fat milks had been tried by most respondents, semi-skimmed milk was acceptable to some but skimmed milk was usually thought to be too thin and tasteless and was used regularly by very few. Most trials of low fat milks were made as part of a slimming programme although some thought them preferable for those suffering from ulcers and heart conditions. A surprising number of people thought that skimmed milk was available only from the supermarket and not distributed by the milkman.

> "I tried skimmed milk when I was on a diet but no-one else in the family would use it, it was too thin, now I've gone back to the usual milk, it's easier than having two pints open at the same time"

Butter and margarine - the vast majority preferred butter on the criterion of taste but some preferred margarines on health grounds. Soft margarines were described as tasting 'lardy' or 'oily' and were used mainly as an ingredient in baking. Most respondents had tried low fat spreads and some polyunsaturated margarines. There was certainly some confusion about the advantages, disadvantages and nature of some of the large variety of branded products now available.

"There's so much to choose from, I know a lot of people have margarine all the time because they think it's better for them but I think that's OK in baking but nothing can taste like butter really"

"Not all margarines are as good for you as others but how do you know which are which? There's a new one out every time you go into the shop"

"Changing to a low fat margarine can really help in cutting down your cholesterol"

Second Set of Discussions

Milk - the majority of respondents had tried low fat milks and there was a preference for semi-skimmed rather than skimmed. There was a belief that children need whole milk, one participant felt that this was true up to 10 years old. Many were uninformed about the different kinds of heat treatment used in processing milk and it was said that sterilising milk takes the goodness out of it. Goat's milk was mentioned as useful for those suffering cow's milk allergies. The notion of milk as "unhealthy" was met with some doubt by many respondents.

"We used to be told that milk is a very cheap food that is very good especially for children, but now people say it is unhealthy. They keep changing their minds on everything"

Butter and margarine - there was a great interest in the alternatives to butter but many didn't understand the differences in fat content or the difference between 'low fat' spreads and polyunsaturated margarines. Respondents wanted to know what was 'best' for them.

> "I know you have low fat margarines or polyunsaturated margarines for different reasons, but I don't know which is for what"

7.4.3.3 Eggs

First Set of Discussions

Eggs were rarely mentioned in these groups, although they were occasionally cited as something to cut down on.

Second Set of Discussions

Eggs were mentioned by all groups and particularly in connection with battery chicken farming. This was generally said to be cruel and many felt that eggs produced by such methods would be inferior in taste and 'healthiness'. Many participants claimed that they would pay more for Free Range eggs. The increased interest in this subject is probably due to recent media coverage.

> "You can see the difference in battery eggs and free range eggs when you break them. Battery eggs have much more water in them"

"You used to think that you could rely on eggs to be pure and healthy, but you can't even do that now with all the antibiotics they give to chickens"

"You don't actually know if free range eggs have come from a battery farm or not - there's no guarantee that when you make that kind of choice you are getting the product you want".

7.4.3.4 Fruit and Vegetables

First Set of Discussions

Respondents were in favour of increasing the amount of fruit and vegetables in their diet. Most thought that eating more salads was a very good way of slimming. People in general, it was said, do not eat enough fresh fruit and vegetables. There was no mention of fibre in this context.

"Fresh vegetables are especially good for you, most people in this country don't eat enough and if they do, they don't usually know how to cook them"

"People don't cook their vegetables in the most healthy way, potatoes are good for you but too many chips are eaten and not enough baked or boiled. Most vegetables are overcooked and much of the goodness taken out like this"

Second Set of Discussions

There was again, in general, a positive attitude towards fruit and vegetables in the diet. There was, however, much more discussion about production methods - the use of

artificial fertilisers and pesticides was critisised in every group. There was reference to methods used to extend the natural seasonal availability of produce for the increased profit of producers. Concern was shown about the health risk in using so many 'unnatural' chemicals. Irradiation was also mentioned and was not a popular concept - it was often referred to as 'gamma ray treatment', this was a result of television coverage. It was thought of as unnecessary by most group members.

"I don't agree with spraying fruit and vegetables. I haven't tried organic vegetables but I do grow as many as I can"

"We try to eat as much fruit and vegetables as possible, but I still worry about what is in these - insecticides are a big problem"

"We buy vegetables covered in insecticides so it is our fault really - why should they do anything about it while we still eat it"

"We should not be so much bothered about fat and salt and sugar but about all the chemicals - we are eating more and more chemicals - I eat a lot of salad, but even that, you don't know what is absorbed from the soil, all these pesticides and things"

"Things like strawberries are being treated so we can have them all year round - soon nothing will be a treat, it will be dangerous instead"

7.4.3.5 Convenience Foods

First Set of Discussions

There was a feeling that convenience food was not nutritionally a good thing but that today's life-style makes them necessary. Vegetables in brine and fruit in syrup were mentioned as undesirable tinned foods. Tinned foods were generally felt to contain more additives. Beefburgers, fish fingers and pizzas were all named as foods demanded by children which were not the 'healthy' choice of their parents.

> "Children sometimes only eat junk food so it's a waste to try to make things for them and have to throw them away. You might as well give them what they want"

Second Set of Discussions

Most respondents said that people eat more convenience foods because they are getting lazy. Sausages and fish fingers were named as 'junk foods' but very difficult to avoid these days. Much discussion centred around cost - convenience foods were thought to be too expensive in view of their quality.

> "It's difficult to have a balanced diet if you only use convenience foods. You don't really know what's in them but they do save so much time when families are coming and going at different times"

> "It's sometimes cheaper to feed a family with

a joint than to buy ready made foods like meat pies"

7.4.3.6 Bread

First Set of Discussions

Most group members use wholemeal bread - it is slightly more expensive than white bread but regarded as better health-wise and more filling. Children were often resistant to the introduction of brown bread in to their diets, and 'Mighty White' was considered a good alternative for them. There was a feeling that a few years ago, people had been told to cut down on bread and now this advice has changed and they are being told to eat more.

"If you were slimming a few years ago, bread and potatoes were the first things you had to cut down on, now no-one mentions starch"

Second Set of Discussions

There was a general agreement that "brown bread" is preferable for taste and fibre content. Often no distinction was made between "brown" and "Wholemeal". The increased choice of breads in supermarkets was commented on with approval. Many declared that they chose brown breads, but the change was no longer recent, and therefore not a subject of interest for discussion.

"Brown bread tastes better than white bread, it's more filling as well so you don't need as much"

7.4.4 Nutritional Factors

7.4.4.1 Fat

First Set of Discussions

There was a great interest in the issue of fat but also a great deal of confusion. The concept that polyunsaturated fat is preferable was understood at only a very basic level by a few people. Polyunsaturated fat was thought of as "vegetable fat" and saturated fat as "of animal origin" and solid. Respondents wanted more information on this subject. Heart disease and obesity were both linked with fat consumption.

> "Fat is the first thing to cut out to lose weight. It's even more important than sugar"

Second Set of Discussions

There was much discussion of ways to cut down on fat and low fat alternatives had been tried for foods such as cheese, sausages, milk and spreads. These products were thought to be healthier but have less taste. Too much fat was mostly seen as unhealthy - but some scepticism was also shown - some people feeling that the risks of fat had been exaggerated. Again, differences in types of fat were not well understood.

> "Polyunsaturated fat is from vegetables, not animals. It is better to have this if you have a heart problem and are trying to lose weight"

The subject of fat was discussed less frequently and with less enthusiasm than in previous groups.

7.4.4.2 Sugar

First Set of Discussion

Sugar was generally considered "bad for you" and was specifically mentioned as something to be avoided. Most diets contain too much sugar although it was said to be difficult to control when so much is added to processed foods. Tooth decay and weight problems were linked with sugar consumption.

> "Even if you cut down on sugar in baking you then find you are still eating it in tinned foods, even things you wouldn't usually think of, like baked beans, have a lot of sugar in them"

Second Set of Discussions

Again there was agreement that people consume too much sugar, but attempts to cut down centred largely on not adding it to beverages. Rather than avoiding sugar-containing processed foods, it was said that children should be brought up with less confectionery and sweet drinks so that they do not develop a 'sweet tooth'. A few people felt that a certain amount of sugar was necessary in the diet.

"Some drinks with lots of sugar in them are aimed at children and even babies, it's disgusting. It makes it very difficult for parents who have decided they want to keep their children away form sugar when sweet adverts are aimed at children and supermarkets always have the sweets near the tills"

7.4.4.3 Fibre

First Set of Discussions

Most discussion on fibre was related to wholemeal bread although some had tried brown rice and wholemeal flour in cooking. The subject was not discussed extensively.

Second Set of Discussions

There was an acceptance that fibre should be increased in their diets, but the diet/health links were not understood, specific diseases were not mentioned. Bread and cereals were popular ways of increasing dietary fibre.

7.4.4.4 Salt

First Set of Discussions

Salt was mentioned in relation to heart disease, high blood pressure and slimming. The issue of salt reduction was by no means understood although many had taken steps to reduce salt in their diets.

"It sounds silly but it's only a small thing to cut out and it really helps to lose weight"

There was much discussion about tinned vegetables with no salt, some said less salt allows the proper flavour of the food to come out whilst others said that food is tasteless without it. Some thought of sea salt as a natural alternative to ordinary table salt.

Second Set of Discussions

There was less emphasis on the issue of salt, reduced salt tinned vegetables were preferred (although said to be expensive) but fresh or frozen were thought to be better and more "natural" than any tinned varieties. Salt substitutes (eg Lo Salt) had been tried by some participants. Sea salt was mentioned as possibly healthier, but the dumping of radioactive waste in the sea made one respondent doubtful about its safety.

> "I used to think sea salt was better nutritionally, but now you don't know with all the radioactive waste getting into the sea"

> "Sometimes I want salt - it's as though your body craves for it if you need it"

7.4.5 Food Labels

First Set of Discussions

Food Labels were thought to be too small and too complicated It was suggested that a system of symbols would be easier to understand and of more practical use. Sell-by dates were often examined and on the ingredients list respondents looked for "E numbers" and added sugar. Few had noticed nutritional labels; those who had mainly looked at the calorific value of the product. Most said that they read food labels more than they used to.

> "You don't see labels straightaway, you usually see bit stars on the front that say "more fibre" or "less sugar" before you see the real label"

> "The labels are useful if you are being careful about E numbers"

Second Set of Discussions

Labels were said to be confusing, most looked for the amount of "E numbers " included in a product and this was often a criterion in the purchase decision. Colours, preservatives and sugar were also specifically mentioned. There was some mistrust of a product labelled "meat" or "beef" for example, as this is not explicit enough and doesn't usually indicate proportion. Little mention was made of nutrition labels.

"Some products say 'salmon' or 'beef' but this could mean any quality or any proportion of the product"

"If food was labelled with its proper contents, sales would go down"

7.4.6 Sources of Dietary Information

First Set of Discussions

Television, books, magazines, doctors and health visitors were all given as sources of dietary information. Information made available in some supermarkets was thought to be useful, particularly when recipes were included.

Second Set of Discussions

Television, radio and magazines were all mentioned. Some felt that the subject of diet and health was receiving too much media attention and the view that "one day we're told one thing, and the next day it's something else" was quite often expressed.

"What happens when things go the other way and they tell us all these things aren't good for us - they'll come up with something else"

"People have become more interested in food over the last 5 - 6 years, and so it's become more popular on television"

7.4.7 Food Prices

First Set of Discussions

Food prices were important to all participants and improving the healthiness of the diet was often said to be expensive.

Second Set of Discussions

Again food prices were important. Expense was mentioned in relation to meat, fish and fruit and vegetables. Some healthy alternative products, eg. low fat products were said to be too costly.

> "For many people healthy eating seems expensive, lots of people have to buy what's cheapest, but if you think about it, healthy eating is cheap"

7.4.8 Eating Out

First Set of Discussions

Very little interest was shown in the idea of eating out - this was said to occur infrequently.

Second Set of Discussions

Recent holidays led to more discussion of this topic. Too many chips and poor value for money were mentioned. Eating out was said to be becoming more popular.

> "It is difficult to go to nice places with a family, you can usually only get junk food and lots of chips, it's also very expensive"

7.4.9 School Meals

First Set of Discussions

Opinion was divided on this subject, some were very critical of school food. Others claimed to have noticed recent attempts to improve the healthiness of their children's meals.

> "They are changing considerably, there are more junk foods but less puddings - yogurts are provided instead"

> "My children are always saying they get too many chips and fritters, I think probably too much fat is used, they are generally rubbish"

Second Set of Discussions

Most people seemed to feel that school food was improving. One mother, whose child needed to avoid additives, said that school meals were not suitable.

> "They're not as good as you would like to give your children. You often don't have any choice though, they need a meal at lunchtime"

7.4.10 Vegetarianism

First Set of Discussions

Vegetarianism was generally not popular. Very few participants had tried a vegetarian diet. Doubts were expressed about the adequacy of vegetarian diets. Meatless meals were commonly equated with salads, these were thought of as unsubstantial and "not good enough for working men".

"There are many things, like iron, that you can only get from meat"

"It's OK if you're on your own, but if you have a family to consider it's easier to do meals with meat in"

Second Set of Discussions

This was discussed in most groups. Some group members had vegetarian children, for whom they cooked separately. This view was respected and the children were not forced to eat meat by their families. Schools were said to be influencing children towards vegetarianism. Concern for animals and health were given as reasons for not eating meat. Some participants said that they were "semi-vegetarian" or only ate meat infrequently. (It was evident that this move away from meat was more acceptable in these groups than it had been in previous groups.)

"Both my daughters are vegetarian. I had to learn new ways of cooking, but this has meant that the family as a whole is more willing to try new things"

"I'm nearly a vegetarian. I eat much less meat than I used to but I don't think it's as easy as that. For instance, dairy farms sell baby cows for veal, and may other products you wouldn't think of have animal products in them"

7.4.11 Artificial Sweeteners

First Set of Discussions

Some group members used artificial sweeteners as part of slimming diets. Some disliked them on taste grounds, whilst others felt that they might be "unhealthy" and were not natural. No-one seemed to be aware of artificial sweeteners included in processed foods.

Second Set of Discussions

Both saccharine and aspartame sweeteners had been tried."Canderel" (an aspartame sweetener) was thought to be better, by some, as it was "more natural". (This is due to the way in which it is advertised - fruit are shown on advertising and many people believed this meant that Canderel is obtained from fruit).

Some people were aware of adverse publicity connected with artificial sweeteners, and felt that they might be dangerous.

Again, the use of artificial sweeteners in processed foods had not been noticed.

7.4.12 Dietary Changes

First Set of Discussions

Most respondents had made one or more health associated changes in their diet. Examples included changing from white bread to wholemeal bread, and changing the type of spread used to a low fat or polyunsaturated spread.

Second Set of Discussions

Some participants claimed to have cut down the amount of sugar they ate. Some said that they were eating less meat. Many said that they ate wholemeal bread and a "health spread", but these tended not to be recent enough changes to cause much discussion and taste was frequently given as a reason, rather than health. Some referred to eating less fat but these tended to be people who had suffered from heart problems and had been advised to do so. In this context, changes were said to have occurred in cooking methods with less fried food being eaten now.

In families where food additives were being avoided because of the presence of children, the whole family diet had altered, as it was thought "unfair" to give one child different foods from the others or from its parents.

> "I feel guilty every time I butter a slice of bread or put salt on my food. I have made changes to my diet and think it is reasonably healthy, but I am still made to feel guilty about things".

7.4.13 Additives and Irradiation

First Set of Discussions

Respondents were indignant about the use of so many additives in processed foods, thinking them generally unnecessary and for the benefit of the producers rather than the consumer. They were also critical of the amount of water added to meat products, believing that this has increased recently. Additives were linked to allergies by some but health links were not generally understood. Many felt that it was hard to avoid additives in food.

> "There's so many companies making food now, they all want to make a profit and additives help them to do this".

> "Most preservatives are not necessary, and colours are only there because we've got used to them".

Second Set of Discussions

The issue of additives seems to have become even more important to consumers, many said they were very likely to reject a food with more than two or three "E numbers" on the ingredients list. They felt that "E numbers" were unhelpful, as they did not know what individual numbers stand for. It was thought by some that it was very difficult to devise a balanced diet and still avoid foods containing additives. Several specific substances to avoid were named, including tartrazine, caramel, E320 and monosodium glutamate. Some

participants had or knew children who needed to avoid these substances. The increase in the number of "additive free" foods now available had been noticed and was said to be helpful. Some said that even eggs, battery eggs especially, and milk contained antibiotics fed to livestock.

> "E factors produce toxins that form a chain that wraps itself around your internal organs - a poison wrapped round everything inside you. All round these toxins, fat accumulates which doesn't do any of your organs any good, If you stop eating E numbers the fat will break up and the toxins will disperse"

This explanation was passed on to our respondent by a friend (a teacher) who was said to have read this in a medical report.

> "It's very difficult to get a full balanced diet and avoid all E numbers. You don't know if they are good or bad for you as you don't know the effect they have on you until you stop taking them"

Conversation about additives progressed to irradiation of food as an alternative - it was described by one respondent as "disgusting and scary". Many had seen a recent television programme concerning food irradiation - as a result, the process was frequently referred to as "Treatment with gamma rays". It was thought that irradiation is a process which makes food that is bad, fresh. Chernobyl was mentioned in some discussions and it was commented that:

> "if there is all this fuss about that disaster, how can they treat our food with it - they're supposed to be protecting us".

It was said that fruit and vegetables might be irradiated to extend seasons without the purchaser being aware of this. Even if irradiation was not used, it was believed that artificial fertilisers would be used in the production of these foods.

The general additive discussion also led to a discussion of the use of growth hormones in the rearing of livestock - again this is a subject which has received recent media coverage and the respondents awareness was certainly heightened by this.

Foodstuffs for livestock were also discussed in this context - it was generally thought that meat (especially pork and chicken) used to have a better flavour when the animals were fed on domestic food waste - now that they are fed on more chemical based food or fish meal, this comes through in the taste of the product. This subject area was discussed extensively in all groups.

> "I saw a programme on gamma rays - someone in the Far East can make a shipment to England then it's rejected so then it will be sent to Holland where it's accepted and they gamma ray it, split it all up then ship it to us and we'll accept it then"

> "Look at Chernobyl - all this fuss and yet they're going to do it to our food - they're supposed to be protecting us"

> "Irradiation is disgusting and scary - why do we need preservatives or irradiation?"

There was a general interest expressed in slimming diets and weight control. To older respondents, healthy eating was synonymous with traditional cooking whilst the younger participants were more interested in the well-being of their children, with particular reference to sugar and additives. The cost of food was important to all respondents with many thinking that healthy eating is prohibitively expensive.

7.5.1 Diet and Disease

Illnesses related to diet mentioned were heart disease, obesity, arthritis, diabetes, allergies (particularly with reference to food colourings) and cancer. Some interest was shown in healthy eating regimes distinct from weight reducing diets although it was slimming that was the main diet/health preoccupation and was discussed in some detail.

7.5.2 Dietary Components

Fish and white meat were thought preferable to red meat although fish was considered expensive. Most respondents had tried low fat milks, mainly as part of slimming diets and most found semi-skimmed milk far more acceptable than skimmed milk on grounds of taste and consistency. Everyone agreed that fresh fruit and vegetables play an important role in healthy eating, some said that they thought that in

general people do not eat enough fresh fruit and vegetables. Most thought that polyunsaturated margarines and low fat spreads were healthy alternatives to butter although butter was generally said to taste better. There was a great deal of confusion about the actual benefits of alternatives to butter, but in general their "healthiness" was accepted.

Many respondents cited salt as something to be avoided, again there was confusion, some thought that salt is fattening and many believed it to cause heart disease. Wholemeal bread was preferred to white bread (many families however did not share this enthusiasm). "Mighty White" bread (which was being heavily promoted in the area) was a brand frequently mentioned as a good alternative for children who did not accept wholemeal bread.

Saturated and polyunsaturated fat were discussed at length but not understood. Heart disease and overweight were the problems associated with fat, many wanted more information on the subject but felt that in general terms, total dietary fat should be reduced. Fibre was referred to in relation to breakfast cerials and bread but, in general, was of little interest. Sugar was said by most to be "bad for you" and most claimed to have cut down the amount of sugar in their diets. Brown sugar and honey were preferred alternatives to refined sugar. Some respondents used artificial sweeteners as an alternative to sugar. Hidden sugar in manufactured

food was mentioned, although the use of artificial sweeteners as an alternative was not a cause of concern.

Overall, most respondents had made some chamges in their diet on health grounds.

7.5.3 Additives and Irradiation

Media coverage of additives was referred to and had aroused considerable concern. The health related problems referred to by all groups was allergy to colouring agents, and children were thought particularly at risk. Many people looked at ingredient labels for "E numbers" but they were thought to be hard to avoid in the "normal" diet. Food promoted as "natural" and "additive-free" was viewed favourably and there was a general dissatisfacion with manufacturer's use of additives.

Irradiation was not mentioned by most participants, those who did bring up the subject thought it was probably safe but undesirable as it is thought unnecessary.

7.5.4 Information

Most respondents were unaware of nutritional labels but rather looked at ingredient lists for sugar and "E numbers". Those who did look at nutritional labels, looked for calorific values and fat content, in general though,

understanding of nutritional labels was very limited. Television, magazines, books, doctors and health visitors were all mentioned as sources of nutritional information. Supermarkets were considered useful sources of information. Recipe suggestions were very popular.

7.6 Summary of the second series of discussion groups

As with the first set of discussion groups, all members showed some interest in healthy eating. There was, however, different emphasis placed on different areas of concern. On this occasion, dietary recomendations were of less interest to respodents than to previous groups. Additives, pesticides, fertilisers and hormones were, on the other hand, of more personal importance to these respondents, particularly in relation to children's diets. The Morrisons healthy eating campaign was received favourably but had, it was felt, not yet made an impact on eating habits. Many respondents declared that "sensible eating" is the best way to a healthy diet.

7.6.1 Diet and Disease

Heart disease, obesity, diabetes, cancer, coeliac disease, ulcers, hyperactivity and arthritis were all mentioned as diet related diseases. Weight problems in all groups, at some length.

7.6.2 Dietary Components

The quality of meat was commented on with some dissatisfaction and a preference expressed for white meat. Many were suspicious about meat products in general and sausages in particular. Fish was thought to be a healthy alternative to meat. Meat production and processing were discussed, as was intensive farming, all were viewed unfavourably. Most had tried reduced fat milk, preferring semi-skimmed to skimmed. It was agreed by many participants that young children need whole milk in their diets. Doubts were expressed about publicity which claimed that milk is "unhealthy". Eggs featured in all discussion groups concern about battery production was expressed as a direct result of recent television coverage.

Reaction to fruit and vegetables was no longer unreservedly favourable. Use of pesticides and artificial fertilisers were cause for concern as was treatment with irradiation to preserve produce. The cost of fresh fruit and vegetables was raised, some said that frozen produce is less expensive as wastage is less and also preferable to tinned products.

Most participants were confused about the fat content and different types of fat in different margarines and spreads. Those who still used butter, did so because they preferred the taste, those who had changed to using a margarine or

spread did so because of price or because they thought it was healthier although this caused some disagreement.

Salt was discussed in the context of high blood pressure and heart disease, some respondents claimed to have cut down their salt consumption or had begun substituting "Lo Salt" as an alternative. Salt-free tinned vegetables were thought to be a good idea but too expensive. In general, there was far less interest in salt than in the first set of discussion groups in May.

Most expressed a preference for wholemeal bread over white bread, fibre was mentioned but not discussed in any detail. Wholemeal flour in baking was not popular however.

Too much fat in the diet was considered a health risk, being associated with heart disease and overweight.
Polyunsaturated fat and vegetable fat in general were considered better on health grounds although some showed doubts about fat and ill-health links, saying that such claims are exaggerated. Fibre was mentioned in relation to bread, but was not discussed in any detail. Sugar was thought to be something which should be cut down in the diet although to most this meant that they had stopped adding it to beverages. Some used an artificial sweetener but for most the after-taste of these was unacceptable. No concern was shown regarding the use of artificial sweeteners in manufactured foods.

7.6.3 Additives and Irradiation

Participants were eager to discuss additives and were concerned that the possible effects were unknown. Some respondents had, or knew of, children who suffered from asthma or were hyperactive, both situations were thought to be aggravated by additives, particularly food colourings. Foods promoted as "additive free" had been noticed and were thought to be a good idea, and were used to make the point that additives were not actually necessary in foods. Those with children on additive-free diets or who were trying to avoid additives generally said that they now found shopping easier.

Irradiation was discussed by all groups, but the separate issues of radioactive contamination and irradiated foods were confused. A recently screened television programe had stimulated interest in this group in this subject and many found the idea frightening and believed that it would be used to disguise bad meat, fruit and vegetables.

7.6.4 Information

Some participants examined ingredients lists on products, usually looking for "additives or E numbers", the only references to nutrition labels were that they were hard to understand. Television, radio and magazines were all mentioned. Programmes and articles suggesting recipes were the most popular. Some respondents felt that diet is receiving too much publicity and some scepticism was evident about health messages.

7.7 Summary

This Chapter has presented the results of the qualitative phase of the research programme. Analysis of these results is included in Part 3.

PART THREE

DISCUSSION AND IMPLICATIONS

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CHAPTER EIGHT

DISCUSSION AND IMPLICATIONS

The previous three Chapters have presented the research results in some detail, the following sections summarise each phase of the programme, emphasise the major findings and highlight trends that have emerged.

8.1 Milk and the Consumer - Summary

This survey shows that concern about diet and health is continuing. This concern has had a direct impact on the sales of different types of liquid milk. There has been a move towards consumption of low fat milks, a better understanding of the its fat content, and a more considered reaction to issues such as dietary fat together with a slightly more critical approach to milk as a food product.

8.1.1 Purchase Behaviour

In general, the survey is in agreement with trend data on sales and with the National Food Survey, confirming the decline in sales of pasteurised (full fat) milk. Only one sub-group, the 16-24 year olds showed an increase in their purchase of this type of milk in the previous four weeks. In one sense this could be seen as encouraging for the future sales of pasteurised milk as it is this age group which are the longest term potential milk consumers. It is, however, also likely that with increasing publicity and advertising of low fat milks we will see even more

switching to low fat milks which will have a significant effect on the market shares of whole and low fat milks.

There has been a switch within most groups of the type of low fat milks people are using. In 1985, skimmed milk was predominant but by 1986 semi-skimmed milk had assumed a more dominant position. This suggests that after an initial switch to skimmed milk, a compromise based on factors such as taste, consistency and family compliance had led to an increased purchase of semi-skimmed milk. There had not, however, been a reversion to whole milk.

8.1.2 Milk Consumption

The trend in milk consumption from whole pasteurised milk towards low fat varieties is symptomatic of the increasing segmentation of the liquid milk market. Further segmentation is currently being attempted by the industry with vigorous marketing of products such as lactose free milks or calcium enriched milks. The market place has also seen recently the initiation of the encouragement of milk purchasing for a particular usage, particularly "Breakfast Milk" which is a new concept for the consumer. Breakfast milk is Channel Island milk (Gold Top) given the identity of a packaged product brand and targeted for a specific use. Although all the above are all ways of segmenting and targeting the liquid milk market, there is a danger that milk will lose its image of a "natural" basic food, perhaps thus alienating some of its users.

There have been marked changes in milk consumption with low fat milks to some extent replacing full fat milk. There has also been some movement in preference, from skimmed to semi-skimmed milk. In addition, there has, however, been a shift from doorstep delivery to supermarket purchase, which is a signficant development. It is symptomatic of trends in supermarket shopping, packaging developments and lifestyle changes, which make doorstep delivery unsatisfactory for many consumers. This must not be interpreted as an argument against doorstep delivery per se Like the liquid milk market itself, distribution is becoming segmented. The doorstep delivery system maintains a very large share of the market and since it is based on a system of standing orders, ensures a regular level of sales. It also has the advantage that it lends itself to overpurchase whereas the supermarket outlet lends itself to underpurchase. In order to survive, however, the delivery system must meet the demands of todays consumer and be efficient and flexible.

8.1.3 Knowledge - Fat Content of Milk

There has been a general increase in the accuracy with which the consumer perceives the fat content of whole milk. However, a considerable number admit to ignorance on this topic and 36% of respondents thought that milk contains over 10% total fat, so there is scope for improving knowledge and understanding of this point.

8.1.4 Attitudes to Milk

Milk still has a good image in the mind of the consumer, although there is cause for concern in the shift from strong agreement with the statement "Milk is full of natural goodness". The "natural" image of milk has been an important element in promotional activity and care needs to be taken if this reputation is to be maintained. This image may be further threatened by the current move to increasing market segmentation. More products may mean more confusion and lead to suspicion and a further challenge to the concept of "natural" with regard to milk. There is also an indication that the perception of the versatility of milk is slipping and equally, some movement towards respondents claiming to be able to do without milk in the house at all. Milk still has a good reputation as a food, but there are the beginnings of a change in attitude, perhaps symptomatic of the increased interest people now take in food which makes them question traditional beliefs. Socio-economic group has emerged in this study as a strong indicator of attitude sets, and so it is quite likely that it will be the ABC1's who will be at the forefront of such trends.

8.1.5 Attitudes to Low Fat Milks

The taste of both skimmed and semi-skimmed milk was not considered comparable to whole milk. The consistency of semi-skimmed milk was, however, considered to be satisfactory.

8.1.6 Attitudes to Diet and Health

It is understandable that many consumers consider fat to be a "bad" component of the diet because of the many nutritional messages that have been conveyed, some of which have been grossly over-simplified. It is encouraging that the understanding of the recommendation to reduce dietary fat seems to be improving.

In the second year of the study, there was a better understanding of the relative merits of saturated and polyunsaturated fat.

Since a growing number of people said that they would buy less milk if it was the main source of fat in their diet, low fat milks should be promoted to these people as a way of implementing dietary recommendations.

There is still general agreement that people are becoming more aware of health issues but not that health worries mean cutting down a little on everything.

The implication of the results of this survey are discussed in Section 8.4

8.2 Ashton-under-Lyne Healthy Eating Survey

This study identified that most people have an habitual shopping routine, using a regular supermarket supplemented by other sources. For some food items, many consumers still favoured the traditional outlets of butchers, bakers, fishmongers and milkmen, which accounts for the high incidence of supplementary shopping. With such patterns of behaviour it seems that true "one-stop shopping" is still not imminent for the mass of the population.

People fall into distinct groups regarding their eating habits but not so clearly regarding their attitudes. By taking a combination of demographic factors, the eating habits of a group may be predicted. This is not so true of attitudes, for which it is much more likely that those with a particular profile of attitudes could come from virtually any demographic group. Conversely, those with a particular demographic profile do not aspire to specific attitude sets, although socio-economic grouping was the exception, the study indicating that this factor maybe a goood indicator of attitude.

It is thus easier to target people based on their food consumption patterns than on their declared values. This point has important implications for those wishing to reach particular groups of people, whether to influence them in their brand loyalty or to design a health promotion strategy for them.

8.3 Group Discussions

There seems to have been a chain of reactions succeeding the publication of recent diet and health reports. The NACNE Report (1983), the COMA Report (1984) and the BMA Report (1986) gave rise to a great deal of publicity resulting in consumer interest and concern about the issues of fat, fibre, sugar and salt, and diet related diseases.

There followed a period during which publicity was given to the labelling of food products, and in response, the consumer wanted more informative labelling and became more aware of what was included in manufactured food products.

Additives became the next subject for concern with the publication of "E for Additive" by Maurice Hanssen (1985) and its accompanying media coverage, interest in this issue was thus heightened.

We currently see a phase of publicity surrounding animal welfare, irradiation, the dumping of radioactive waste, pesticides and fertilisers and also hormone treatment of livestock.

Emphasis has most certainly changed, even over the period of just a few months and many of the concerns expressed bring accompanying references to recent media coverage.

This is not to say that the consumer is no longer concerned with the original diet and health topics, but that there is now a situation of awareness at two levels.

There is an underlying interest in healthy eating, but at the same time there is a more enthusiastic reaction to those issues receiving, often emotive, media coverage.

It is understandable how this situation has come about. The basics of the healthy eating debate were initially good news material. But as with any other current affairs issues, they soon fail to make new headlines. With a persistent interest in food issues, some of the more controversial issues have been emphasised.

Although no longer headline material, the messages of healthy eating are still being covered in the media, in the form of educational programmes such as "A Taste of Health" on BBC TV. Some of those whose initial interest was aroused by headlines have obtained a greater understanding by continuing to take an interest in such programmes.

The first set of discussions revealed much concern about obesity, heart disease and additives. The conversation revolved mostly around the basic dietary recommendation related to heart disease. In the second set of discussions, however, there was less emphasis on this subject and more controversial issues were raised more often - irradiation,

pesticides, hormones and farming methods all received increased attention.

There was some feeling that interest in the diet/health debate is waning, some felt that too much information had been given and that some of it was conflicting. It was evident that people are becoming increasingly critical of media coverage of these issues.

The subject areas most commonly discussed were those over which people had little control. It was clear that many people felt that the food industry and food producers should not be using chemical additives, hormones, pesticides and irradiation, but that the individual has no way of preventing this. This gave rise to the view that "we eat processed foods with additives in because it's convenient and we have no choice".

On the other hand, those aspects of diet which might be improved by personal measures taken by the individual, now seem to be less interesting. A number of people had made changes which were intended, for example, to reduce the fat content of their diet. In most cases, for those participating in the second set of group discussions such changes were no longer very recent. It was also clear that most people knew that the advice is to cut down on fat, equally most knew many dietary sources of fat, but were not prepared, for a number of reasons, to put such recommendations into practice.

The shift of interest towards subjects which are beyond individual control seems to indicate a certain unwillingness amongst some people to be made to feel responsible for their own health or ill-health.

Another point well illustrated by the results of the two series of discussions, was the enormous power of the media. In both cases, the principal subjects discussed were directly related to recent television and radio programmes. It was evident, in some cases, that the difference between information and advertising was not well understood. One participant cited the television advertisement for milk as a "Source of dietary information". Other examples of the power of advertising were seen in the enthusiastic acceptance of "Mighty White" bread (which had been test launched in the north of England with much media coverage) this was accepted, without question as a healthy product. Equally, the belief in "Canderel" as a natural product obtained from fruit, evidently stems from the images used in television advertising. Some members of the group could not recall the name of this product but referred to it as "the one that's from apples and oranges".

Clearly television and radio programmes about diet and health were extremely popular and were a powerful medium for education.

The following topics were each discussed more and with greater interest in September than in the first series of discussions: Free range eggs/chickens, intensive farming methods, organic fruit and vegetables and vegetarianism.

Amongst the second group members there was a positive attitude towards free range eggs and organic produce, and some felt prepared to pay more for them.(There was also doubt expressed as to whether claims to be "free range" and "organic" were always accurate). Vegetarianism was also generally accepted, and certain participants were willing to cater for vegetarian children and accept their view. Towards all these topics, the second group members showed greater tolerance and interest.

As previously stated, discussion group members were largely middle-aged, working class, north of England housewives, often without any money to spare. They were not the young, affluent south of England men and women who have been seen to accept such issues as part of their lifestyle for some time now.

It was clear that the discussion group members have recently been influenced by publicity and now believe that intensive farming, growth promoters and chemical fertilisers are undesirable; whether this stems from concern about animal welfare or from a feeling that food so produced will be of inferior quality and/or unsafe.

Some individuals had made and maintained alterations in their diets for health reasons. Such changes as eating wholemeal bread and using low fat spreads were discussed at greater length in May than in September. The impression was that the changes were less recent by September, and therefore of less immediate interest. Consequently, there was less discussion of the reasons for these changes and this may be why in the second set of discussions participants did not appear to be so aware of diet/health associations (or were less prepared to talk about them).

In both series of groups there was a tendency for participants to view changes in the diet as a measure to be taken when signs of illness had already occurred. Men who had suffered heart attacks were generally making serious attempts to achieve the dietary recommendations. Similarly, sufferers from diabetes, ulcers, hiatus hernias and asthma were all taking greater care of their own diets. There was little evidence that other family members of heart attack victims were changing their diets and certainly not with the same care.

In both series of groups there was a lack of appreciation of the "healthy diet" as important for healthy individuals who wished to remain healthy. Some women who were watching their own intake, to avoid weight problems, were still prepared to feed their children and husbands on "rubbish" as

one lady expressed it. There was a feeling that children liked chips, sausages and burgers and should not be deprived of them and that working men "need" big filling meals (not necessarily consistent with dietary recommendations).

However, there was a minority in both groups who did consider the preventative aspects of eating and who did consider their children's diets to be of importance to their future well-being. These tended to be younger women with young children, who were also the most concerned about the effects of food additives.

There is still an underlying concern about diet and health which needs to be maintained and clarified with ongoing informative campaigns. People need practical guidelines on dietary changes and the avoidance of illness must be stressed repeatedly.

The current interest in such issues as hormones and irradiation has not, in fact, replaced diet/health concerns but represents a different area of interest. An equally enthusiastic response may well be prompted by other issues publicised in the future.

In summary, the discussion groups indicated a shift in emphasis and areas of consumer interest, very dependent on recent media coverage. Also illustrated was a growing acceptance of "alternative" farming methods and vegetarianism and a general lack of awareness of the role of diet in preventing, rather than curing, disease.

8.4 Implications and Recommendations

This type of research, to investigate consumer habits and attitudes, is generally undertaken in a commercial environment. In such situations it has implications for the development and marketing of both established and new products.

The environment in which this programme of research has been conducted does not make it pertinent to any particular product or market. Rather, it has implications for a number of different types of people and organisations. The following sections discuss these implications - the research is set into a practical context in which decisions can be based. It is this use of information in a practical, policy decision making, situation which is the basis of the useful application of such work.

Throughout the research programme, the results were communicated to a variety of individuals and organisations (Appendix 2) and were therefore discussed at great length. The implications of the results, presented in this thesis, are the product of consideration of both the results and those discussions.

8.4.1 Food Producers

Interest in food and related issues has moved backwards through the food chain. Consumers are now aware of and interested in both agricultural and livestock production. There is now a demand for organically farmed produce and "conservation grade" meat. These trends are likely have wide ranging effects on the economic structure of the agricultural sector and associated industries which provide many of the "chemicals" that consumers are now reacting against.

8.4.1.1 The Milk Producers

This research has taken milk as a case study and so there are specific implications for milk producers as well as general ones for agriculture.

Increasing consumption of low fat milks and over-production in general may lead to problems in the future. Much milk is now made into butter and sold into intervention. One long term measure is the breeding and feeding of dairy cows which yield a milk with an initial lower fat content, or with a different fatty acid composition.

At the 1987 Conference of the British Society of Animal Production, Dr Orskov, an eminent researcher in the feeding of ruminants said:

> "We are not, as researchers, looking far enough ahead....We are not debating aggressively how we see the role of livestock in thirty years time. We are doing research with no longer vision than the politicians concerned with the time span between elections, and for industries concerned with the return cost in the present economic framework. We are not out there creating new options from which our politicians and economists can choose to provide new economic frameworks."

He then went on to talk about the milk industry, in particular:

> "Very little can be done with butter, we accumulate butter in so-called butter mountains, we sell it for next to nothing and expect the tax payer to pay the party. In twenty-five years what have we done about it? Or do we believe that in twenty-five years from now butterfat will again be in demand? We are still paying the farmer for butterfat and not for protein, for which we can find a good market and sell with a good conscience. We are running round in circles no larger than our present economic policies permit. Animals made to measure, Yes, but aren't we getting the measure wrong?"

(Orskov, 1987)

One way forward for dairy farming is to provide what the market place demands at an acceptable price. This can be helped by reducing the amount of fat produced - by reducing the amount in whole milk. Current financial incentives for dairy farmers mitigate against this, but the commercial environment is already forcing a reduction in the relative price paid to dairy farmers for fat. In short, the farmer, like other links in the food chain, is increasingly having to operate within the usual economic constraints of the laws

of supply and demand. It would, of course, take a number of years to implement breeding programmes to produce low fat milk, and there are many problems to be overcome before this could be effective. The system of compositional payments on the other hand could be changed much more rapidly. It is important that the implications of this are realised and that appropriate action is implemented immediately.

The consumer is now subject to some form of dietary message from many sources, many of which will include an opinion on the benefits or otherwise of milk and dairy products by virtue of their profile as a staple food with a very traditional and well established role in our diet. The influence of this information cannot be ignored, the media being a particularly strong influence.

The dairy industry has been fortunate throughout this movement in consumer awareness, since most dairy products are by repute and, in fact, relatively natural and unprocessed. Heat treatment of milk has become established to the extent that it is largely forgotten or ignored by the consumer. Many consumers however are cynical about the whole food industry and some criticism is now being aimed at dairy farming practices.

Publicity surrounding the prospective use of bovine somatatrophin (BST) is filtering into public opinions and concern. There are many dairy farmers who are themselves worried about the effect that use of BST will have on the

attitudes of their customers. The dairy industry, indeed the whole food industry, must keep a very close watch on movements in consumer opinion which may affect food demand and they must react in a positive way to these opinions.

8.4.1.2 The Milk Industry

The move towards low fat milks is an opportunity to increase the total demand for milk, reversing the current trend of decline. With increasing sales through supermarkets, there is ample scope for point of sale promotion to this end, especially as milk is usually very poorly presented in store. The media are already well used to for the promotion of milk and this is a valuable tool with which to maintain consumer awareness. Milk advertising has recently begun to include coloured bottle tops which represent low fat milks, there is much more scope, particuluarly for advertising, directed solely at skimmed and semi-skimmed milk. This must include information to ensure an understanding of the colour codes used on bottles of milk, a practical step to increase awareness of healthy alternatives to traditional products.

8.4.2 The Food Industry

Food demand has traditionally been determined by factors of price, availability, quality and taste. Today it is not quite so straightforward. Rather, it is subject to a complex combination of social, political and economic factors and constraints. There have been two main developments which have led to this increased complexity of food demand:

- changing food technology and advanced distribution methods leading to the enormous choice of food products presented to today's consumer
- there is now a vast amount of information available to the consumer from a vast number of sources

Consumers may not be in a position to analyse the scientific facts but they are certainly in a position to have an opinion. These opinions can and very often do affect food demand and in this sense, the opinions of the consumer are ignored to the commercial detriment of the food industry. There is, on the other hand, often a great difference between what people say, what they do and what they would like to do. Understanding of this complex interaction is critical to the success of food companies, not only in terms of their commercial performance, but also with respect to their public image.

This emphasises the need for food companies to undertake in-depth analyses of consumer motivation regarding food and more importantly, to react to their findings in both a sympathetic yet responsible way. This is not such a simple task as it may appear as the recent case of food additives demonstrates.

When food additives first gained attention, the food industry saw a marketing opportunity and promoted a large number of products on an additive free platform. It was this reaction, in itself, that has been responsible for the sustained consumer awareness of food additives. At the same time however, there are many in the food industry who have expressed their concern about consumer over-reaction regarding food additives. It would thus seem that they have not realised the social implications of their own marketing strategies.

Food additives are, in fact a very interesting example of current attitudes towards the food industry, people now question claims such as "no artificial additives" or "no additives" can be made and it is very much a matter of debate as to whether some things should be classed as an "ingredient" or as an "additive". In short, the food industry reaction to consumer interest in additives has only added to consumer's general mistrust of the food industry.

The food industry should not underestimate today's (or tomorrow's) consumer.

Current trends in food demand are towards foods with a minimum of ingredients considered by the consumer to be "unnecessary additives" and towards those products which are less apparently highly processed - in short, to what can be considered "natural" foods. There is frequent reference amongst consumers and in the media to a "campaign for real food". The food industry reaction to this is often to question - What is real food? What is natural? What is unprocessed?

Those in the food industry know what consumers mean and yet they are defensive. If they think consumers are misinformed, or misunderstand an issue, then it is up to them to undertake responsible Public Relations campaigns to inform and educate.

Senior food industry executives (Food Policy Research Unit, 1988) deny any responsibility for these functions. However, consumer knowledge is affecting their commercial performance and their reputation and therefore perhaps they should reconsider their stand on this point.

A most effective policy that the food industry could adopt is to work more closely with "official" sources of information, for example the Health Education Authority and the British Medical Association. The food industry is now the most common source of food information but the health professionals are considered the most reliable (McCluney, 1988). The food industry has the resources to fund large information campaigns, it could only lend them credibility if they were to undertake these on a regular basis, in cooperation with, and under the endorsement of, official health education organisations.

Most importantly, the food industry must accept that its major problem is one of image and it must address this problem in a positive way, it cannot go on being defensive and antaganistic about every issue that arises.

When food additive concern was at its height, it was claimed that consumers should be more concerned about genuine health worries such as food borne disease. (Many in the food industry confused quality issues regarding food additives with health issues). Recently there has been much publicity regarding food poisioning and warnings issued by the Ministry of Agriculture, Fisheries and Food about the dangers of consuming raw or under-cooked eggs. The food industry have not reacted by assuring consumers that they are doing everything they can to combat the problem, but

rather are claiming to be "the innocent victims of factual misrepresentation". The food industry claims that the immediate fall in the sale of eggs is "the result of blatant scaremongering by the media. It is absolutely scandalous" and refers to "...the salmonella scare, started by the media...", (Yorkshire Post, 26th.Nov.1988). There is clearly a problem of communication (or non-communication) between the media and the food industry, (Food Policy Research Unit, 1987). The food industry claim misrepresentation, even victimisation by the media, who in turn claim non-cooperation from the food industry.

There is however a tendancy at the moment for the food industry to adopt a more positive approach in their marketing. Recent issues of popular magazines carried many advertisements for food products (Options, (1988); Prima, (1988); She, (1988); Bella, (1988); Taste, (1988); Womans Realm, (1988); Mother and Baby, (1988)), none of these advertisements used food additives as their major sales message. Rather they concentrated on the positive attributes of their products, high fibre or vitamin contents, putting over positive messages for a positive image.

Another example of food industry reaction to current interest, is in the attitude of the Food and Drink Federation (FDF) to a recent book, Childrens Food: The Good, the Bad and the Useless (Lobstein, 1988). It was reported (Anon, The Grocer, 1988), that the food industry was "preparing for an assault" and that the FDF was "considering the contents of the book". The best course of action that the FDF could take would be to ignore the book and to put their communication efforts into other issues, or even to react by saying that of course all food products are not inherently good for children but that their members are aware of this (as they must be) and that they are constantly trying to improve the situation. In short they would gain a more positive image by reacting to, rather than defending against, such criticism.

8.4.3 Food Retailers

8.4.3.1 Retail Multiples

Supermarkets are the main venue for food shopping for most people, therefore, their stock profile is the main determinant of food availability. The merchandising of supermarket stock affects consumer choice in a supermarket and so can affect the nutritional quality of their customers diet. Although the customer is free to choose between products, it is the job of the merchandiser to influence this choice. Pricing policies of supermarkets are also a factor in food choice and there are instances where the "healthy" alternative is the more expensive alternative, wholemeal bread for example is generally more expensive than white.

There is also much promotional material available in supermarkets as part of either manufacturers or retailers point of sale campaigns. Monitoring of the quality of such literature would enable retailers to have a significant influence on the level of public knowledge and understanding of food issues.

8.4.3.2 Other Retailers

Smaller, specialist and independent retailers have, in recent years, been under considerable financial pressure from the large supermarket chains. The decreasing number of people buying some products from sources other than the supermarket emphasises this threat. By identifying consumer trends however, this group of retailers can fill demands that are often not fully met by larger organisations. There are niches for organic, vegetarian and wholefoods which are not adequately catered for by retail multiples. There is also an element of convenience in small corner shops. Not all consumers have access to large supermarkets which are frequently located away from town centres. There are also large areas of the country where local supermarkets (or superstores) are a considerable distance away from the built up areas where the majority of consumers live. In such instances regular purchase of fresh foods leaves an opportunity for the traditional, smaller suppliers of such products - bakers, greengrocers and butchers.

8.4.4 Advertising Agencies

A major function of advertising and public relations agencies is to reach the target market defined by their clients. This can be done by aiming their campaigns at particular demographic groups, this research shows that it could also be done by aiming at specific buying groups or those with homogenous sets of attitudes. Specifically, this research identifies the AB/C1 Socio-economic groups as the main opinion formers in society.

When working in a defined market place such as "food" or "health food" or "health", agencies can only benefit from knowing more about the population than their demographic details. The increased efficiency with which they can identify their audience will make their campaigns more successful and more cost effective.

Today, advertising is designed to appeal to consumers lifestyles or, more specifically, to their lifestyle aspirations. All promotion, from merchandising, to packaging, to advertising, in some way portrays, or implies, lifestyle. Self-image is very important in consumers food behaviour, by eating or not eating, buying or not buying certain products or brands, the consumer can make a statement about themselves and their attitudes to many things, including their families and even their environment.

Perhaps then, it is not merely the food product, or the ingredients of a food product that is important to a consumer, but the image of a product. The advertisers, together with the food industry, have created, in a very short time, the image of a consumer concerned about food additives. This is perhaps the best example of the powerful influence of the people who develop advertising campaigns and brand strategies on behalf of food companies.

In this sense then, it would seem appropriate to discuss very carefully the social implications of advertising campaigns and the desirability or otherwise of these implications.

8.4.5 The Media

The media are a major influence on consumer awareness. They can and do, incite concern and lead public opinion. It has emerged very strongly that current issues are largely determined by the media. When consumers express concern about an issue, it can very often be linked with the screening of a television documentary or a major newspaper article.

It is, of course, the purpose of the media to be a means of communication to the consumer and very effective journalistic techniques have been developed across the various media. In documentries, which often have a lifestyle/food/health dimension, there may be a fine line between an informative and an influential approach. Sensationalism improves television ratings and so it may be tempting to be, if not sensational, somewhat overdramatic. It is important that the media takes a responsible attitude towards their role in publicising health and/or diet issues, working more closely and more sympathetically with both health professionals and industry representatives.

8.4.6 Health Professionals

Those involved in Health Promotion are working to implement the recommendations put forward in the COMA Report (1984) and the NACNE Report (1983). This task can be helped considerably if those involved have an understanding of current consumer habits and attitudes and how these are changing. The detail included in this thesis allows for the analysis of the views of individual groups and hence the development of campaigns specifically to meet the needs of identifiable individuals.

Some trends (such as shopping habits) are applicable to most people (Chapter 6) whilst others (such as consumption of some food products) are different in some socio-economic groups, age groups or other demographic classifications. These points also apply to other health professionals who are involved in either the prevention or cure of lifestyle related illnesses and who are frequently called upon to give advice to patients. It is easier to make recommendations towards a healthy lifestyle if there is a good understanding of current habits and attitudes.

8.4.7 Consumers

There are many ways in which consumer´s views are made known to those in the food industry. Equally, the food industry undertakes much research into consumer views and habits, in order to predict future demand. There are very many companies in the food industry, in competition to meet this demand and therefore, the consumer now has the power, in effect, to veto products which do not meet their requirements. In short, their real power is their buying power, which itself stems from the increased and increasing choice offered to them by the food industry.

Consumers are bombarded with messages about the food they eat and many of these messages have a health dimension. It is largely left to the individual consumer to decide on the relative reliability of each source. They are also faced with many new food products with accompanying advertising claims designed to encourage purchase. The information used in such encouragement is often distinct from other information, such as ingredients lists or nutritional labels, which are more factual and often more useful in determining the actual nature of the product.

8.4.8 Consumer Organisations

Consumer organisations, by implication of their title, represent the consumer. The first thing they need to appreciate is who the consumer is and how they are changing. The ageing UK population, for example, should be of interest to such groups, as should the increasing proportion of single-person households. By understanding these trends, such organisations can seek to influence the food producers and food distributors into catering for the emerging population. Also, by understanding which issues are of concern to consumers, they can act as lobbyists on their behalf, as they have a more structured organisation and more credibility than individual consumers.

8.4.9 Government

The food chain is closely interwoven with government at both legislative and constituency level. It follows then that those working in Government need to be well informed about food issues as they relate to the consumer. The food industry is a major force in the economy and changing issues can effect food demand in both the short and the long term.

In the short term for example, egg consumption has been affected by current concern regarding salmonella; "warning the public of possible bankruptcies among egg producers, a member of the regional committee... admitted his egg sales had plummeted by almost £1000 this week", (Yorkshire Post, 1988).

In the long term, concern regarding this issue could influence breeding, feeding and housing of laying hens, which may need new legislation to ensure adequate control and maintenance of standards. This is a current example of how consumer concern could affect government, past examples include issues such as ingredients labels.

It is important that those involved in new legislation are aware of consumer habits and attitudes, especially those who are representing British consumers in the European Community, where legislation is being formed which will have extensive implications for change in this Country.

The other major area for political interest is the converging of some food and conservation/environmental issues. It is awareness of attitude changes such as movement through the food chain that will help those in government react to the needs of their voters.

8.5 Commentary

The previous section has discussed a number of different groups of people. All these groups, however, have one thing in common - they are communicators. Those involved in the food industry communicate messages about their products to consumers and to their advertising agents. Consumers communicate their needs and wants to suppliers.

The most recently forged channels of communication are those involving health professionals and consumer organisations. It is also a recent development that industry communciation with the consumer has become a two-way process.

Information from the food industry, aimed at the consumer, was discussed in Chapter 1 and the availability of such information is largely the result of the food industry listening more closely to the demands of consumers, consumer organisations and health educators. Although the food industry is under no obligation to educate in this way, it does have very powerful educative potential. By using this potential in a constructive and responsible manner, the industry can go some way to improving its currently poor image amongst many consumers.

The food industry is now aware of the somewhat diverse views of consumers, the research presented here represents one method by which consumers can communicate en masse with the food industry. This also represents a means by which consumer views can be made known to the media and to anyone who has an interest in the views and habits of food consumers.

With communication between groups being so complex, it must be effective communication, it must be understandable and it must be practical. It is easy to tell consumers what the desirable composition of a healthy diet should be in terms of balance of nutrients, but this means very little to the average consumer who thinks in terms of foods and meals. Far more practical help is needed in order to convert health recommendations into shopping for, and feeding of a family. Recommendations for change must take into account such factors as current diet, levels of understanding and existing beliefs.

Effective communication may present difficulties, but this does not mean that useful information campaigns cannot be developed. Information campaigns undertaken by educators should take into account the other information which often contibutes to consumer knowledge, such as advertising messages. As an example; many food products are now promoted as "Low in cholesterol" which has health implications but which presents an incomplete health message and one which

could easily be misunderstood. Such claims often lead to a number of unanswered questions, a fact which should be recognised by health educators. This example is an instance of a 'health message' used as a promotional tool which, intentially or otherwise, can mislead with respect to the nutritional benefits of a product.

Although the media can contribute to confusion and misunderstandings, it can also represent an excellent opportunity for providing effective and informative messages. If such communication is undertaken conscientiously and with the serious intention of disseminating information then the consumer of tomorrow will be better educated, healthier and still more demanding.

The idea of effective communication is inexorably linked with the concept of marketing. Marketing has frequently come under attack as being increasingly contrary to a newly-evolving set of social and political norms (Webster, 1974). This consumer backlash was a function of the many social changes of the 1960's which also led to the beginnings of "consumerism". Today, consumerists, environmentalists, and health workers are demanding yet more accountability from the food industry (indeed from all industry) and a more honest approach to sales promotion and "claims".

The issue of diet and health highlighted many practices in the food industry which has triggered a chain of concern and interest which the food industry should not ignore.

8.6 Concluding Remarks

This thesis has identified a number of major points for consideration:

- Consumers are interested in diet and health issues.

- Consumers are becoming more knowledgeable and are developing better understanding of diet and health issues.

- Consumers are confused by many of the messages aimed at them regarding food.

- The food industry must react in a responsible way to the developing consumer concern.

- The media are a very big, possibly the biggest, influence on consumer concern.

- The marketing stategies of the food industry itself are instrumental in forming and developing areas of concern, mainly through their appeal to consumer self-image.

- Ongoing research is necessary to monitor developments in habits and attitudes regarding food.

This work has highlighted the importance of communication in today's environment. The two most influential communicators regarding food are vying for consumer attention. The food industry is constantly communicating sophisticated and costly marketing messages to the consumer. The media is communicating issues of current interest or concern to the consumer. They are both doing their jobs and if they do so in a responsible and ethical manner, then the consumer should benefit. If either, or both groups are at all irresponsible or unethical, then the result is, logically, a confused consumer. This research has emphasised a certain amount of confusion and misunderstanding by the consumer of many food issues.

Today's consumer has enormous choice in food shopping and it is the use of this choice which gives them their power. The food industry and the media must realise the power of today's consumer and above all respect it.

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APPENDICIES

APPENDIX 1

Food Policy Research Unit

Published Reports.

PUBLICATIONS

REPORTS

The reports are prepared by members of Food Policy Research as commentaries on contemporary issues in food policy. Reports include information from a wide variety of sources or present results from specific research projects and are likely to be of particular interest to the industries concerned. All reports have wide circulation in academia, the food industries and government departments and institutions.

The reports abstracted here are distributed by:

Horton Publishing Limited
6 Southbrook Terrace
Great Horton
Bradford
West Yorkshire BD7 1AB

Telephone (0274) 306245

Payment (to Horton Publishing Limited)

J Verner Wheelock

The COMA Report

The DHSS Committee on Medical Aspects of Food Policy reported on the relationships between "Diet and Cardiovascular Disease" in July 1984 and made recommendations for dietary change. This report discusses these recommendations and considers the implications for the consumers, industry and government.

September 1984 ISBN 1-85143-000-8 (Out of Print)

J Verner Wheelock and Ann Freckleton

Nutritional Labelling

The 1984 COMA report (see above) recommended that Government take steps to improve public knowledge of the composition of foods. This includes the use of nutritional labelling. A proliferation of systems of information presentation can cause confusion and it is desirable that a standard format be developed. The report includes an evaluation of the various formats which may be considered by those wishing to implement a system of nutritional labelling.

December 1984 ISBN 1-85143-001-6 (Out of Print)

J Verner Wheelock and Stephen J Fallows

Implications of the COMA Report on "Diet and Cardiovascular Disease" for British Agriculture.

March 1985 ISBN 1-85143-003-2 (Out of Print)

Ann Freckleton

Who is Shaping the Nutritional Label?

A report on the activities of Government, manufacturers, retailers and consumers.

July 1985 ISBN 1-85143-005-9 (Out of Print)

Stephen J Fallows and Heather Gosden

Does the Consumer Really Care?

The report presents results of a survey of consumer attitudes to foodstuffs together with a review of current nutritional advice and the commercial response to this advice.

October 1985 ISBN 1-85143-006-7 (Out of Print)

Sue Montague

Healthy Eating and the NHS

This report provides an introduction to the development of local food and health policies in Britain; their origin, basic format, strategies for implementation, and an outline of some of the obstacles affecting implementation.

November 1985 ISBN 1-85143-007-5 £20.00

Ann Freckleton

The Impact of a Supermarket Nutrition Information Programme

This report presents results from a qualitative evaluation of the Tesco "Healthy Eating Programme" and assess the impact upon consumer attitudes and purchasing patterns.

April 1986 ISBN 1-85143-008-3 £25.00

Juliet Slattery

Diet/Health: Food Industry Initiatives

A review of developments in the UK Food Industry following the NACNE and COMA reports.

April 1986 ISBN 1-85143-009-1 (Out of Print)

Stephen J Fallows

Change in the UK Milk Industry: Issues and Challenges

A report on some of the significant issues facing the UK milk industry in the 1980's.

July 1986 ISBN 1-85143-011-3 (Out of Print)

J Verner Wheelock

Food Additives in Perspective

This paper examines a number of the current food additives issues with particular reference to consumers, industry and government.

August 1986 ISBN 1-85143-012-1 £30.00

Gillian Wright and Juliet Slattery

Talking about Healthy Eating

A report on the changing emphasis of consumer concern.

October 1986 ISBN 1-85143-012-X £25.00

Juliet Slattery and Gillian Wright

The Consumer Reaction to a Healthy Eating Initiative

This report examines the strategic development in the health education process, taking as a case study the healthy eating campaign of the regional supermarket chain, Wm. Morrison (Supermarkets) PLC.

October 1986 ISBN 1-85143-014-3 £25.00

Stephen J Fallows

Deciding Our Food Laws

A brief introduction to the processes through which food legislation is derived in Britain; including topics such as compositional standards, additives, labelling and food hygiene.

November 1986 ISBN 1-85143-015-6 £25.00

Judith Woodward

Regulating the Meat Product Industry

This report illustrates for the lay reader the complexity of the procedures and issues involved in the establishment of new regulations controlling the composition and labelling of specified products. It is also a commentary on the Meat Product and Spreadable Fish Product Regulations of 1984.

December 1986 ISBN 1-85143-017-2 £25.00

Michael Heasman

<u>One Lump or Two?</u>

The report looks at the background to the sugar and health debate; production and consumption issues and changes in the market-place that relate to sugar in the United Kingdom.

May 1987 ISBN 1-85143-022-9 £35.00

Gillian Wright

<u>Milk and the Consumer</u>

This report presents results from a two year survey designed to investigate changes in milk purchasing, attitudes and knowledge in the context of the diet and health concern.

Volume 1: <u>Milk and the Consumer</u>

June 1987 ISBN 1-85143-023-7 £35.00

Volume 2: <u>Statistical Supplement</u>

June 1987 ISBN 1-85143-024-5 £40.00

Special price for complete set £65.00

Helen Blackholly

<u>Fruits and Vegetables: Implications for Coronary Heart Disease</u>

This report introduces the topic of fruits and vegetables and the role they may play in preventing Coronary Heart Disease.

July 1987 ISBN 1-85143-026-1 £35.00

Ann Freckleton

<u>Nutrition Labelling: An International View</u>

A report that details initiatives regarding nutrition labelling for the individual EEC member states and for Australia, Canada, Finland, Norway, Sweden, Switzerland and the USA.

September 1987 ISBN 1-85143-036-9 £25.00

Judith D Frank

UK and International Food Consumption Patterns

This series of reports, published in seven volumes, presents a comprehensive analysis of changes in patterns of food consumption.

Volume 1: Dietary Changes in the United Kingdom

August 1987 ISBN 1-85134-028-8 £30.00

Volume 2: Changing Demand for Food

August 1987 ISBN 1-85143-029-6 £25.00

Volume 3: International Dietary Trends

August 1987 ISBN 1-85143-030-X £55.00

Volume 4: European Food Consumption and Expenditure

August 1987 ISBN 1-85143-031-8 £40.00

Volume 5: Demographic and Socio-Economic Factors Affecting Food Consumption

August 1987 ISBN 1-85143-032-6 £35.00

Volume 6: Future Trends in Food Consumption

August 1987 ISBN 1-85143-033-4 £30.00

Volume 7: Compendium of Statistics on International Food Consumption

August 1987 ISBN 1-85143-034-2 £100.00

Special price for complete set £275.00

Jacqueline McCluney

Answering Back: Public Views on Food and Health Information

The report gives an important insight into the educational and decision-making impact of information on the consumer. It presents the results of a postal survey of women examining their use of and various attitudes to various sources of food and health information.

January 1988 ISBN 1-871099-00-5 £85.00

J Verner Wheelock

Food-Bourne Disease: The Hidden Hazard

This report provides a comprehensive critique of the current issues and sets out major recommendations for action by food manufacturers, caterers, the public sector and consumers alike.

March 1988 ISBN 1-871099-01-3 £25.00

Stephen J Fallows

Towards 1992: Completing the EEC Internal Market for Food

This report analyses the implications for the food industries, by the completion of the single European market. It includes an explanation of the background to the EEC's strategies for food markets and a review of the key proposals for new legislation on food additives, materials in contact with food and official inspection.

March 1988 ISBN 1-871099-03-X £25.00

Judith Woodward

Consumer Attitudes to Meat and Meat Products

This report explores the findings of the results of an independant consumer survey which examined consumers attitudes towards, and consumption of, meat and meat products. As well as their views on labelling and use of "quality marks".

April 1988 ISBN 1-871099-02-1 £50.00

Ann Freckleton

The Development of Nutrition Labelling in the U.K.

The report highlights the difficulties of implementing consistent nutrition labelling and the differences in the approach taken by Government, Food manufacturers and especially Food retailers.

July 1988 ISBN 1-871099-05-6 £45.00

APPENDIX 2

Gillian Wright

Communication of Research:

- -Publications
- -Papers
- -Conferencies and Presentations

APPENDIX 2

Publications

G Wright and J Slattery "Talking about Healthy Eating - a report on the changing emphasis of consumer concerns" Food Policy Research, Bradford 1986

J Slattery and G Wright "The Consumer reaction to a Healthy Eating Initiative" Food Policy Research, Bradford 1986

G Wright "Milk and the Consumer" Volumes 1 and 2 Food Policy Research, Bradford 1987

Papers

G Wright and S Fallows "Milk is Good Value for Money" Farmers Guardian 12th September 1986

G Wright "Milk and the Consumer" Dairy Industries International July 1987

G Wright "Milk and the Consumer" Modus - Journal of the National Association of Teachers of Home Economics. Volume 5 Number 8. November 1987.

G Wright "Dairy Products and the Consumer" Exploring Pastures New-Dairy Industry Special Issue of the British Food Journal. Volume 91 Issue 1 p12-15. November 1988.

Presented at Conferences

G Wright and J McCluney "Diet, Food and Health: Who is Educating the Consumer?" 8th International Home Economics Research Conference, Glasgow. September 1986.

G Wright "Towards a Healthy Diet - A Consumer Viewpoint" British Vetinary Association Congress, Brighton. September 1986.

G Wright "What Does the Human Consumer Mean by Additive Free Pig and Poultry Meat and Eggs" Society of Feed Technologists Conference, Bolton. November 1986.

G Wright "Consumer Attitudes to Alternative Poultry Products." Scottish Poultry Conference, Dunblane. March 1987.

G Wright and S Fallows "Milk and the Consumer; Attitudes and Behavior - Implications for Milk Production" BSAP Winter Meeting. March 1987. (Published in Animal Production 44 (3) 491. Scarborough.

G Wright "Developoment of Consumer Attitudes" 'Food and the Consumer' University of Bradford, Wakefield May 1987.

G Wright and S Fallows "What the UK Consumer Says About Diet and Health" 5th European Nutrition Conference, Warsaw. May 1987.

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G Wright "What the Consumer says about Diet and Health" 9th Home Economics International Research Conference, Guildford. September 1987.

J Woodward, G Wright and S Fallows "UK Consumer Concerns About Foods and Health" 7th World Congress of Food Science and Technology, Singapore. September 1987.

G Wright "Consumers, Diet and Health" 'Food and the Consumer',University of Bradford, Bradford. October 1987.

G Wright "What do People Eat Now?" Society of Chemistry in Industry, Food Group - Soft Drinks Panel Symposium 'Soft Drinks and Healthy Living', London. October 1987.

G Wright "What People Eat" Biomedical Sciences Society, University of Bradford, Bradford. October 1987.

G Wright "Consumer Perceptions of Diet and Health" Humberside College of Technology, Grimsby. October 1987.

G Wright "Animal Production - a Case Study of Consumer Reaction with Paticular Reference to the Diet and Health Issue." BSAP Winter Meeting, Scarborough. April 1988.

G Wright "The Future of Consumer Research" University of Bradford, Industry Seminar, Bradford. September 1988.

G Wright "People and Food" Bradford Vegetarian Society, Bradford. September 1988.

G Wright "Consumer Concerns about Food Additives" Food Ingredients Europe (FIE88), Wembley. November 1988.

APPENDIX 3

Sampling Points:

1985/1086 Study of Milk and the Consumer

LIST OF SAMPLING POINTS USED IN THE 1985-1986 MILK SURVEY

ERDINGTON	LEATHERHEAD	BURTON
EARLING	KIDDERMINSTER	HARROW
REDDITCH	ST ALBANS	DROITWICH
BURNT OAK	KIDSGROVE	SUNDERLAND
SHREWSBURY	HARTLEPOOL	NEWARK
BLYTHE VALLEY	MELTON MOWBRAY	WARRINGTON
STAMFORD	LIVERPOOL	CHESTERFIELD
PRESTON	NOTTINGHAM	WREXHAM
CARMARTHEN	MANCHESTER	MONMOUTH
BUXTON	BRISTOL	WIGAN
COWBRIDGE	SALFORD	AXMINSTER
OLDHAM	TAVISTOCK	WORSLEY
TRURO	MOSLEY	BEXHILL
BRADFORD	CHRISTCHURCH	LEEDS
GOSPORT	GRIMSBY	HEWLEY
HARROGATE	AYLESBURY	BARNSLEY
SWINDON	HUDDERSFIELD	BARNHURST
ST IVES	GRAVESEND	HOLT
ORPINGTON	DEREHAM	SIDCUP
CANVEY	HODDESDON	SOUTHEND
WIMBLEDON	SUTTON & CHEAM	

APPENDIX 4

1985/1986 Questionnaires

Milk and the Consumer

SRA/7119

SERIAL No.: 1016 (6-9)

CARD No. 1 (10)

INTERVIEWER No.: 7 0 1 1 1 6 (11)(12)(13)(14)(15)(16)

MILK ATTITUDE STUDY

NAME: ----------

ADDRESS: ----------

TELEPHONE No.: ----------

OCCUPATION OF HEAD OF HOUSEHOLD - Position: Factory Supervisor

Industry: Dairies Co.

OFFICE USE ONLY

CODER No. Initials ..... PUNCHER No. Initials .....
(17)(18) (19)(20)

PERSONAL DETAILS (WOMEN ONLY)

AGE (21)

16 - 24 ---- 1
25 - 34 ---- (2)
35 - 44 ---- 3
45 - 54 ---- 4
55 - 64 ---- 5
65+ -------- 6

RECORD ACTUAL AGE

3 2 . YEARS
(22) (23)

CODE 0 0 IF NOT STATED

WORKING STATUS (24)

Full-time (30+ hrs per week) ---------- (1)
Part-time (8-29 hrs per week) ---------- 2
Not working (less than 8 hrs per week) ----- 3

CLASS (25)

AB -------- 1
C1 -------- 2
C2 -------- (3)
DE -------- 4

AREA (26)

TVS -------- 1
TSW -------- 2
London ----- 3
Anglia ----- (4)
HTV -------- 5
Central ---- 6
Yorks ------ 7
Lancs ------ 8
Tyne Tees -- 9

MARITAL STATUS (27)

Married ---------- (1)
Single/Widowed
Divorced/Separated ---- 2

CHILDREN (28)

With children (under 10) at home ---------- (1)
No children at home ---- 2

FAMILY COMPOSITION

Number of Adults in Home including informant (Code X if ten or more) [ ] (29)

Number of Children aged 0-5 in the home [1] (30)

Number of Children aged 6-9 in the home [ ] (31)

Number of Children aged 10-15 in the home [1] (32)

INTERVIEWER'S DECLARATION

I confirm that I personally carried out this interview face-to-face with the above named person (who was previously unknown to me) and that I asked all relevant questions and fully recorded the answers in full conformance with the survey specifications.

SIGNED: D Buckley DATE: 21 5 1985

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Good morning/afternoon/evening. I am from Survey Research Associates Limited and we are conducting a survey on behalf of Bradford University.

Q.A. SHOW CARD A Just to check that we get a good cross-section of people please tell me whether you or any of your family or close friends work in any of these occupations?

Advertising -------	1	(33)
Marketing ---------	2 CLOSE - DO	
Market Research ---	3 NOT COUNT	
Milk Retailing ----	4 IN QUOTA.	
Dairy Farming -----	5	
Public Relations --	6	
None of these -----	(7) ASK Q.B.	

Q.B. Are you the main purchaser in this household of food and milk, or not?

Yes ----------	(1) ASK Q.C.	(34)
No ----------	2 CLOSE - DO NOT COUNT IN QUOTA.	

Q.C. SHOW CARD B Would you look at this card please. Which of these types of milk have you bought at all in the past four weeks?

Pasteurised ----------	(1)	(35)
Channel Island -------	1	(36)
Homogenised ----------	1	(37)
Sterilised -----------	1	(38)
Untreated (Green Top) -	1	(39)
Semi-skimmed ---------	1	(40)
Skimmed --------------	1	(41)
None of these --------	1	(42)

INSTRUCTION: YOU NEED TO HAVE A QUARTER OF YOUR INFORMANTS OR MORE WHO HAVE BOUGHT SEMI-SKIMMED OR SKIMMED MILK. CHECK YOUR QUOTA

Bought Semi-Skimmed and/or Skimmed -------	(1)	(43)

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.1a SHOW CARD B First I should like to know how many pints for each of these types of milk you had delivered by your milkman last week - that is the last seven days?

INSTRUCTION: Take the informant back over the last seven days i.e, this morning, yesterday, etc to make sure the number is correct but only record the total for the week.

.1b And how many pints of milk of each type have you bought for yourself or your family from the grocers, supermarket or elsewhere last week? (That is not delivered by the milkman).

INSTRUCTION: Code [0|0] FOR NO PINTS, [0|1] FOR ONE PINT (ETC.)

	Q.1a DELIVERED BY THE MILKMAN		Q.1b BOUGHT ELSEWHERE	
Pasteurised ----------		(44/45)	1 3	(58/59
Channel Island -------		(46/47)		(60/61
Homogenised ----------		(48/49)		(62/63
Sterilised -----------		(50/51)		(64/65
Untreated (Green Top) -		(52/53)		(66/67
Semi-Skimmed ---------		(54/55)	0 1	(68/69
Skimmed --------------		(56/57)		(70/71

WRITE IN TOTAL PINTS BOUGHT IN THE WEEK: (72/73

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Q.2. SHOW CARD C I am going to read out a number of statements. Please consider each one in turn and tell me which of the phrases on this card best describes your opinion?

INTERVIEWER - START READING FROM A NEW POINT EACH TIME. MAKE SURE YOU READ ALL THE STATEMENTS & TICK START.

	STRONGLY AGREE	SLIGHTLY AGREE	SLIGHTLY DISAGREE	STRONGLY DISAGREE	NO OPINION DON'T KNOW	
( ) Skimmed milk tastes worse than whole milk	1	(2)	3	4	5	(11)
( ) Milk is good value for money	(1)	2	3	4	5	(12)
( ) I don't think that fat is any good for you at all	1	(2)	3	4	5	(13)
( ) Semi-skimmed milk has plenty of body to it	(1)	2	3	4	5	(14)
( ) Saturated fat is better for you than polyunsaturated fat	1	2	3	4	(5)	(15)
( ) If milk was the main source of fat in my diet I should buy less of it	1	(2)	3	4	5	(16)
( ) Gold top milk is good for you	1	2	(3)	4	5	(17)
( ) Even if fat was no good for you I would still eat it	1	(2)	3	4	5	(18)
( ) If low fat milks were more expensive than whole milk people would still buy them	(1)	2	3	4	5	(19)
( ) Milk is full of natural goodness	(1)	2	3	4	5	(20)
( ) Whole milk has less flavour than semi-skimmed milk	1	2	(3)	4	5	(21)
( ) People are a lot more conscious of health these days	(1)	2	3	4	5	(22)
( ) There is too much fat in gold top milk	(1)	2	3	4	5	(23)
( ) I could do without milk in the house at all	1	2	3	(4)	5	(24)
( ) Skimmed milk is just a poorer pint of milk than whole milk	1	2	3	(4)	5	(25)
( ) Milk is a very versatile food	(1)	2	3	4	5	(26)
( ) Adults would be healthier if they drank more milk	1	2	3	4	(5)	(27)
( ) If you are worried about your health then you have to cut down a little on everything	(1)	2	3	4	5	(28)

- 5 -

Q.3. SHOW CARD D How much fat do you think a pint of ordinary pasteurised milk like silver top has in it?

0.0 - 0.3%	1	(29)
0.4% - 1.5%	2	
1.6% - 5.0%	3	
6% - 10%	4	
11% - 20%	5	
21% - 30%	(6)	
31% - 50%	7	
Over 50%	8	
No idea	9	

Q.4. Bradford University might want to contact you again on this subject. Are you willing for this to happen, or not?

Yes	(1)	(30)
No	2	

ASK ALL

Q.5. I have a simple diary which it would be helpful if you could complete over the next four weeks. All completed diaries will go into a draw and the first three out will receive prizes of £100, £50 and £25. Will you do this for us?

Accepted diary	(1)	(31)
Did not accept	2	

INSTRUCTION: Explain diary to all who accept it. Leave return envelope stamped. Check that you have completed the personal details.

C O N S U M E R S T U D Y 1 9 8 6

When complete, please return to:

Gillian Wright
Food Policy Research
School of Biomedical Sciences
University of Bradford
BRADFORD
Yorkshire
BD7 1DP

A pre-paid envelope is enclosed for your convenience

Explanation of the different kinds of milk mentioned in this survey

Pasteurised	-	Whole milk, silver top
Channel Island	-	Gold top
Homogenised	-	Red top
Sterilised	-	Crown capped bottles. Often known by the name of a local dairy such as Clover or Model
Untreated	-	Green Top
Semi-skimmed	-	Red and silver striped top. Semi-skimmed milk is available either pasteurised or sterilised or UHT
Skimmed	-	Blue and silver striped top. Skimmed milk is available either pasteurised or sterilised or UHT

Which of the following kinds of milk have you bought in the last 4 weeks? 1-4

Please tick each box as appropriate 5

Pasteurised	☐	6-9
Channel Island	☐	10
Homogenised	☐	11
Sterilised	☐	12
Untreated	☐	13
Semi-skimmed	☐	14
Skimmed	☐	15
None of these	☐	16
		17
		18
		19
		20
		21

How many pints of the following kinds of milk have you bought from your MILKMAN during the past 7 DAYS?

Please write the number of pints in each appropriate box

Pasteurised	
Channel Island	
Homogenised	
Sterilised	
Untreated	
Semi-skimmed	
Skimmed	
Other	

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How many pints of the following kinds of milk have you bought from sources other than your milkman (eg, supermarket, corner shop) over the last 7 DAYS?

Please write the number of pints in each appropriate box

Pasteurised		22-23
		24-25
Channel Island		26-27
		28-29
Homogenised		30-31
		32-33
Sterilised		34-35
		36-37
Untreated		38
		39-40
Semi-skimmed		41-42
		43-44
Skimmed		45-46
		47-48
Other		49-50
		51-52
		53-54
		55

Do you have a regular order with your milkman?

Yes / No

Is semi-skimmed milk available from your milkman?

Yes / No / Don't know

Is skimmed milk available from your milkman?

Yes / No / Don't know

How much fat do you think a pint of ordinary milk like pasteurised has in it? 56

Please tick the appropriate box 57

58

59

0.0% - 0.3% ☐

0.4% - 1.5% ☐

1.6% - 5% ☐

6% - 10% ☐

11% - 20% ☐

21% - 30% ☐

31% - 50% ☐

Over 50% ☐

No idea ☐

Please read the following statements and circle the number which most closely represents your reaction to each one.

These questions are arranged in a random order to aid analysis.

Example: If you slightly agree that your current diet is healthy and well balanced, circle number 2 ie:

1	(2)	3	4	5	6	
Strongly Agree	Slightly Agree	Don't Know	No opinion	Slightly Disagree	Strongly Disagree	1-4
						5
						6-9
						10
						11
						12

1	My current diet is healthy and well balanced	1	2	3	4	5	6	13
2	It is easy to have a healthy diet at home but more difficult when you eat out	1	2	3	4	5	6	14
3	Food should be labelled to say if it has been treated with pesticides	1	2	3	4	5	6	15
4	People are becoming vegetarian because of concern for animal welfare	1	2	3	4	5	6	16
5	On food labels, calories and energy are different ways of giving the same information	1	2	3	4	5	6	17
6	I have started eating some things because I think they are healthy	1	2	3	4	5	6	18
7	Brown sugar is better for you than white sugar	1	2	3	4	5	6	19
8	If you are worried about your health then you have to cut down a little on everything	1	2	3	4	5	6	20
9	Natural foods are useful if you are trying to make your diet healthy	1	2	3	4	5	6	21
10	There is increasing concern about the way meat is produced	1	2	3	4	5	6	22
								23

		Strongly Agree	Slightly Agree	Don't Know	No opinion	Slightly Disagree	Strongly Disagree	
11	Milk contributes only a small proportion of fat to the total diet	1	2	3	4	5	6	24
12	Fast foods such as hamburgers and pizzas cannot be considered healthy meals	1	2	3	4	5	6	25
13	There is too much sugar used in food manufacturing	1	2	3	4	5	6	26
14	Vegetable fat is always polyunsaturated	1	2	3	4	5	6	27
15	Milk is full of natural goodness	1	2	3	4	5	6	28
16	More people are not eating meat because of worries about hormone residues	1	2	3	4	5	6	29
17	Restaurants should be more specific about the ingredients in their dishes	1	2	3	4	5	6	30
18	Cutting out milk would be cutting out the main source of fat in my diet	1	2	3	4	5	6	31
19	Sugar is a good source of energy	1	2	3	4	5	6	32
20	There are too many additives in food	1	2	3	4	5	6	33 34
21	A healthy diet does not contain red meat	1	2	3	4	5	6	35
22	People are a lot more conscious of health these days	1	2	3	4	5	6	36
23	Irradiation is an effective way of preserving food	1	2	3	4	5	6	37
24	Children should eat less foods containing sugar	1	2	3	4	5	6	38
25	I prefer to buy natural foods whenever possible	1	2	3	4	5	6	39

		Strongly Agree	Slightly Agree	Don't Know	No opinion	Slightly Disagree	Strongly Disagree	
26	Milk is a very versatile food	1	2	3	4	5	6	40
27	Skimmed milk tastes worse than whole milk	1	2	3	4	5	6	41
28	I don't think eating sugar is any good for you at all	1	2	3	4	5	6	42
29	Insecticides used in farming can remain on food and be harmful when eaten	1	2	3	4	5	6	43
30	Grilling food takes some of the goodness out of it	1	2	3	4	5	6	44 45
31	If the amount of fat as in milk was clearly labelled people would buy more skimmed and semi-skimmed milk	1	2	3	4	5	6	46
32	Skimmed milk contains less vitamins than whole milk	1	2	3	4	5	6	47
33	I think I have too much sugar in my diet	1	2	3	4	5	6	48
34	Food can be safely exposed to radiation to make it last longer	1	2	3	4	5	6	49
35	It is necessary to include meat for a meal to be well balanced	1	2	3	4	5	6	50
36	If milk was the main source of fat in my diet I should eat less of it	1	2	3	4	5	6	51
37	Saturated fat is better for you than polyunsaturated fat	1	2	3	4	5	6	52
38	The way food is cooked can affect how good it is for you	1	2	3	4	5	6	53
39	I am trying to reduce the amount of sugar I eat	1	2	3	4	5	6	54

		Strongly Agree	Slightly Agree	Don't Know	No opinion	Slightly Disagree	Strongly Disagree	
40	I could do without milk in the house at all	1	2	3	4	5	6	55
41	Animal fat is saturated fat	1	2	3	4	5	6	56 57
42	Semi-skimmed milk has plenty of body in it	1	2	3	4	5	6	58
43	I don't think fat is any good for you at all	1	2	3	4	5	6	59
44	Healthy eating is expensive	1	2	3	4	5	6	60
45	Whole milk has less flavour than semi-skimmed	1	2	3	4	5	6	61
46	Meals without meat can be just as substantial as meals with meat	1	2	3	4	5	6	62
47	Even if fat was no good for you I would still eat it	1	2	3	4	5	6	63
48	I don't think sugar is any good for you at all	1	2	3	4	5	6	64
49	If low fat milks were more expensive than whole milk people would still buy them	1	2	3	4	5	6	65
50	Milk is good value for money	1	2	3	4	5	6	66
51	All animal fats are bad for you	1	2	3	4	5	6	67 68
52	Additives in food can be harmful	1	2	3	4	5	6	69
53	Skimmed milk is just a poorer pint of milk than whole milk	1	2	3	4	5	6	70
54	Canteen meals are usually as good for you as the meals you have at home	1	2	3	4	5	6	71

Have you received any information or advice on what to eat from the following sources?

Please tick the appropriate boxes

Supermarket	☐
Health food shop	☐
Chemist	☐
Health Centre / GP	☐
Hospital	☐
TV	☐
Radio	☐
Magazines	☐
Newspapers	☐
Friends and Relatives	☐
Books	☐
Other - please specify	☐

_____

_____

Please list what you consider to be the 3 most reliable sources of information on diet

1 _____

2 _____

3 _____

Describe anything you think the National Health Service (ie, GP's, hospitals) should do to provide information about healthy eating

_____

_____

_____

_____

_____

1-4
5
6-9
10
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25-26
27
28

Please list the kind of health problems that you think are related to the kind of food people eat

_____

_____

_____

_____

Where would you go for information if you wanted advice on your diet?

_____

_____

From the point of view of healthy eating, is it preferable to choose

Saturated Fat . . . . .

Polyunsaturated Fat . .

Please tick

Briefly explain your answer to the last question

_____

_____

_____

So that the results of this survey can be effectively analysed, would you please complete the following personal details:

How many hours each week do you spend in paid work?

Please tick the appropriate box

30 hours or more ☐

8 - 29 hours ☐

8 hours or less ☐

Please describe the occupation(s) of the head(s) of your household

_____

_____

_____

Please describe the industry in which this work was done (eg, automotive, civil service, food manufacturing)

_____

What is your marital status?

_____

Do you know anyone who has adjusted their diet for health reasons?

Yes / No

Please give a brief explanation

_____

_____

_____

Including yourself, how many adults (16+ years) are there in your household? ☐ 54-55

How many children under 5 years old are there in your household? ☐ 56

How many children between 6 and 9 years old are there in your household? ☐ 57-58

How many children between 10 and 15 years old are there in your household? ☐ 59-60

61-62

63-64

65-66

67

Do you have any general comments on the topic of diet and health?

68-70

71

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APPENDIX 5

1985/1986 Results

Tabulation of Milk and the Consumer Results

by demographic group

Figure 5.25

Respondents having purchased different types of milk over the previous four weeks - by socio economic group (Socio-Economic Group)

Units : Number of Respondents (%)
Sample : Socio-Economic Group -
AB n = 214 (1985) 117 (1986)
C1 n = 317 (1985) 137 (1986)
C2 n = 437 (1985) 174 (1986)
DE n = 490 (1985) 148 (1986)

Type of milk	1985	1986	Significance
Socio-Economic Group : AB			
Pasteurised	173 (81)	89 (76)	0.0000
Semi skimmed	43 (20)	45 (39)	0.0000
Skimmed	63 (29)	34 (29)	0.0601
Any low fat	97 (45)	72 (62)	0.0000
Socio-Economic Group : C1			
Pasteurised	248 (78)	100 (73)	0.0000
Semi skimmed	58 (18)	49 (36)	0.0000
Skimmed	79 (25)	44 (32)	0.0000
Any low fat	125 (39)	82 (60)	0.0000
Socio-Economic Group : C2			
Pasteurised	363 (83)	141 (81)	0.0000
Semi skimmed	63 (14)	44 (25)	0.0000
Skimmed	85 (20)	38 (22)	0.0000
Any low fat	134 (31)	74 (43)	0.0000
Socio-Economic Group : DE			
Pasteurised	403 (82)	115 (78)	0.0000
Semi skimmed	49 (10)	28 (19)	0.0000
Skimmed	88 (18)	35 (24)	0.0000
Any low fat	130 (27)	53 (36)	0.0000

Significance by Socio-Economic Group		
Pasteurised	0.3650	0.4007
Semi skimmed	0.0007	0.0008
Skimmed	0.0019	0.1589
Any low fat	0.0000	0.0000

Figure 5.26
Respondents having purchased different types of milk over the previous four weeks - by Age Group

Units : Number of Respondents (%)
Sample : Age Group in years 16-24 198 (1985) 64 (1986)
25-34 276 (1985) 119 (1986)
35-44 264 (1985) 123 (1986)
45-54 219 (1985) 96 (1986)
55-64 221 (1985) 85 (1986)
Over 65 281 (1985) 89 (1986)

Type of milk	1985	1986	Significance
Age Group : 16-24			
Pasteurised	165 (83)	54 (84)	0.0001
Semi skimmed	27 (14)	14 (22)	0.0003
Skimmed	35 (18)	13 (20)	0.0029
Any low fat	59 (30)	33 (34)	0.0004
Age Group : 25-34			
Pasteurised	226 (82)	96 (81)	0.0000
Semi skimmed	62 (23)	47 (40)	0.0000
Skimmed	62 (23)	23 (19)	0.0000
Any low fat	113 (41)	60 (50)	0.0000
Age Group : 35-44			
Pasteurised	219 (83)	100 (81)	0.0000
Semi skimmed	50 (19)	36 (29)	0.0000
Skimmed	74 (28)	39 (32)	0.0000
Any low fat	106 (40)	72 (59)	0.0000
Age Group : 45-54			
Pasteurised	183 (84)	66 (69)	0.0000
Semi skimmed	27 (12)	29 (30)	0.0001
Skimmed	53 (24)	33 (34)	0.0001
Any low fat	75 (34)	55 (57)	0.0006
Age Group : 55-64			
Pasteurised	179 (81)	64 (75)	0.0000
Semi skimmed	24 (11)	24 (28)	0.0004
Skimmed	48 (22)	23 (27)	0.0106
Any low fat	70 (32)	39 (46)	0.0004
Age Group: 65 and over			
Pasteurised	215 (77)	65 (73)	0.0000
Semi skimmed	23 (8)	16 (16)	0.0083
Skimmed	43 (15)	20 (20)	0.0000
Any low fat	63 (23)	33 (37)	0.0000
Significance by Age Group			
Pasteurised	0.3478	0.1163	
Semi skimmed	0.0000	0.0204	
Skimmed	0.0078	0.0761	
Any low fat	0.0000	0.0620	

Figure 5.27

Respondents having purchased different types of milk over the previous four weeks - by households with and without children

Units : Number of Respondents (%)
Sample : With children n = 1308 (1985) 526 (1986)
Without children n = 150 (1985) 50 (1986)

Type of milk	1985	1986	Significance2
With Children			
Pasteurised	1060 (81)	411 (78)	0.0000
Semi skimmed	199 (15)	153 (29)	0.0000
Skimmed	281 (22)	136 (26)	0.0000
Any low fat	442 (34)	257 (49)	0.0000
Without Children			
Pasteurised	127 (85)	34 (68)	0.0036
Semi skimmed	14 (9)	13 (26)	0.0333
Skimmed	34 (23)	15 (30)	0.0144
Any low fat	44 (29)	24 (48)	0.0112
Significance by households with and without children			
Pasteurised	0.3317	0.1450	
Semi skimmed	0.0704	0.7663	
Skimmed	0.8190	0.6394	
Any low fat	0.3145	0.3352	

Figure 5.28

Respondents having purchased different types of milk over the previous four weeks - by size of household

Units : Number of Respondents (%)
Sample : Single person households n = 194 (1985) 61 (1986)
Two person n = 532 (1985) 215 (1986)
Three person n = 282 (1985) 116 (1986)
Four person n = 305 (1985) 133 (1986)
Five or more people n = 145 (1985) 51 (1986)

Type of milk	1985	1986	Significance
Single Person Household			
Pasteurised	142 (73)	45 (74)	0.0000
Semi skimmed	15 (8)	9 (15)	0.0204
Skimmed	33 (17)	12 (20)	0.0000
Any low fat	48 (25)	18 (30)	0.0000
Two person Household			
Pasteurised	436 (82)	166 (77)	0.0000
Semi skimmed	70 (13)	30 (65)	0.0000
Skimmed	103 (19)	26 (55)	0.0000
Any low fat	160 (30)	107 (50)	0.0000
Three Person Household			
Pasteurised	240 (87)	87 (75)	0.0000
Semi skimmed	51 (32)	32 (28)	0.0000
Skimmed	64 (26)	26 (22)	0.0012
Any low fat	102 (36)	50 (43)	0.0000
Four Person Household			
Pasteurised	253 (83)	104 (78)	0.0000
Semi skimmed	48 (16)	43 (32)	0.0000
Skimmed	76 (25)	41 (31)	0.0000
Any low fat	115 (38)	78 (59)	0.0000

Figure 5.28 (continued)

Type of milk	1985	1986	Significance
Five or more Person Household			
Pasteurised	116 (80)	43 (84)	0.0072
Semi skimmed	29 (20)	17 (33)	0.0064
Skimmed	39 (27)	17 (33)	0.0202
Any low fat	61 (42)	28 (55)	0.0072
Significance by size of Household[2]			
Pasteurised	0.0176	0.6861	
Semi skimmed	0.0054	0.1124	
Skimmed	0.0728	0.2812	
Any low fat	0.0015	0.0003	

Figure 5.29

Average weekly milk consumption per household - by socio-economic group (Socio-Economic Group)

Units : Pints of milk per week
Sample : Socio-Economic Group - AB n = 214 (1985) 117 (1986)
C1 n = 317 (1985) 137 (1986)
C2 n = 437 (1985) 174 (1986)
DE n = 490 (1985) 148 (1986)

Type of Milk	Source of Milk 1985 Milk-man	1985 Elsewhere	1985 Total	1986 Milk-man	1986 Elsewhere	1986 Total	Significance
Socio-Economic Group : AB							
Pasteurised	8.7	1.0	9.7	7.2	1.0	8.2	0.002
Semi skimmed	1.2	0.2	1.4	2.6	0.4	3.0	0.001
Skimmed	1.3	0.6	1.9	1.2	0.6	1.8	0.630
Total low fat	2.5	0.8	3.3	3.8	1.0	4.8	0.014
Total Milk	11.8	1.8	13.6	11.9	2.1	14.0	0.775
Socio-Economic Group : C1							
Pasteurised	7.5	1.1	8.6	6.3	1.2	7.5	0.039
Semi skimmed	1.2	0.1	1.3	2.1	0.4	2.5	0.015
Skimmed	0.8	0.5	1.3	1.1	0.4	1.5	0.893
Total low fat	2.0	0.6	2.6	3.2	0.8	4.0	0.047
Total Milk	10.3	1.8	12.1	10.3	2.1	12.4	0.969
Socio-Economic Group : C2							
Pasteurised	9.1	1.6	10.7	7.1	1.7	8.8	0.000
Semi skimmed	0.8	0.2	1.0	1.7	0.4	2.1	0.006
Skimmed	0.5	0.4	0.9	1.0	0.4	1.4	0.012
Total low fat	1.3	0.6	1.9	2.7	0.8	3.5	0.000
Total Milk	11.7	2.4	14.1	11.1	2.8	13.9	0.219
Socio-Economic Group : DE							
Pasteurised	7.4	1.5	8.9	6.0	2.1	8.1	0.030
Semi skimmed	0.5	0.1	0.6	0.9	0.2	1.1	0.014
Skimmed	0.4	0.3	0.7	0.7	0.6	1.3	0.132
Total low fat	0.9	0.4	1.3	1.6	0.8	2.4	0.003
Total Milk	9.0	2.2	11.2	8.6	3.2	11.8	0.112

Figure 5.30

Average weekly milk consumption per household - by age group

Units : Pints of milk per week
Sample Age Group in years 16-24 198 (1985) 64 (1986)
25-34 276 (1985) 119 (1986)
35-44 264 (1985) 123 (1986)
45-54 219 (1985) 96 (1986)
55-64 221 (1985) 85 (1986)
Over 65 281 (1985) 89 (1986)

Sample :

Type of Milk	Source of Milk 1985 Milk-man	1985 Elsewhere	1985 Total	1986 Milk-man	1986 Elsewhere	1986 Total	Significance
Age 16-24							
Pasteurised	7.0	2.1	9.1	6.0	2.0	8.0	0.758
Semi skimmed	0.7	0.2	0.9	0.8	0.4	1.2	0.726
Skimmed	0.4	0.2	0.6	0.7	0.4	1.1	0.379
Total low fat	1.1	0.4	1.5	1.5	0.8	2.3	0.627
Total Milk	9.0	2.6	11.6	8.5	3.1	11.6	0.722
Age 25-34							
Pasteurised	8.8	1.4	10.2	8.0	1.7	9.7	0.335
Semi skimmed	1.5	0.2	1.7	2.6	0.5	3.1	0.021
Skimmed	0.6	0.3	0.9	0.7	0.3	1.0	0.609
Total low fat	2.1	0.5	2.6	3.3	0.8	4.1	0.114
Total Milk	11.9	2.1	14.0	12.0	2.6	14.6	0.838
Age 35-44							
Pasteurised	11.0	2.0	13.0	8.4	1.3	9.7	0.000
Semi skimmed	1.2	0.0	1.2	2.4	0.3	2.7	0.003
Skimmed	0.8	0.7	1.5	1.4	0.8	2.2	0.191
Total low fat	2.0	0.7	2.7	3.8	1.1	4.9	0.001
Total Milk	14.4	2.9	17.3	13.1	2.7	15.8	0.057

Figure 5.30 (continued)

Type of Milk	1985 Source of Milk: Milk-man	1985 Source of Milk: Elsewhere	1985 Source of Milk: Total	1986 Source of Milk: Milk-man	1986 Source of Milk: Elsewhere	1986 Source of Milk: Total	Significance
Age 45-54							
Pasteurised	9.2	1.5	10.7	6.3	1.7	8.0	0.000
Semi skimmed	0.6	0.2	0.8	1.6	0.4	2.0	0.005
Skimmed	0.9	0.3	1.2	1.3	0.5	1.8	0.201
Total low fat	1.5	0.5	2.0	2.9	0.9	3.8	0.004
Total Milk	11.7	2.3	14.0	10.9	2.8	13.7	0.425
Age 55-64							
Pasteurised	6.9	1.2	8.1	5.2	1.7	6.9	0.138
Semi skimmed	0.6	0.5	1.1	1.8	0.2	2.0	0.008
Skimmed	0.5	0.1	0.6	0.7	0.5	1.2	0.339
Total low fat	1.1	0.6	1.7	2.5	0.7	3.2	0.114
Total Milk	8.9	2.1	11.0	9.0	3.8	12.8	0.454
Age 65 and over							
Pasteurised	5.6	0.4	6.0	4.7	0.9	5.6	0.101
Semi skimmed	0.3	0.1	0.4	0.7	0.2	0.9	0.023
Skimmed	0.5	0.1	0.6	0.8	0.4	1.2	0.062
Total low fat	0.8	0.2	1.0	1.5	0.6	2.1	0.000
Total Milk	7.1	0.7	7.8	6.8	1.7	8.5	0.001

Figure 5.31

Average weekly milk consumption per household - by households with and without children

Units : Pints of milk per week
Sample : With children n = 1308 (1985) 526 (1986)
Without children n = 150 (1985) 50 (1986)

Type of Milk	Source of Milk 1985 Milk-man	1985 Elsewhere	1985 Total	1986 Milk-man	1986 Elsewhere	1986 Total	Significance
With children							
Pasteurised	8.2	1.5	9.7	6.8	1.6	8.4	0.000
Semi skimmed	0.9	0.1	1.0	1.8	0.4	2.2	0.000
Skimmed	0.6	0.4	1.0	1.1	0.5	1.6	0.212
Total low fat	1.5	0.5	2.0	2.9	0.9	3.8	0.000
Total Milk	10.7	2.2	12.9	10.7	2.6	13.3	0.830
Without children							
Pasteurised	7.3	0.8	8.1	4.6	0.9	5.5	0.076
Semi skimmed	0.2	0.1	0.3	1.1	0.3	1.4	0.048
Skimmed	0.6	0.3	0.9	0.6	0.8	1.4	0.333
Total low fat	0.8	0.4	1.2	1.7	1.1	2.8	0.011
Total Milk	8.9	1.4	10.3	7.2	2.2	9.4	0.866

Figure 5.32

Average weekly milk consumption per household - by size of household

Units : Pints of milk per week
Sample : Single person households n = 194 (1985) 61 (1986)
Two person n = 532 (1985) 215 (1986)
Three person n = 282 (1985) 116 (1986)
Four person n = 305 (1985) 133 (1986)
Five or more people n = 145 (1985) 51 (1986)

Type of Milk	Source of Milk 1985			1986			Significance
	Milk-man	Elsewhere	Total	Milk-man	Elsewhere	Total	
Single Person Household							
Pasteurised	3.4	0.7	4.1	2.8	1.2	4.0	0.474
Semi skimmed	0.3	0.1	0.4	0.4	0.1	0.5	0.058
Skimmed	0.3	0.2	0.5	0.6	0.2	0.8	0.823
Total low fat	0.6	0.3	0.9	1.0	0.3	1.3	0.186
Total Milk	4.5	1.1	5.6	4.5	1.7	6.2	0.008
Two Person Household							
Pasteurised	6.7	1.3	8.0	5.6	1.2	6.8	0.001
Semi skimmed	0.6	0.1	0.7	1.6	0.3	1.9	0.002
Skimmed	0.5	0.3	0.8	0.7	0.5	1.2	0.045
Total low fat	1.1	0.4	1.5	2.3	0.8	3.1	0.000
Total Milk	8.5	1.9	10.4	8.7	2.2	10.9	0.677
Three Person Household							
Pasteurised	9.3	1.7	11.0	7.4	2.1	9.5	0.106
Semi skimmed	1.1	0.1	1.2	1.5	0.3	1.8	0.272
Skimmed	0.7	0.5	1.2	0.8	0.7	1.5	0.937
Total low fat	1.8	0.6	2.4	2.3	1.0	3.4	0.365
Total Milk	11.9	2.4	14.3	11.3	3.4	14.7	0.597

Figure 5.32 (continued)

Type of Milk	Source of Milk 1985 Milk	1985 Elsewhere	1985 Total	Source of Milk 1986 Milk	1986 Elsewhere	1986 Total	Significance
Four Person Household							
Pasteurised	10.5	1.4	11.9	8.3	1.4	9.7	0.000
Semi skimmed	1.1	0.1	1.2	2.5	0.3	2.8	0.000
Skimmed	0.9	0.4	1.3	1.5	0.5	2.0	0.458
Total low fat	2.0	0.5	2.5	4.0	0.8	4.8	0.003
Total Milk	13.9	2.5	16.4	13.3	2.5	15.8	0.167
Five or more Person Household							
Pasteurised	12.1	2.0	14.1	9.6	2.4	12.0	0.035
Semi skimmed	1.5	0.3	1.8	2.7	0.9	3.6	0.019
Skimmed	1.0	0.4	1.4	1.5	0.3	1.8	0.700
Total low fat	2.5	0.7	3.2	4.2	1.2	5.4	0.007
Total Milk	16.5	2.8	19.3	15.3	3.9	19.2	0.715

Figure 5.33

Amount of fat thought to be in a pint of whole, pasteurised milk - by socio-economic group.

Units : Number of respondents (%)
Sample : Socio-economic group
AB n = 214 (1985) 117 (1986)
C1 n = 317 (1985) 137 (1986)
C2 n = 437 (1985) 174 (1986)
DE n = 490 (1985) 148 (1986)

%Fat	1985	1986	Significance
Socio-economic group: AB			
0.1-0.3	0 (0)	0 (0)	0.0031
0.4-1.5	10 (5)	5 (4)	
1.6-5.0	23 (11)	25 (21)	
6-10	36 (17)	18 (15)	
11-20	28 (13)	22 (19)	
21-30	43 (20)	16 (14)	
31-50	18 (8)	6 (5)	
Over 50	3 (1)	1 (1)	
No idea	53 (25)	24 (21)	
Socio-economic group: C1			
0.1-0.3	2 (1)	5 (4)	0.0031
0.4-1.5	8 (2)	5 (4)	
1.6-5.0	23 (10)	28 (20)	
6-10	40 (13)	17 (13)	
11-20	58 (18)	28 (20)	
21-30	56 (18)	20 (15)	
31-50	34 (11)	6 (4)	
Over 50	7 (2)	6 (4)	
No idea	79 (25)	22 (16)	
Socio-economic group: C2			
0.1-0.3	7 (2)	7 (4)	0.0053
0.4-1.5	14 (3)	15 (9)	
1.6-5.0	50 (11)	26 (15)	
6-10	52 (12)	21 (12)	
11-20	63 (150	18 (10)	
21-30	57 (13)	24 (14)	
31-50	40 (9)	13 (79)	
Over 50	9 (2)	5 (3)	
No idea	145 (33)	45 (26)	

Figure 5.33 (continued)

	1985	1986	SIGNIFICANCE
Socio-economic group: DE			
0.1-0.3	7 (1)	10 (7)	0.0823
0.4-1.5	20 (4)	9 (6)	
1.6-5.0	44 (9)	13 (9)	
6-10	54 (11)	25 (17)	
11-20	51 (10)	11 (7)	
21-30	62 (13)	14 (9)	
31-50	34 (7)	7 (5)	
Over 50	9 (2)	3 (2)	
No Idea	209 (43)	56 (38)	

Significance by socio-economic group.

0.0001 0.0002

Figure 5.34

Amount of fat thought to be in a pint of whole, pasteurised milk - by age group.

Units : Number of respondents (%)
Sample : Age Group 16 - 24 years 198 (1985) 64 (1986)
25 - 34 years 276 (1985) 119 (1986)
35 - 44 years 264 (1985) 123 (1986)
45 - 54 years 219 (1985) 96 (1986)
55 - 64 years 221 (1985) 85 (1986)
Over 65 years 281 (1985) 89 (1986)

%Fat	1985	1986	Significance
Age Group: 16 - 24 years			
0.1-0.3	3 (2)	- -	0.4194
0.4-1.5	7 (3)	4 (6)	
1.6-5.0	15 (8)	6 (9)	
6-10	26 (13)	11 (17)	
11-20	28 (19)	13 (20)	
21-30	39 (20)	10 (16)	
31-50	16 (8)	5 (8)	
Over 50	7 (3)	3 (5)	
No idea	47 (24)	12 (19)	
Age Group: 25 - 34 years			
0.1-0.3	1 (-)	3 (3)	0.1419
0.4-1.5	7 (3)	8 (7)	
1.6-5.0	22 (8)	18 (15)	
6-10	36 (13)	13 (11)	
11-20	51 (18)	18 (15)	
21-30	50 (18)	26 (22)	
31-50	32 (12)	6 (5)	
Over 50	7 (3)	5 (4)	
No idea	70 (25)	22 (18)	
Age Group: 35 - 44 years			
0.1-0.3	4 (1)	3 (3)	0.0084
0.4-1.5	7 (3)	5 (4)	
1.6-5.0	3 (12)	25 (20)	
6-10	29 (11)	19 (15)	
11-20	40 (15)	19 (15)	
21-30	46 (17)	19 (16)	
31-50	32 (12)	9 (8)	
Over 50	2 (1)	2 (2)	
No idea	73 (28)	22 (18)	

Figure 5.34 (continued)

Amount of fat thought to be in a pint of whole, pasteurised milk - by Age Group.

Age Group: 45 - 54 years

%Fat	1985	1986	Significance
0.1-0.3	2 (1)	2 (2)	0.3220
0.4-1.5	8 (4)	3 (3)	
1.6-5.0	23 (10)	20 (21)	
6-10	35 (16)	14 (15)	
11-20	29 (13)	16 (17)	
21-30	31 (14)	10 (10)	
31-50	17 (8)	6 (6)	
Over 50	4 (2)	3 (3)	
No idea	70 (32)	22 (23)	

Age Group: 55 - 64 years

0.1-0.3	3 (1)	6 (7)	0.0403
0.4-1.5	10 (4)	5 (6)	
1.6-5.0	20 (9)	10 (12)	
6-10	28 (13)	15 (18)	
11-20	23 (10)	8 (9)	
21-30	30 (14)	5 (6)	
31-50	17 (8)	4 (5)	
Over 50	8 (4)	2 (2)	
No idea	82 (37)	30 (35)	

Age Group: 65 years and over.

0.1-0.3	3 (1)	8 (9)	0.0566
0.4-1.5	13 (5)	9 (10)	
1.6-5.0	39 (14)	13 (15)	
6-10	28 (10)	9 (10)	
11-20	19 (7)	5 (6)	
21-30	22 (8)	4 (4)	
31-50	12 (4)	2 (2)	
Over 50	- -	- -	
No idea	144 (51)	39 (44)	

Significance by Age Group

0.0000	0.0001

Figure 5.35

Amount of fat thought to be in a pint of whole, pasteurised milk - by households with and without children.

Units : Number of respondents (%)
Sample : With children n = 1308 (1985) 526 (1986)
Without children n = 150 (1985) 50 (1986)

%Fat	1985	1986	Significance
Households with children			
0.1-0.3	15 (1)	21 (4)	0.0000
0.4-1.5	48 (4)	32 (6)	
1.6-5.0	132 (10)	84 (16)	
6-10	161 (12)	71 (13)	
11-20	172 (13)	73 (14)	
21-30	194 (15)	70 (13)	
31-50	118 (9)	31 (6)	
Over 50	26 (2)	14 (3)	
No idea	442 (34)	130 (26)	
Households without children			
0.1-0.3	1 (1)	1 (2)	0.6555
0.4-1.5	4 (3)	2 (4)	
1.6-5.0	18 (12)	8 (16)	
6-10	21 (14)	10 (20)	
11-20	28 (19)	6 (12)	
21-30	24 (16)	4 (8)	
31-50	8 (5)	1 (2)	
Over 50	2 (1)	1 (2)	
No idea	44 (29)	17 (34)	

Significance by households with and without children

0.4556 0.6285

Figure 5.36

Amount of fat thought to be in a pint of whole, pasteurised milk by size of household.

Units: Number of respondents (%)
Sample: Single person households n = 194 (1985) 61 (1986)
Two person households n = 532 (1985) 215 (1986)
Three person households n = 282 (1985) 116 (1986)
Four person households n = 305 (1985) 133 (1986)
Five or more people n = 145 (1985) 51 (1986)

% Fat	1985	1986	Significance
Single person households.			
0.1-0.3	2 (1)	5 (8)	0.1062
0.4-1.5	8 (4)	5 (8)	
1.6-5.0	16 (8)	6 (10)	
6-10	17 (9)	3 (5)	
11-20	18 (9)	6 (10)	
21-30	15 (8)	7 (11)	
31-50	14 (7)	1 (2)	
Over 50	6 (3)	- -	
No idea	98 (51)	28 (46)	
Two person households			
0.1-0.3	5 (1)	9 (4)	0.0004
0.4-1.5	24 (4)	14 (7)	
1.6-5.0	76 (14)	39 (18)	
6-10	68 (13)	33 (15)	
11-20	73 (14)	32 (15)	
21-30	77 (15)	23 (11)	
31-50	33 (6)	5 (2)	
Over 50	6 (1)	5 (2)	
No idea	170 (32)	55 (26)	
Three person households			
0.1-0.3	4 (1)	4 (3)	0.0174
0.4-1.5	10 (4)	3 (7)	
1.6-5.0	24 (9)	17 (15)	
6-10	37 (13)	20 (17)	
11-20	40 (14)	14 (12)	
21-30	45 (16)	17 (16)	
31-50	35 (12)	12 (11)	
Over 50	8 (3)	4 (3)	
No idea	79 (28)	20 (17)	

Figure 5.36 (continued)

% Fat	1985	1986	Significance
Four person households			
0.1-0.3	3 (1)	2 (2)	0.0080
0.4-1.5	6 (2)	4 (3)	
1.6-5.0	27 (9)	20 (15)	
6-10	39 (13)	17 (13)	
11-20	44 (14)	22 (16)	
21-30	55 (18)	21 (16)	
31-50	28 (9)	10 (7)	
Over 50	7 (2)	5 (4)	
No idea	96 (32)	32 (24)	
Five or more person households			
0.16-1.3	2 (2)	2 (4)	0.5512
0.4-1.5	4 (3)	3 (6)	
1.6-5.0	7 (5)	10 (19)	
6.0-10	21 (15)	8 (16)	
11-20	25 (17)	5 (10)	
21-30	26 (18)	6 (12)	
31-50	16 (11)	4 (8)	
Over 50	1 (1)	1 (2)	
no idea	43 (28)	12 (23)	
Significance by size of household			
	0.0001	0.0351	

Figure 5.37

Response to "Milk is a very verstile food".

Units: % Respondents
Sample: refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Dont Know No Opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All respondents											
	79	75	19	20	1	2	1	2	-	1	0.0026
Socio-economic group											
AB	78	72	19	21	-	2	2	3	1	2	0.0091
C1	79	81	18	16	1	1	2	2	-	-	0.0070
C2	78	74	20	22	1	2	1	2	-	-	0.7604
DE	79	72	18	22	1	4	1	2	1	1	0.4513
Significance	0.9560		0.2878								
Age Group (years)											
16-24	76	77	20	17	-	3	3	3	1	-	0.2014
25-34	79	74	19	25	1	1	1	-	-	-	0.0394
35-44	82	70	16	25	-	2	2	3	-	-	0.1460
45-54	81	79	16	19	2	1	-	1	1	-	0.0864
55-64	78	74	20	15	-	7	1	2	1	2	0.1578
65+	76	76	21	17	1	4	2	2	-	1	0.6680
Significance	0.5943		0.4091								
With and without children											
With	80	76	18	20	-	1	1	2	1	1	0.0039
Without	72	63	27	26	1	9	-	2	-	-	0.0568
Significance	0.0294		0.0858								
Size of household											
One	77	68	21	20	-	8	1	2	1	2	0.2930
Two	78	79	19	16	1	2	2	2	-	1	0.2564
Three	91	75	16	23	1	1	2	1	-	-	0.8807
Four	78	74	20	23	1	2	1	4	1	-	0.0060
Five+	82	69	15	25	1	2	1	4	1	-	0.4000
Significance	0.9014		0.1394								

Figure 5.38

Response to "milk is full of natural goodness"

Units: % Respondents
Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Dont Know No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All respondents											
	70	54	25	33	1	4	3	8	1	1	0.0000
Socio-economic group											
AB	68	47	26	35	1	6	5	12	-	-	0.0000
C1	68	55	27	31	1	4	2	9	2	1	0.0029
C2	71	54	25	34	2	4	2	6	-	2	0.2498
DE	72	57	22	32	2	4	3	5	1	2	0.2390
Significance	0.1642		0.6348								
Age Group (years)											
16-24	69	52	27	35	2	5	1	6	1	2	0.0000
25-34	70	45	26	39	-	4	3	10	1	2	0.0026
35-44	69	46	24	33	3	5	4	14	-	2	0.0001
45-54	74	61	22	32	-	3	3	4	1	-	0.2574
55-64	68	64	26	26	2	5	3	5	1	-	0.6509
65+	72	60	24	33	3	5	1	1	-	1	0.7160
Significance	0.6143		0.3031								
With and without children											
With	71	53	25	33	1	5	2	8	1	1	0.0000
Without	67	61	27	34	2	3	4	-	-	2	0.0004
Significance	0.5109		0.2654								
Size of household											
One	65	51	28	29	2	14	4	2	1	4	0.3139
Two	69	56	25	34	3	4	3	6	-	-	0.0011
Three	75	53	22	30	1	3	1	10	1	4	0.0001
Four	69	52	27	37	3	2	1	9	-	-	0.0000
Five+	69	54	21	32	2	4	5	10	-	-	0.1194
Significance	0.2041		0.0114								

Figure 5.39

Response to "milk is good value for money"

Units: % Respondents
Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Dont Know No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All respondents											
	74	77	22	18	-	2	3	2	1	1	0.0000
Socio-economic group											
AB	76	76	20	20	1	1	2	1	1	2	0.0034
C1	72	78	26	19	-	-	1	2	1	1	0.0043
C2	75	73	20	22	1	1	3	2	1	2	0.0000
DE	72	82	22	11	1	3	4	3	1	1	0.0007
Significance		0.2585		0.4078							
Age Group (years)											
16-24	73	81	21	11	1	5	4	3	1	-	0.0002
25-34	74	74	24	23	1	2	1	1	-	-	0.0218
35-44	73	73	24	24	-	2	2	1	1	-	0.6973
45-54	85	82	12	15	-	1	1	1	2	1	0.0001
55-64	71	75	23	16	-	1	5	4	1	4	0.0000
65+	68	78	26	14	-	4	5	2	1	2	0.0352
Significance		0.0447		0.0540							
With and without children											
With	74	77	22	18	-	2	3	2	1	1	0.0000
Without	69	80	26	18	-	-	4	-	1	2	0.1658
Significance		0.6926		0.8585							
Size of household											
One	69	70	23	20	-	4	6	4	2	2	0.0003
Two	71	81	24	13	1	2	3	2	1	2	0.0000
Three	78	79	19	18	-	2	3	1	-	-	0.3227
Four	74	75	23	21	1	3	2	1	-	-	0.0100
Five+	79	70	17	26	2	2	2	-	-	2	0.2429
Significance		0.0461		0.0359							

Figure 5.40

Response to "I could do without milk in the house at all"

Units: % Respondents
Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Dont Know No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All respondents											
	5	3	2	4	1	2	6	10	86	81	0.0003
Socio-economic group											
AB	4	2	1	2	1	2	8	10	85	84	0.2013
C1	4	4	3	5	1	1	6	14	86	76	0.0000
C2	5	3	2	4	1	2	5	7	87	84	0.0023
DE	6	1	2	5	1	2	6	11	85	81	0.1295
Significance	0.5580		0.5567								
Age Group (years)											
16-24	4	2	4	2	-	-	6	8	86	88	0.0000
25-34	5	1	1	2	2	1	5	9	87	87	0.1047
35-44	6	4	2	4	-	1	3	14	89	77	0.0000
45-54	4	2	1	4	-	1	4	11	91	82	0.0061
55-64	6	4	4	7	1	1	8	10	81	78	0.2762
65+	6	3	1	6	1	4	9	10	83	77	0.8529
Significance	0.1098		0.5658								
With and without children											
With	5	3	2	4	-	-	6	11	87	82	0.0003
Without	5	2	4	9	1	3	9	9	81	77	0.2907
Significance	0.1409		0.5578								
Size of household											
One	9	4	4	14	1	7	8	19	78	56	0.6515
Two	4	2	3	5	1	1	9	11	83	81	0.0022
Three	4	4	2	1	-	1	4	10	90	84	0.2962
Four	6	1	2	1	-	-	5	8	87	90	0.0000
Five+	4	-	-	4	1	-	1	8	94	88	0.0186
Significance	0.0017		0.0000								

Figure 5.41

Response to "Skimmed milk tastes worse than whole milk"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	29	31	22	32	14	13	13	10	12	15	0.0000
Socio-economic Group											
AB	32	37	27	34	17	16	10	10	14	13	0.0016
C1	28	24	26	39	18	10	15	11	13	16	0.0001
C2	28	29	21	30	26	18	15	11	10	12	0.0000
DE	29	32	18	25	31	16	12	7	10	20	0.0022
Significance	0.0003		0.0587								
Age Group											
16-24	31	27	17	39	20	7	15	14	17	13	0.1501
25-34	26	30	26	34	19	11	16	11	13	14	0.0254
35-44	28	30	27	33	19	15	14	6	12	16	0.0001
45-54	33	32	22	29	26	7	12	10	7	22	0.0133
55-64	29	31	19	30	25	14	15	11	12	14	0.2726
65 +	27	33	19	27	37	18	8	10	9	12	0.0001
Significance	0.0000		0.7422								
Households with and without children											
With	29	30	22	32	23	13	14	10	12	15	0.0000
Without	24	41	22	27	33	13	11	5	10	14	0.0855
Significance	0.1073		0.5142								
Size of household											
One	22	29	20	18	35	23	11	5	12	25	0.0054
Two	30	33	21	35	27	11	13	9	9	12	0.0339
Three	27	28	22	35	22	10	17	10	12	17	0.0101
Four	33	30	24	32	19	11	11	15	13	12	0.0000
Five +	28	32	23	30	18	12	15	6	16	20	0.0064
Significance	0.0079		0.0350								

Figure 5.42

Response to "If you are worried about your health then you have to cut down a little on everything"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don't Know No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	29	23	40	29	8	6	15	23	8	19	0.0004
Socio-economic Group											
AB	29	15	40	28	6	6	15	27	10	24	0.0460
C1	27	21	43	23	4	7	18	27	8	22	0.5491
C2	31	27	40	33	8	2	14	21	7	17	0.1119
DE	29	27	40	31	10	8	13	19	8	15	0.1431
Significance	0.1627		0.0353								
Age Group											
16-24	23	16	45	35	8	6	17	27	7	16	0.0999
25-34	28	18	38	34	5	-	20	23	9	25	0.0622
35-44	36	24	40	24	6	2	11	31	7	19	0.3612
45-54	36	22	37	27	7	3	12	25	8	23	0.1938
55-64	30	34	39	34	10	6	15	14	6	12	0.0253
65 +	24	27	45	23	8	17	13	15	10	18	0.7840
Significance	0.0263		0.0003								
Households with and without children											
With	30	22	41	29	8	6	14	23	7	20	0.0078
Without	23	30	42	28	7	4	15	20	13	18	0.1936
Significance	0.1230		0.8780								
Size of household											
One	24	32	47	32	8	10	10	9	11	17	0.8123
Two	27	23	42	25	7	8	16	28	8	16	0.0036
Three	30	19	40	34	8	4	15	19	7	24	0.5785
Four	32	24	41	32	9	1	13	25	5	18	0.1306
Five +	37	22	28	24	9	6	15	22	11	26	0.5618
Significance	0.0360		0.0355								

Figure 5.43

Response to "Skimmed milk is just a poorer pint of milk than whole milk"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	23	15	27	16	17	15	18	20	17	34	0.0000
Socio-economic Group											
AB	16	10	29	13	11	9	18	25	26	43	0.0014
C1	17	13	24	13	15	25	21	22	23	37	0.0002
C2	22	13	25	17	18	21	21	19	14	30	0.0001
DE	29	24	28	21	21	14	12	14	10	27	0.0000
Significance	0.000		0.0222								
Age Group											
16-24	22	9	20	16	15	22	21	17	22	36	0.0008
25-34	17	5	26	13	12	17	23	30	22	35	0.0024
35-44	20	13	23	13	14	16	22	19	21	39	0.0000
45-54	21	14	29	23	18	6	17	19	15	38	0.0010
55-64	29	24	29	21	18	10	13	18	11	27	0.1796
65 +	29	31	30	16	23	20	9	10	9	23	0.0329
Significance	0.0000		0.0000								
Households with and without children											
With	23	15	25	16	17	15	18	20	17	34	0.0000
Without	20	21	36	19	20	16	10	16	14	28	0.1482
Significance	0.0099		0.8961								
Size of household											
One	26	26	30	13	22	26	11	9	11	26	0.6502
Two	23	19	27	16	19	13	16	22	15	30	0.0018
Three	21	10	28	22	15	18	17	18	19	32	0.0005
Four	20	8	24	15	14	13	23	23	19	41	0.0018
Five +	27	16	19	14	15	13	21	16	18	41	0.0000
Significance	0.0072		0.0012								

Figure 5.44

Response to "Skimmed milk has plenty of body in it"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	6	16	18	25	40	28	19	22	17	9	0.0000
Socio-economic Group											
AB	8	15	19	32	33	21	18	19	22	13	0.0016
C1	10	18	20	29	34	21	20	27	16	5	0.0002
C2	7	14	18	23	39	36	20	19	16	8	0.0002
DE	9	16	15	18	44	34	17	22	15	10	0.1009
Significance	0.1747		0.0092								
Age Group											
16-24	10	14	20	25	37	40	16	18	17	3	0.0650
25-34	9	14	20	21	34	33	21	26	16	6	0.0055
35-44	8	15	19	24	31	26	21	23	21	12	0.0000
45-54	8	19	17	25	39	24	21	25	15	7	0.0022
55-64	5	19	15	29	41	23	20	18	19	11	0.6715
65 +	9	13	14	25	49	33	14	16	14	13	0.6508
Significance	0.0338		0.4148								
Households with and without children											
With	9	16	18	24	37	30	19	21	17	9	0.0000
Without	7	12	17	28	44	23	15	28	17	9	0.1514
Significance	0.4746		0.8865								
Size of household											
One	9	10	17	31	44	30	16	14	14	15	0.1215
Two	8	17	16	22	38	28	19	24	19	9	0.0009
Three	8	19	20	26	38	36	20	16	14	3	0.0367
Four	9	15	19	27	37	24	20	25	15	9	0.0004
Five +	8	12	17	18	36	34	18	22	21	14	0.0019
Significance	0.7405		0.0003								

Figure 5.45

Response to "Skimmed milk has less flavour than semi skimmed milk"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don´tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	7	7	9	8	25	13	21	23	38	49	0.0000
Socio-economic Group											
AB	4	4	4	2	20	7	26	26	46	61	0.0994
C1	4	5	12	10	20	11	20	23	44	51	0.0491
C2	9	8	9	7	25	16	21	26	36	43	0.4136
DE	8	9	9	12	29	21	20	16	34	42	0.1326
Significance	0.0000		0.0042								
Age Group											
16-24	8	5	9	13	23	19	24	24	36	39	0.4951
25-34	8	6	9	9	24	14	21	35	38	36	0.1485
35-44	5	3	11	8	17	16	24	21	43	52	0.0094
45-54	8	7	7	8	23	9	22	15	40	61	0.5922
55-64	7	10	8	4	25	11	19	19	41	56	0.4309
65 +	7	12	9	7	33	15	19	19	32	47	0.0130
Significance	0.1148		0.0047								
Households with and without children											
With	7	7	9	7	25	15	21	23	38	48	0.0000
Without	5	5	8	24	29	4	21	17	37	50	0.2626
Significance	0.5611		0.0017								
Size of household											
One	6	15	10	10	32	16	18	19	34	40	0.0019
Two	6	7	8	5	26	13	20	22	40	53	0.0251
Three	10	6	9	13	24	20	22	20	35	41	0.2613
Four	6	3	10	8	19	11	25	26	40	52	0.0105
Five +	6	6	10	9	20	10	23	28	41	47	0.3575
Significance	0.1296		0.0014								

Figure 5.46

Response to "If low fat milks were more expensive than whole milk, people would still buy them"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	30	31	38	37	14	19	10	8	8	5	0.0203
Socio-economic Group											
AB	33	26	39	47	10	12	12	9	6	6	0.2762
C1	32	31	38	35	11	20	11	10	8	4	0.0865
C2	29	29	41	37	11	19	10	10	9	5	0.2609
DE	29	38	35	33	18	20	10	4	8	5	0.1392
Significance	0.1128		0.3791								
Age Group											
16-24	31	30	41	42	10	17	11	8	7	3	0.0095
25-34	33	27	41	46	10	16	12	9	4	2	0.0033
35-44	31	31	38	31	10	21	11	10	10	7	0.7263
45-54	36	42	36	39	8	11	9	6	11	2	0.9865
55-64	26	27	40	33	16	15	8	12	10	13	0.3647
65 +	24	30	33	33	24	28	11	5	8	4	0.0353
Significance	0.0000		0.0092								
Households with and without children											
With	30	31	38	37	13	18	11	9	8	5	0.0426
Without	28	35	41	40	15	15	9	5	7	5	0.3331
Significance	0.6833		0.2480								
Size of household											
One	29	37	34	29	21	20	8	8	8	6	0.1312
Two	25	26	40	40	16	21	12	8	7	5	0.0682
Three	36	34	35	31	10	21	10	8	9	6	0.7038
Four	33	36	39	35	9	13	10	11	9	5	0.0038
Five +	34	26	39	56	10	14	9	4	8	-	0.8806
Significance	0.0173		0.0181								

Figure 5.47

Response to "I don't think fat is any good for you at all"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	26	17	30	25	5	6	30	37	9	15	0.0002
Socio-economic Group											
AB	27	11	23	23	2	5	36	39	12	22	0.0052
C1	26	14	31	25	4	5	30	39	9	17	0.4691
C2	24	17	35	24	6	6	29	43	6	10	0.8161
DE	26	25	27	26	9	8	29	29	9	12	0.0366
Significance	0.0007		0.0541								
Age Group											
16-24	21	13	34	33	10	4	29	41	6	9	0.7628
25-34	25	14	31	28	3	2	33	46	8	10	0.5242
35-44	32	15	28	23	4	6	27	38	9	18	0.0102
45-54	25	18	24	17	6	9	34	43	11	13	0.3932
55-64	28	25	31	29	5	6	28	22	8	18	0.6562
65 +	23	18	29	20	8	12	31	30	9	20	0.0527
Significance	0.0661		0.0139								
Households with and without children											
With	26	17	30	24	6	7	30	38	8	14	0.0011
Without	25	19	29	31	4	2	29	29	13	19	0.0348
Significance	0.2185		0.6841								
Size of household											
One	21	21	33	25	8	9	27	30	11	15	0.4711
Two	26	18	30	22	6	8	29	36	9	16	0.0033
Three	28	18	27	28	5	4	34	38	6	12	0.8772
Four	25	16	31	24	4	3	30	44	10	13	0.2246
Five +	28	10	26	29	8	12	32	33	6	16	0.2367
Significance	0.2718		0.0273								

Figure 5.48

Response to "Even if fat was no good for you I would still eat it"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	16	9	42	40	5	10	16	17	21	24	0.0000
Socio-economic Group											
AB	19	4	43	43	2	7	14	23	22	23	0.0764
C1	15	9	40	36	4	12	20	17	21	26	0.0000
C2	16	7	44	44	4	11	16	18	20	20	0.0008
DE	15	15	40	35	8	12	15	11	22	27	0.1395
Significance	0.0576		0.0479								
Age Group											
16-24	19	11	44	45	10	14	14	13	13	17	0.0931
25-34	15	6	47	50	2	11	17	20	19	13	0.0094
35-44	16	8	40	36	-	10	20	22	24	24	0.0002
45-54	21	8	44	38	3	8	12	13	20	33	0.0964
55-64	12	10	35	31	6	13	19	14	28	32	0.4600
65 +	14	15	40	36	10	6	15	17	21	26	0.9153
Significance	0.0000		0.0541								
Households with and without children											
With	16	9	42	40	5	10	16	18	21	23	0.0000
Without	14	10	40	30	3	12	21	13	22	35	0.2747
Significance	0.4584		0.6230								
Size of household											
One	19	16	40	41	7	11	12	10	22	22	0.7355
Two	15	7	39	38	7	11	17	16	22	28	0.0049
Three	16	5	38	47	4	10	20	14	22	24	0.0010
Four	16	11	49	40	3	8	14	23	18	18	0.0687
Five +	16	14	45	27	3	15	16	22	20	22	0.0328
Significance	0.2302		0.0004								

Figure 5.49

Response to "If milk was the main source of fat in my diet I should eat less of it"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don´tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	13	20	24	30	10	15	30	22	23	13	0.1552
Socio-economic Group											
AB	14	23	26	32	8	12	31	16	21	17	0.6130
C1	14	22	28	34	10	11	27	21	21	12	0.8621
C2	13	18	23	33	9	16	31	24	24	9	0.2980
DE	11	20	22	20	11	17	31	27	25	16	0.0335
Significance	0.6961		0.1208								
Age Group											
16-24	12	13	20	33	11	18	32	25	25	11	0.0349
25-34	13	15	30	39	7	13	29	20	21	13	0.4330
35-44	17	20	30	33	9	11	27	27	17	9	0.0696
45-54	14	27	26	26	9	10	27	23	24	14	0.7526
55-64	13	27	19	22	13	17	35	20	20	14	0.2519
65 +	8	20	19	19	12	23	31	18	30	20	0.3850
Significance	0.0002		0.0710								
Households with and without children											
With	13	20	25	31	9	14	30	22	23	13	0.1169
Without	13	21	23	16	9	15	32	27	23	21	0.1782
Significance	0.9447		0.4439								
Size of household											
One	11	21	19	28	13	13	30	19	27	19	0.1558
Two	13	21	23	22	10	20	30	23	24	14	0.6322
Three	11	21	27	33	9	13	33	22	20	11	0.4730
Four	14	20	28	36	9	10	29	23	20	11	0.1803
Five +	16	16	23	41	9	13	27	20	25	10	0.2290
Significance	0.3957		0.0639								

Figure 5.50

Response to "Saturated fat is better for you than polyunsaturated fat"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	3	5	9	3	43	26	14	13	31	53	0.0000
Socio-economic Group											
AB	1	3	10	2	29	15	11	12	49	68	0.0011
C1	3	8	8	2	33	18	17	10	39	62	0.0345
C2	2	3	11	4	44	33	14	16	29	44	0.0097
DE	3	7	8	7	54	31	14	12	21	43	0.0949
Significance	0.0000		0.0005								
Age Group											
16-24	2	2	10	2	50	56	13	9	25	31	0.0697
25-34	2	2	10	2	37	25	15	18	36	53	0.0320
35-44	3	2	10	4	32	23	16	13	39	58	0.0039
45-54	5	4	10	3	36	20	14	10	35	63	0.0043
55-64	3	8	10	4	39	27	14	9	34	52	0.0010
65 +	1	15	7	5	58	30	14	11	20	39	0.5513
Significance	0.0000		0.0281								
Households with and without children											
With	3	5	9	3	42	26	14	12	32	54	0.0000
Without	2	9	13	5	43	26	15	16	27	44	0.0362
Significance	0.4991		0.4006								
Size of household											
One	3	13	9	6	56	30	12	9	20	42	0.3529
Two	2	7	8	4	41	24	15	11	34	54	0.0000
Three	1	3	12	2	37	28	17	15	33	52	0.0094
Four	2	3	10	4	42	24	13	13	33	56	0.0001
Five +	5	-	10	-	42	27	11	16	32	57	0.9655
Significance	0.0073		0.3464								

Figure 5.51

Response to "People are a lot more conscious of health these days"

Units: % Respondents

Sample: Refer to section 5.5.4

Response	Strongly Agree		Slightly Agree		Don'tKnow No opinion		Slightly Disagree		Strongly Disagree		Significance
Sample	85	86	85	86	85	86	85	86	85	86	
All Respondents											
	81	80	16	18	1	1	1	1	1	-	0.9847
Socio-economic Group											
AB	85	79	12	20	1	1	1	-	1	-	0.9748
C1	82	84	16	15	1	-	1	1	-	-	0.9402
C2	83	74	14	23	2	1	1	1	-	1	0.1579
DE	77	82	19	14	1	3	2	1	1	-	0.9918
Significance	0.1613		0.6128								
Age Group											
16-24	82	75	15	24	-	1	3	-	-	-	0.4111
25-34	84	77	14	20	2	1	-	2	-	-	0.8867
35-44	85	79	14	19	1	1	-	-	-	1	0.9545
45-54	84	80	15	17	-	1	1	1	-	1	0.0461
55-64	80	83	17	14	1	3	1	-	1	-	0.1995
65 +	74	82	20	15	2	3	3	-	1	-	0.9624
Significance	0.0135		0.7948								
Households with and without children											
With	82	50	15	18	1	1	1	1	1	-	0.9336
Without	75	72	22	23	1	5	2	-	-	-	0.4061
Significance	0.1573		0.0196								
Size of household											
One	77	76	19	19	1	5	1	-	2	-	0.9065
Two	80	82	17	17	1	1	2	-	-	-	0.4530
Three	85	77	13	20	1	2	1	1	-	-	0.8533
Four	81	82	16	17	2	-	1	1	-	-	0.6551
Five +	86	72	14	24	-	-	-	2	-	2	0.0848
Significance	0.1933		0.2002								

APPENDIX 6

Exhibitors at Tameside Healthy Eating Exhibition

APPENDIX 6

List of Exhibitors - Tameside Healthy Eating Campaign.

ASM Cash and Carry.

Food Policy Research Unit, University of Bradford.

Co-op Dairies.

Elliott Service & Co. - representing John West Foods
New Zealand Lamb
Martlet Natural Foods.

Health and Diet Food Company Ltd.

Jedwells Foods Ltd.

Lo Salt.

Meat and Livestock Commission.

Wm Morrison Supermarkets plc.

James Robertsons & Sons.

Richard Sharrock and Sons.

Suma Wholefoods.

TMBC Food Control.

TMBC Recreation Department.

TMBC School Catering Service.

TMBC Trading Standards.

TMBC Staff Restaurant.

Tameside College Catering Department.

Tameside College Refrectory.

Tameside and Glossop Health Authority.

Weight Watchers.

APPENDIX 7

1987/1988 Questionnaire

Tameside Healthy Eating Exhibition

CONSUMER QUESTIONNAIRE

SUMMER 1988

It is important that the food manufacturers and retailers know what people want in food and in shopping facilities. It is only by collecting information from a good many consumers that we are able to represent your views to the food industry. Please help us to do this by completing the following questionnaire and returning it to us in the reply paid envelope. In appreciation of your help, all received forms will be entered into a draw for gifts of £75, £50 and £25.

Food Policy Research Unit
University of Bradford
BRADFORD
West Yorkshire BD7 1DP

Please circle the response that most closely reflects your answer to the following questions.

WHERE DO YOU DO YOUR SHOPPING?

1. Do you do most of your shopping

At a supermarket .....A

At a market .....B

At a corner shop C

Other .....D

2. How often do you shop for food

Everyday .....A

2 - 3 times a week .....B

Once a week C

Once a fortnight .....D

Once a month .....E

3. Do you supplement your food shopping at

Markets .....A

Corner shops .....B

Supermarkets other than your regular C

Other .....D

Please specify .....

4. Do you use the same supermarket regularly for your main shopping? Yes/No

5. Where do you buy most of your vegetables?

Supermarket .....A

Greengrocer .....B

Market C

Don't buy vegetables .....D

Please specify.....

6. Where do you buy most of your bread?

Supermarket .....A

Bakers shop .....B

Don't buy bread C

Please specify.....

7. Where do you buy most of your meat?

Supermarket .....A

Butchers shop .....B

Market C

Don't buy meat .....D

Please specify.....

8. Where do you buy most of your wet fish? 22 23

Supermarket .....A

Fish mongers .....B

Market C

Don't buy wet fish.....D

Please specify.....

9. Where do you buy most of your milk 24 25

Supermarkets .....A

Milkman .....B

Don't buy milk C

Please specify .....

356

WHAT SORT OF THINGS DO YOU EAT? 26 27 28 29

10. Tell us a little about your diet. Please read the following list of foods and circle the number nearest to how often you eat it.

	Never	Once a month	2-3 times a month	Every week	Every day	
Baked Beans	1	2	3	4	5	30
Sausages	1	2	3	4	5	31
Meusli	1	2	3	4	5	32
Red Meat	1	2	3	4	5	33
Crisps	1	2	3	4	5	34
Brown Rice	1	2	3	4	5	35
Fish Fingers	1	2	3	4	5	36
Poultry	1	2	3	4	5	37
White Rice	1	2	3	4	5	38
Lentils	1	2	3	4	5	39
White Fish	1	2	3	4	5	40
White Bread	1	2	3	4	5	41
Tinned Fish	1	2	3	4	5	42
Pasta	1	2	3	4	5	43
Wholemeal Bread	1	2	3	4	5	44
Wholemeal Pasta	1	2	3	4	5	45
Frozen Peas	1	2	3	4	5	46

	Never	Once a month	2-3 times a month	Every week	Every day	
Cornflakes	1	2	3	4	5	47
Yogurt - Natural	1	2	3	4	5	48
Yogurt - Fruit	1	2	3	4	5	49
Cream Cakes	1	2	3	4	5	50
Butter	1	2	3	4	5	51
Cottage Cheese	1	2	3	4	5	52
Skimmed Milk	1	2	3	4	5	53
Whole (full fat) Milk	1	2	3	4	5	54
Low fat spread (eg gold)	1	2	3	4	5	55
Cream Crackers	1	2	3	4	5	56
Lemonade	1	2	3	4	5	57
Polyunsaturated margarine	1	2	3	4	5	58
Diet Lemonade	1	2	3	4	5	59
Biscuits	1	2	3	4	5	60
Hi Bran Cereal (eg All Bran)	1	2	3	4	5	61
White Sugar	1	2	3	4	5	62
Chocolate Biscuits	1	2	3	4	5	63
Potatoes (all kinds)	1	2	3	4	5	64
Chips	1	2	3	4	5	65
Brown Sugar	1	2	3	4	5	66
Baked Potatoes	1	2	3	4	5	67
Tomatoes	1	2	3	4	5	68
Bacon	1	2	3	4	5	69
Confectionery (eg Mars Bars)	1	2	3	4	5	70
Eggs	1	2	3	4	5	71
Ryvita	1	2	3	4	5	72
						73
						74

1-4
5
6
7
8
9

HAVE YOU CHANGED YOUR DIET?

11. Is you diet very different now to what it was 10 years ago? Yes / No — 10

12. Do you consider this is because of — 11

- Income changes.....A
- Health concern .....B
- Availability of different food.....C
- Food Advertising .....D
- Television Programmes .....E
- Travelling Abroad .....F
- Magazines .....G
- Other .....H

Please specify .....

13. Have you changed your diet for medical reasons? Yes / No — 13

Please specify .....

14. Have you changed your diet because of concern about your general health? Yes / No — 14

Please specify .....

15. Do you know anyone else who has changed their diet for medical reasons? Yes / No

Please specify .....

16. Do you know of anyone else who has changed their diet because of concern about their general health? Yes / No

Please specify .....

17. If you have children, have they received any information on healthy eating at school? Yes / No

18. Do you think they should have more .....A
less .....B
about right C

15

16

17

18

19

20

QUALITY MARKS

There has been much discussion about introducing quality marks on products such as cheese, meat and meat products

19. Do you think that you would use such a mark? Yes / No / Don't know

21

20. Do you think that an independent organisation should introduce such a mark?

Yes .....A
No .....B
Don't know C

22

21. Do you think that the food industry should introduce one?

Yes .....A
No .....B
Don't know C

23

WHAT DO YOU THINK

22. What is your reaction to some of the current issues regarding food? Please circle the number which most closely represents your reaction to the following statements.

		Strongly Agree	Slightly Agree	Don't know/ No Opinion	Slightly Disagree	Strongly Disagree	Office Use
1	My current diet is healthy and well balanced	1	2	3	4	5	31
2	It is easy to have a healthy diet at home but more difficult when you eat out.	1	2	3	4	5	32
3	Food should be labelled to say if it has been treated with pesticides.	1	2	3	4	5	33
4	People are becoming vegetarian because of concern for animal welfare.	1	2	3	4	5	34
5	There is so much sugar used in food manufacturing.	1	2	3	4	5	35
6	Fast foods such as hamburgers and pizzas cannot be considered healthy meals.	1	2	3	4	5	36
7	There is increasing concern about the way meat is produced.	1	2	3	4	5	37
8	Vegetable fat is always polyunsaturated.	1	2	3	4	5	38
9	More peoaple are not eating meat because of worries about hormone residues.	1	2	3	4	5	39
10	Restaurants should be more specific about the ingredients in their dishes.	1	2	3	4	5	40
11	Sugar is a good source of energy.	1	2	3	4	5	41

		Strongly Agree	Slightly Agree	Don't know/ No Opinion	Slightly Disagree	Strongly Disagree	Office use
12	There are too many additives in food.	1	2	3	4	5	42
13	A healthy diet does not contain red meat.	1	2	3	4	5	43
14	Irradiation is an effective way of preserving food.	1	2	3	4	5	44
15	Children should eat less foods containing sugar.	1	2	3	4	5	45
16	I prefer to buy natural foods whenever possible.	1	2	3	4	5	46
17	Insecticides used in farming can remain on food and be harmful when eaten.	1	2	3	4	5	47
18	Grilling food takes some of the goodness and fat out of it.	1	2	3	4	5	48
19	I think I have too much sugar in my diet.	1	2	3	4	5	49
20	Food can be safely exposed to radiation to make it last longer.	1	2	3	4	5	50
21	It is necessary to include meat for a meal to be well balanced.	1	2	3	4	5	51
22	The way food is cooked can affect how good it is for you.	1	2	3	4	5	52
23	Animal fat is saturated fat.	1	2	3	4	5	53
24	I don't think fat is any good for you at all.	1	2	3	4	5	54
25	Healthy eating is expensive.	1	2	3	4	5	55
26	Additives in food can be harmful.	1	2	3	4	5	56
27	Canteen meals are usually as good for you as the meals you have at home.	1	2	3	4	5	57

		Strongly Agree	Slightly Agree	Don't know/ No Opinion	Slightly Disagree	Strongly Disagree	Office use
28	I am trying to reduce the amount of sugar I eat.	1	2	3	4	5	58
29	Food is more highly processed than it used to be.	1	2	3	4	5	59
30	It is difficult to avoid highly processed food in todays eating habits.	1	2	3	4	5	60
31	Modern food production methods have led to a general decline in the quality of food.	1	2	3	4	5	61
32	People do not take the health risk of a poor diet seriously enough.	1	2	3	4	5	62

HOW DO YOU FIND OUT ABOUT HEALTH ISSUES?

Have you received any information or advice on what to eat from

		Office use
Supermarkets	A	1-4
Health Food Shop	B	5
Chemist	C	6
Health Care Centre/GP	D	7
Hospital	E	8
TV	F	9
Radio	G	10
Magazines	H	11
Newspapers	I	12
Friends & Relations	J	13
Books	K	14
Other	L	15

Please specify .....

16

17

18

19

20

21

22

23

Please list what you consider to be the three most reliable sources of information on diet

1 24

2 25

3 26

Please list the places you would go to for information if you wanted advice on your diet

1 27

2 28

2 29

30

31

32

33

PLEASE TELL US ABOUT YOURSELF 34

35

So that the answers you have given us can be grouped together with those of other similar people, would you please give the following personal details.

Including yourself, how many adults (over 16 years) are there in your household 36-37

_____

How many children (under 16 years) are there in your household. 38-39

_____

How many hours each week do you spend in paid work? 40

30 hours or more ..... A

8 - 29 hours ..... B

8 hours or less C

What is your marital status? _____ 41

How old are you? .....Years

Please describe the occupation of yourself and other adults in your household. 42

_____

_____

Please give your name and address so that your form can be entered into the draw.

Many thanks for your co-operation.

APPENDIX 8

1987/1988 Results

Tabulations of Tameside Healthy Eating Results

by demographic group

Figure 6.21

Response to "where do you do most of your shopping?" - by socio-economic group

Units: Number of respondents (%)

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group					
Supermarket	7	(88)	6	(100)	0.5714
Market	-	-	-	-	
Corner shop	-	-	-	-	
Other	1	(12)	-	-	
Socio-economic group C1					
Supermarket	32	(91)	30	(97)	0.4008
Market	1	(3)	1	(3)	
Corner shop	-	-	-	-	
Other	2	(6)	-	-	
Socio-economic group C2					
Supermarket	41	(85)	37	(94)	0.2374
Market	6	(13)	1	(3)	
Corner shop	-	-	-	-	
Other	1	(2)	1	(3)	
Socio-economic group DE					
Supermarket	58	(92)	39	(92)	0.9066
Market	4	(6)	2	(5)	
Corner shop	1	(2)	1	(2)	
Other	-	-	-	-	
Significance	0.2711		0.8832		

Figure 6.22a

Response to "where do you do most of your shopping?" by age group

Unit: Number of Respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Age group 16-24 years					
Supermarket	7	(70)	4	(80)	0.1699
market	3	(30)	-	-	
Corner shop	-	-	-	-	
Other	-	-	1	(20)	
Age group 25-34 years					
Supermarket	40	(87)	33	(97)	0.2550
Market	4	(9)	1	(3)	
Corner shop	-	-	-	-	
Other	2	(4)	-	-	
Age group 35-44					
Supermarket	35	(91)	22	(100)	0.6088
Market	1	(3)	-	-	
Corner shop	1	(3)	-	-	
Other	1	(3)	-	-	
Age group 45-54					
Supermarket	24	(100)	17	(100)	1.0000
Market	-	-	-	-	
Corner shop	-	-	-	-	
Other	-	-	-	-	
Age group 55-64					
Supermarket	11	(79)	20	(95)	0.2655
Market	2	(14)	1	(5)	
Corner shop	1	(7)	-	-	
Other	-	-	-	-	

Figure 6.22a Continued

Source	1987		1988		Significance
Age group 65+					
Supermarket	22	(92)	15	(83)	0.4139
Market	1	(4)	2	(11)	
Corner shop	-	-	1	(6)	
Other	-	(4)	-	-	
Significance	0.1585		0.0045		

Figure 6.23

Response to "where do you do most of your shopping?" by households with and without children

Units: Number of respondents (%)

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Significance
Households with children					
Supermarket	64	(91)	33	(97)	0.6498
Market	3	(4)	1	(3)	
Corner shop	1	(2)	-	-	
Other	2	(3)	-	-	
Households without children					
Supermarket	76	(88)	79	(94)	0.4553
Market	8	(9)	3	(4)	
Corner shop	1	(1)	1	(1)	
Other	2	(2)	1	(1)	
Significance	0.6874		0.8348		

Figure 6.24

Response to "where do you do most of your shopping?" by size of household

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Source	1987		1988		Significance
Single person household					
Supermarket	6	(84)	22	(92)	0.4341
Market	2	(11)	1	(4)	
Corner shop	1	(5)	-	-	
Other	-	-	1	(4)	
Two person household					
Supermarket	37	(86)	39	(93)	0.2365
Market	3	(7)	2	(5)	
Corner shop	-	-	1	(2)	
Other	3	(7)	-	-	
Three person household					
Supermarket	29	(91)	20	(100)	0.4241
Market	3	(9)	-	-	
Corner shop	-	-	-	-	
Other	-	-	-	-	
Four person household					
Supermarket	35	(92)	21	(96)	0.7371
Market	2	(5)	1	(4)	
Corner shop	-	-	-	-	
Other	1	(3)	-	-	
Five or more person household					
Supermarket	21	(95)	10	(100)	0.4934
Market	1	(5)	-	-	
Corner shop	-	-	-	-	
Other	-	-	-	-	
Significance	0.3449		0.8418		

Figure 6.25

Response to "where do you supplement your food shopping?" by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Markets	4	(50)	5	(83)	0.5312
Corner shops	2	(25)	1	(17)	
Supermarkets other than regular	1	(13)	-	-	
other	1	(12)	-	-	
Socio-economic group C1					
Markets	19	(54)	16	(53)	0.4063
Corner shops	6	(17)	7	(23)	
Supermarkets other than regular	8	(23)	3	(10)	
other	2	(6)	4	(14)	
Socio-economic group C2					
Markets	21	(45)	23	(59)	0.0757
Corner shops	7	(15)	9	(23)	
Supermarkets other than regular	14	(30)	3	(8)	
other	5	(10)	4	(10)	
Socio-economic group DE					
Markets	26	(43)	19	(46)	0.6861
Corner shops	14	(23)	10	(24)	
Supermarkets other than regular	16	(26)	11	(27)	
other	5	(8)	1	(3)	
Significance	0.9409		0.2166		

Figure 6.26

Response to "where do you supplement your food shopping?" by Age Group

Units: Number of Respondents (%)

Sample: Age Group

16-24 years	n = 10 (1987)	5 (1988)
25-34 years	n = 46 (1987)	34 (1988)
35-44 years	n = 38 (1987)	22 (1988)
45-54 years	n = 24 (1987)	17 (1988)
55-64 years	n = 14 (1987)	21 (1988)
65 + years	n = 25 (1987)	19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Markets	3	(30)	3	(60)	0.5286
Corner shops	3	(30)	1	(20)	
Supermarket other than regular	4	(40)	1	(20)	
Other	-	-	-	-	
Age group 25-34					
Markets	24	(52)	14	(43)	0.0022
Corner shops	3	(7)	11	(33)	
Supermarket other than regular	14	(30)	2	(6)	
Other	5	(11)	6	(18)	
Age greoup 35-44					
Markets	18	(50)	12	(55)	0.8103
Corner shops	8	(22)	6	(27)	
Supermarket other than regular	6	(17)	3	(14)	
other	4	(11)	1	(4)	
Age group 45-54					
Markets	10	(42)	10	(59)	0.5213
Corner shops	8	(33)	3	(18)	
Supermarket other than regular	5	(21)	4	(23)	
other	1	(4)	-	-	

Figure 6.26 (continued)

Source	1987	1988	Significance
Age group 55-64			
Markets	4 (31)	13 (65)	0.1770
Corner shops	3 (23)	4 (20)	
Supermarket other than regular	5 (39)	2 (10)	
Other	1 (8)	1 (5)	
Age 65+			
Markets	12 (50)	1 (6)	0.6962
Corner shops	4 (17)	1 (6)	
Supermarket other than regular	6 (25)	5 (28)	
Other	2 (8)	1 (6)	
Significance	0.4820	0.2680	

Figure 6.27

Response to "where do you supplement your food shopping?" by households with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Significance
Households with children					
Markets	25	(36)	17	(50)	0.1188
Corner shops	13	(19)	10	(29)	
Supermarkets other than regular	22	(32)	5	(15)	
Other	9	(13)	2	(6)	
Households without children					
Markets	46	(54)	46	(56)	0.4981
Corner shops	16	(19)	17	(21)	
Supermarkets other than regular	19	(22)	12	(15)	
other	4	(5)	7	(8)	
Significance	0.0694		0.7624		

Figure 6.28

Response to "where do you supplement your food shopping?" by size of household

Units: Number of Respondents (%)

Sample: Size of household

1 person	n = 20 (1987)	24 (1988)
2 people	n = 43 (1987)	43 (1988)
3 people	n = 32 (1987)	20 (1988)
4 people	n = 38 (1987)	22 (1988)
5+ people	n = 22 (1987)	10 (1988)

Source	1987		1988		Significance
Single person households					
Markets	9	(47)	15	(63)	0.4455
Corner shops	2	(11)	5	(21)	
Supermarkets other than regular	7	(37)	2	(8)	
Other	1	(5)	2	(8)	
Two person households					
Markets	25	(58)	22	(54)	0.6427
Corner shops	6	(14)	10	(24)	
Supermarkets other than regular	10	(23)	7	(17)	
Other	2	(5)	2	(5)	
Three person households					
Markets	13	(41)	9	(47)	0.9441
Corner shops	7	(22)	3	(16)	
Supermarkets other than regular	9	(28)	5	(26)	
Other	3	(9)	2	(11)	
Four person households					
Markets	16	(43)	11	(50)	0.7393
Corner shops	8	(22)	6	(27)	
Supermarkets other than regular	7	(19)	2	(9)	
other	6	(16)	3	(14)	

Figure 6.28 (continued)

Source	1987	1988	Significance
Five or more person households			
Markets	7 (35)	6 (60)	0.4567
Corner shops	6 (30)	3 (30)	
Supermarkets other than regular	6 (30)	1 (10)	
Other	1 (5)	- -	
Significance	0.5559	0.8527	

Figure 6.29

Response to "do you use the same supermarket regularly?" by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

	1987		1988		Significance
Socio-economic group AB					
Yes	7	(88)	5	(83)	0.6923
No	1	(12)	1	(17)	
Socio-economic group C1					
Yes	30	(86)	26	(84)	0.8349
No	5	(14)	5	(16)	
Socio-economic group C2					
Yes	35	(76)	34	(90)	0.1908
No	11	(24)	4	(10)	
Socio-economic group DE					
Yes	52	(85)	34	(79)	0.4140
No	8	(15)	9	(21)	
Significance	0.6869		0.6553		

Figure 6.30

Response to "Do you use the same supermarket regularly?" by Age Group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

	1987		1988		Significance
Age group 16-24 years					
Yes	8	(80)	4	(80)	0.7582
No	2	(20)	1	(20)	
Age group 25-34 years					
Yes	40	(87)	28	(85)	0.7895
No	6	(13)	5	(15)	
Age group 35-44 years					
Yes	34	(92)	20	(91)	0.8957
No	3	(12)	2	(9)	
Age group 45-54 years					
Yes	21	(88)	13	(77)	0.6147
No	3	(12)	4	(23)	
Age group 55-64 years					
Yes	7	(63)	20	(95)	0.0581
No	3	(27)	1	(5)	
Age group 65+ years					
Yes	16	(67)	14	(74)	0.8703
No	8	(33)	5	(26)	
Significance	0.0165		0.3939		

Figure 6.31

Response to "Do you use the same supermarket regularly?" by housholds with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

	1987		1988		Significance
Households with children					
Yes	64	(91)	29	(88)	0.8327
No	6	(9)	4	(12)	
Households without children					
Yes	63	(76)		(82)	0.4034
No	20	(24)		(18)	
Significance	0.0349		0.6498		

Figure 6.32

Response to "Do you use the same supermarket regularly?" by size of household

Units: Number of respondents (%)

Sample: Size of household

1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

	1987		1988		Significance
Single person households					
Yes	10	(53)	19	(79)	0.1294
No	9	(47)	5	(21)	
Two person households					
Yes	34	(83)	34	(79)	0.8634
No	7	(17)	9	(21)	
Three person households					
Yes	26	(81)	17	(85)	0.7229
No	6	(19)	3	(15)	
Four person households					
Yes	35	(95)	20	(91)	0.9928
No	2	(50	2	(9)	
Five or more					
Yes	19	(91)	9	(100)	0.8731
No	2	(9)	-	-	
Significance	0.0007		0.4502		

Figure 6.33

Response to "How often do you shop for food?" by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Frequency of shopping

	1987		1988		Significance
Socio-economic group AB					
Every day	3	(38)	1	(17)	0.2966
2-3 times a week	4	(50)	2	(33)	
Once a week	1	(12)	3	(50)	
Once a fortnight	-	-	-	-	
Once a month	-	-	-	-	
Socio-economic group C1					
Every day	4	(11)	14	(13)	0.5121
2-3 times a week	13	(37)	16	(52)	
Once a week	11	(31)	9	(29)	
Once fortnight	5	(14)	1	(3)	
Once a month	2	(6)	1	(3)	
Socio-economic group C2					
Every day	8	(17)	6	(15)	0.7000
2-3 times a week	23	(48)	16	(41)	
Once a week	11	(23)	14	(36)	
Once a fortnight	3	(6)	1	(3)	
Once a month	3	(6)	2	(5)	
Socio-economic group DE					
Every day	8	(13)	9	(21)	0.2892
2-3 times a week	29	(46)	19	(44)	
Once a week	23	(36)	11	(25)	
Once a fortnight	3	(5)	2	(5)	
Once a month	-	-	2	(5)	
Significance	0.2748		0.9876		

Figure 6.34

Response to "How often do you shop for food?" by Age Group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Frequency of shopping

	1987		1988		Significance
Age group 16-24					
Every day	-	-	-	-	0.7003
2-3 times a week	5	(50)	3	(60)	
Once a week	4	(40)	1	(20)	
Once a fortnight	1	(10)	1	(20)	
Once a month	-	-	-	-	
Age group 25-34					
Every day	9	(20)	9	(27)	0.1918
2-3 times a week	10	(22)	12	(35)	
Once a week	19	(41)	12	(35)	
Once a fortnight	5	(11)	-	-	
Once a month	3	(6)	1	(3)	
Age group 35-44					
Every day	9	(24)	3	(14)	0.6459
2-3 times a week	14	(37)	11	(50)	
Once a week	11	(29)	7	(32)	
Once a fortnight	2	(5)	1	(4)	
Once a month	2	(5)	-	-	
Age group 45-54					
Every day	3	(13)	3	(18)	0.4413
2-3 times a week	14	(58)	7	(41)	
Once a week	5	(21)	3	(17)	
Once a fortnight	2	(8)	2	(12)	
Once a month	-	-	2	(12)	

Figure 6.34 (continued)

Frequency of shopping

	1987		1988		Significance
Age group 55-64					
Every day	1	(7)	2	(10)	0.3347
2-3 times a week	10	(71)	9	(42)	
Once a week	3	(22)	8	(38)	
Once a fortnight	-	-	-	-	
Once a month	-	-	2	(10)	
Age group 65+					
Every day	2	(8)	3	(16)	0.5635
2-3 times a week	17	(71)	11	(58)	
Once a week	4	(17)	5	(26)	
Once a fortnight	1	(4)	-	-	
Once a month	-	-	-	-	
Significance	0.0711		0.2801		

Figure 6.35

Response to "How often do you shop for food?" by houeholds with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Frequency of shopping

	1987		1988		Significance
Households with children					
Every day	12	(17)	7	(21)	0.7856
2-3 times a week	22	(32)	14	(41)	
Once a week	26	(37)	10	(29)	
Once a fortnight	7	(10)	2	(6)	
Once a month	3	(4)	1	(3)	
Households without children					
Every day	12	(14)	13	(15)	0.4137
2-3 times a week	48	(55)	39	(46)	
Once a week	20	(23)	27	(32)	
Once a fortnight	5	(6)	2	(2)	
Once a month	2	(2)	4	(5)	
Significance	0.0554		0.8000		

Figure 6.36

Response to "How often do you shop for food?" by size of household

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Frequency of shopping

	1987		1988		Significance
Single person households					
Every day	2	(11)	3	(13)	0.6172
2-3 times a week	13	(68)	13	(54)	
Once a week	4	(21)	8	(33)	
Once a fortnight	-	-	-	-	
Once a month	-	-	-	-	
Two person households					
Every day	5	(12)	5	(12)	0.4565
2-3 times a week	25	(58)	18	(42)	
Once a week	8	(18)	14	(32)	
Once a fortnight	3	(7)	2	(5)	
Once a month	2	(5)	4	(9)	
Three person households					
Every day	5	(16)	3	(15)	0.7176
2-3 times a week	14	(44)	12	(60)	
Once a week	10	(31)	3	(15)	
Once a fortnight	2	(6)	1	(5)	
Once a month	1	(3)	1	(5)	
Four person households					
Every day	6	(16)	7	(32)	0.3919
2-3 times a week	11	(29)	5	(23)	
Once a week	14	(37)	9	(41)	
Once a fortnight	5	(13)	1	(4)	
Once a month	2	(5)	-	-	

Figure 6.36 (continued)

Frequency of shopping

	1987		1988		Significance
Five or more person households					
Every day	5	(23)	2	(20)	0.5902
2-3 times a week	6	(27)	5	(50)	
Once a week	10	(46)	3	(30)	
Once a fortnight	1	(4)	-	-	
Once a month	-	-	-	-	
Significance	0.2410		0.3771		

Figure 6.37

Main sources of vegetables by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Supermarket	-	-	-	-	0.0924
Green Grocer	5	(63)	1	(17)	
Market	2	(25)	5	(83)	
Don't buy vegetables	1	(13)	-	-	
Socio-economic group C1					
Supermarket	7	(20)	9	(29)	0.3212
Green Grocer	14	(40)	7	(23)	
Market	13	(37)	15	(48)	
Don't buy vegetables	1	(3)	-	-	
Socio-economic group C2					
Supermarket	14	(29)	10	(26)	0.8596
Green Grocer	17	(35)	16	(41)	
Market	17	(35)	13	(33)	
Don't buy vegetables	-	-	-	-	
Socio-economic group DE					
Supermarket	16	(26)	7	(16)	0.6753
Green Grocer	24	(39)	20	(47)	
Market	20	(33)	15	(35)	
Don't buy vegetables	1	(2)	1	(2)	
Significance	0.3506		0.1941		

Figure 6.38

Main sources of vegetables by Age Group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Supermarket	3	(33)	2	(40)	0.7648
Green Grocer	3	(33)	1	(20)	
Market	2	(23)	2	(40)	
Don't buy vegetables	1	(11)	-	-	
Age group 25-34					
Supermarket	14	(30)	9	(27)	0.5390
Green Grocer	12	(26)	8	(23)	
Market	18	(39)	17	(50)	
Don't buy vegetables	2	(4)	-	-	
Age group 35-44					
Supermarket	9	(24)	4	(18)	0.3804
Green Grocer	15	(41)	13	(59)	
Market	13	(35)	5	(23)	
Don't buy vegetables	-	-	-	-	
Age group 45-54					
Supermarket	5	(21)	2	(12)	0.5703
Green Grocer	10	(42)	6	(35)	
Market	9	(37)	9	(53)	
Don't buy vegetables	-	-	-	-	
Age group 55-64					
Supermarket	2	(14)	6	(28)	0.3612
Green Grocer	7	(50)	5	(24)	
Market	5	(36)	9	(43)	
Don't buy vegetables	-	-	1	(5)	

Figure 6.38 (continued)

Source	1987		1988		Significance
Age group 65+					
Supermarket	4	(17)	3	(16)	0.9937
Green Grocer	14	(58)	11	(58)	
Market	6	(25)	5	(26)	
Don't buy vegetables	-	-	-	-	
Significance	0.4084		0.1858		

Figure 6.39

Main sources of vegetables by households with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

	1987		1988		Significance
Households with children					
Supermarket	17	(24)	6	(18)	0.7618
Greengrocer	27	(39)	14	(41)	
Market	25	(36)	14	(41)	
Don't buy vegetables	1	(1)	-	-	
Households without children					
Supermarket	21	(25)	20	(24)	0.7558
Greengrocer	34	(40)	30	(35)	
Market	28	(33)	34	(40)	
Don't buy vegetables	2	(2)	1	(1)	
Significance	0.9640		0.7964		

Figure 6.40

Main sources of vegetables by size of household

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

	1987		1988		Significance
Single person households					
Supermarket	1	(6)	4	(17)	0.7447
Greengocer	7	(38)	8	(33)	
Market	9	(50)	11	(46)	
Don't buy vegetables	1	(6)	1	(4)	
Two person households					
Supermarket	10	(23)	9	(20)	0.4302
Greengrocer	21	(49)	17	(40)	
market	11	(26)	17	(40)	
Don't buy vegetables	1	(2)	-	-	
Three person households					
Supermarket	12	(39)	6	(30)	0.4435
Greengocer	9	(29)	4	(20)	
Market	10	(32)	10	(50)	
Don't buy vegetables	-	-	-	-	
Four person households					
Supermarket	9	(24)	4	(18)	0.5534
Greengrocer	11	(29)	10	(46)	
Market	17	(45)	8	(36)	
Don't buy vegetables	1	(2)	-	-	
Five or more					
Supermarket	5	(23)	3	(30)	0.9068
Greengrocer	12	(54)	5	(50)	
market	5	(23)	2	(20)	
Don't buy vegetables	-	-	-	-	
Significance	0.1857		0.6435		

Figure 6.41

Main sources of bread by socio-econoic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Supermarket	1	(13)	4	(67)	0.0629
Baker	7	(88)	2	(33)	
Don't buy bread	-	-	-	-	
Socio-economic group C1					
Supermarket	24	(68)	24	(77)	0.5242
Baker	10	(29)	7	(23)	
Don't buy bread	1	(3)	1	(3)	
Socio-economic group C2					
Supermarket	22	(46)	26	(66)	0.1514
Baker	24	(50)	12	(31)	
Don't buy bread	2	(4)	1	(3)	
Socio-economic group DE					
Supermarket	31	(51)	29	(67)	0.2221
Baker	28	(47)	14	(33)	
Don't buy bread	1	(2)			
Signficance	0.0885		0.7963		

Figure 6.42

Main sources of bread by Age Group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Supermarket	7	(78)	3	(60)	0.4545
Baker	2	(22)	2	(40)	
Don't buy bread	-	-	-	-	
Age group 25-34					
Supermarket	26	(57)	24	(71)	0.2932
Baker	20	(43)	10	(29)	
Don't buy bread	-	-	-	-	
Age group 35-44					
Supermarket	18	(49)	19	(86)	0.7702
Baker	16	(43)	3	(14)	
Don't buy bread	3	(8)	-	-	
Age group 45-54					
Supermarket	16	(67)	12	(71)	0.0131
Baker	7	(29)	4	(23)	
Don't buy bread	1	(4)	1	(6)	
Age group 55-64					
Supermarket	2	(15)	14	(67)	0.9047
Baker	11	(85)	7	(33)	
Don't buy bread	-	-	-	-	
Age group 65+					
Supermarket	10	(42)	11	(58)	0.4532
Baker	14	(58)	8	(42)	
Don't buy bread	-	-	-	-	
Significance	0.0215		0.3783		

Figure 6.43

Main sources of bread by household with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Signficance
Households with children					
Supermarket	42	(60)	26	(76)	0.2315
Baker	26	(37)	7	(21)	
Don't buy bread	2	(3)	1	(3)	
Households without children					
Supermarket	38	(45)	57	(67)	0.0093
Baker	44	(52)	28	(33)	
Don't buy bread	2	(3)	-	-	
Significance	0.1665		0.1308		

Figure 6.44

Main sources of bread by size of household

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Source	1987		1988		Significance
Single person households					
Supermarkets	7	(39)	18	(75)	0.0412
Baker	11	(61)	6	(25)	
Don't buy bread	-	-	-	-	
Two person households					
Supermarkets	16	(37)	25	(58)	0.0841
Baker	27	(63)	18	(42)	
Don't buy bread	-	-	-	-	
Three person households					
Supermarkets	18	(58)	16	(80)	0.2370
Baker	12	(39)	4	(20)	
Don't buy bread	1	(3)	-	-	
Four person households					
Supermarket	26	(68)	16	(73)	0.8707
Baker	9	(24)	5	(23)	
Don't buy bread	3	(8)	1	(4)	
Five or more person households					
Supermarket	11	(52)	8	(80)	0.2795
Baker	10	(48)	2	(20)	
Don't buy bread	-	-	-	-	
Significance	0.0157		0.3.37		

Figure 6.45

Main sources of meat by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Supermarket	1	(13)	1	(17)	0.0606
Butcher	7	(87)	2	(33)	
Market	-	-	-	-	
Don't buy meat	-	-	3	(50)	
Socio-economic group C1					
Supermarket	8	(23)	14	(45)	0.0463
Butcher	22	(63)	9	(29)	
Market	1	(3)	3	(10)	
Don't buy meat	4	(11)	5	(16)	
Socio-economic group C2					
Supermarket	13	(28)	11	(28)	0.9844
Butcher	26	(55)	21	(54)	
Market	3	(6)	2	(5)	
Don't buy meat	5	(11)	5	(13)	
Socio-economic group DE					
Supermarket	18	(30)	11	(25)	0.8108
Butcher	29	(47)	24	(56)	
Market	9	(15)	6	(14)	
Don't buy meat	5	(8)	2	(5)	
Significance	0.3860		0.0377		

Figure 6.46

Main sources of meat by age group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Supermarket	6	(67)	1	(20)	0.1689
Butcher	2	(22)	3	(60)	
Market	1	(11)	-	-	
Don't buy meat	-	-	1	(20)	
Age group 25-34					
Supermarket	17	(37)	14	(41)	0.6912
Butcher	20	(43)	11	(32)	
Market	3	(7)	3	(9)	
Don't buy meat	6	(13)	6	(18)	
Age group 35-44					
Supermarket	11	(30)	7	(32)	0.2311
Butcher	18	(50)	12	(54)	
Market	2	(6)	2	(9)	
Don't buy meat	5	(14)	1	(5)	
Age group 45-54					
Supermarket	4	(17)	4	(23)	0.1697
Butcher	17	(71)	7	(41)	
Market	2	(8)	3	(18)	
Don't buy meat	1	(4)	3	(18)	
Age group 55-64					
Supermarket	1	(8)	7	(33)	0.1658
Butcher	9	(69)	9	(43)	
Market	2	(15)	1	(5)	
Don't buy meat	1	(8)	4	(19)	

Figure 6.46 (continued)

Source	1987		1988		Significance
Age group 65+					
Supermarket	1	(4)	3	(16)	0.9682
Butcher	18	(72)	12	(72)	
Market	3	(12)	3	(16)	
Don´t buy meat	3	(12)	1	(5)	
Significance	0.0430				

Figure 6.47

Main sources of meat by households with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Significance
Households with children					
Supermarket	17	(24)	14	(41)	0.1193
Butcher	44	(63)	14	(41)	
Market	2	(3)	3	(9)	
Don't buy bread	7	(10)	3	(9)	
Households without children					
Supermarket	23	(27)	23	(27)	0.8234
Butcher	41	(49)	42	(49)	
Market	11	(13)	8	(10)	
Don't buy bread	9	(11)	12	(14)	
Signficance	0.0994		0.4833		

Figure 6.48

Main source of meat by size of household

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Source	1987		1988		Signficance
Single person households					
Supermarket	3	(16)	7	(29)	0.2345
Butcher	12	(63)	11	(45)	
Market	-	-	3	(13)	
Don't buy meat	4	(21)	3	(13)	
Two person households					
Supermarket	12	(28)	12	(28)	0.3944
Butcher	20	(46)	23	(53)	
Market	8	(19)	3	(7)	
Don't buy meat	3	(7)	5	(12)	
Three person households					
Supermarket	13	(42)	8	(40)	0.4985
Butcher	13	(42)	6	(30)	
Market	2	(6)	4	(20)	
Don't buy meat	3	(10)	2	(10)	
Four person households					
Supermarket	8	(22)	7	(32)	0.2432
Butcher	24	(65)	9	(41)	
Market	2	(5)	1	(4)	
Don't buy meat	3	(8)	5	(23)	
Five or more person households					
Supermarket	4	(19)	3	(30)	0.7258
Butcher	15	(71)	7	(70)	
Market	1	(5)	-	-	
Don't buy meat	1	(5)	-	-	
Significance	0.0883		0.5067		

Figure 6.49

Main sources of fish by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Supermarket	-	-	2	(33)	0.0525
Fishmongers	7	(88)	1	(17)	
Market	-	-	1	(17)	
Don't buy fish	1	(12)	2	(33)	
Socio-economic group C1					
Supermarket	5	(14)	7	(23)	0.7078
Fishmongers	15	(43)	11	(37)	
Market	7	(20)	4	(13)	
Don't buy fish	8	(23)	8	(27)	
Socio-economic group C2					
Supermarket	11	(23)	6	(15)	0.6458
Fishmongers	22	(47)	19	(49)	
Market	3	(7)	5	(13)	
Don't buy fish	11	(23)	9	(23)	
Socio-economic group DE					
Supermarket	8	(13)	8	(19)	0.3281
Fishmongers	30	(50)	17	(39)	
Market	6	(10)	9	(21)	
Don't buy fish	16	(27)	9	(21)	
Significance	0.2664		0.8911		

Figure 6.50

Main sources of fish by Age Group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Supermarket	1	(11)	-	-	0.7015
Fish mongers	2	(22)	1	(20)	
Market	1	(11)	-	-	
Don't buy fish	5	(56)	4	(80)	
Age group 25-34					
Supermarket	10	(22)	5	(15)	0.8247
Fish monger	18	(39)	12	(36)	
Market	5	(11)	4	(12)	
Don't buy fish	13	(28)	12	(36)	
Age group 35-44					
Supermarket	5	(14)	4	(18)	0.2079
Fish monger	18	(50)	9	(41)	
Market	2	(6)	5	(23)	
Don't buy fish	11	(30)	4	(18)	
Age group 45-54					
Supermarket	3	(13)	6	(35)	0.2090
Fish monger	9	(37)	3	(18)	
Market	5	(21)	5	(29)	
Don't buy fish	7	(29)	3	(18)	
Age group 55-64					
Supermarket	-	-	5	(24)	0.0180
Fish monger	13	(100)	10	(48)	
Market	-	-	2	(10)	
Don't buy fish	-	-	4	(19)	

Figure 6.50 (continued)

Source	1987		1988		Significance
Age group 65+					
Supermarket	5	(21)	3	(16)	0.9682
Fish monger	15	(62)	12	(63)	
Market	3	(13)	3	(16)	
Don't buy fish	1	(4)	1	(5)	
Signficance	0.0087		0.0408		

Figure 6.51

Main sources of fish by households with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Significance
Households with children					
Supermarket	12	(17)	7	(21)	0.9557
Fish monger	27	(39)	13	(40)	
Market	8	(12)	3	(9)	
Don't buy fish	22	(32)	10	(30)	
Households without children					
Supermarket	12	(14)	16	(19)	0.1843
Fish monger	48	(57)	35	(41)	
Market	9	(11)	16	(19)	
Don't buy fish	15	(18)	18	(21)	
Significance	0.1192		0.5085		

Figure 6.52

Main sources of fish by size of households

Units: Number of respondents (%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Source	1987		1988		Significance
Single person households					
Supermarket	2	(11)	3	(12)	0.4077
Fish monger	14	(74)	12	(50)	
Market	2	(11)	5	(21)	
Don't buy fish	1	(4)	4	(17)	
Two person households					
Supermarket	9	(21)	9	(21)	0.7650
Fish monger	23	(53)	19	(44)	
Market	5	(12)	8	(19)	
Don't buy fish	6	(14)	7	(16)	
Three person households					
Supermarket	5	(16)	4	(21)	0.0761
Fish monger	12	(39)	4	(21)	
Market	1	(3)	5	(26)	
Don't buy fish	13	(42)	6	(32)	
Four person households					
Supermarket	5	(13)	3	(14)	0.7465
Fish monger	17	(46)	9	(41)	
Market	4	(11)	1	(4)	
Don't buy fish	11	(30)	9	(41)	
Five or more person households					
Supermarket	3	(15)	4	(40)	0.2773
Fish monger	8	(40)	4	(40)	
Market	4	(20)	-	-	
Don't buy fish					
Significance	0.1392		0.2090		

Figure 6.53

Main source of milk by socio-economic group

Units: % Respondents

Sample: Socio-economic groups
AB n = 8 (1987) 6 (1988)
C1 n = 35 (1987) 31 (1988)
C2 n = 48 (1987) 39 (1988)
DE n = 64 (1987) 43 (1988)

Source	1987		1988		Significance
Socio-economic group AB					
Supermarket	3	(38)	2	(33)	0.6573
Milkman	5	(62)	4	(67)	
Don't buy milk	-	-	-	-	
Socio-economic group C1					
Supermarket	9	(26)	7	(23)	0.5970
Milkman	25	(71)	24	(77)	
Don't buy milk	1	(3)	-	-	
Socio-economic group C2					
Supermarket	7	(15)	13	(33)	0.0955
Milkman	39	(83)	26	(67)	
Don't buy milk	1	(2)	-	-	
Socio-economic group DE					
Supermarket	11	(18)	11	(26)	0.3155
Milkman	49	(82)	31	(72)	
Don't buy milk	-	-	1	(2)	
Significance	0.5554		0.8156		

Figure 6.54

Main source of milk by Age group

Units: Number of respondents (%)

Sample: Age Group
16-24 years n = 10 (1987) 5 (1988)
25-34 years n = 46 (1987) 34 (1988)
35-44 years n = 38 (1987) 22 (1988)
45-54 years n = 24 (1987) 17 (1988)
55-64 years n = 14 (1987) 21 (1988)
65 + years n = 25 (1987) 19 (1988)

Source	1987		1988		Significance
Age group 16-24					
Supermarket	5	(56)	2	(40)	0.5000
Milkman	4	(44)	3	(60)	
Don't buy milk	-	-	-	-	
Age group 25-34					
Supermarket	15	(33)	11	(32)	0.4625
Milkman	29	(63)	23	(68)	
Don't buy milk	2	(4)	-	-	
Age group 35-44					
Supermarket	3	(8)	4	(18)	0.4828
Milkman	33	(92)	18	(82)	
Don't buy milk	-	-	-	-	
Age group 45-54					
Supermarket	4	(17)	5	(29)	0.5563
Milkman	20	(83)	12	(71)	
Don't buy milk	-	-	-	-	
Age group 55-64					
Supermarket	-	-	7	(33)	0.0392
Milkman	13	(100)	13	(62)	
Don't buy milk	-	-	1	(5)	
Age group 65+					
Supermarket	4	(17)	4	(21)	0.7136
Milkman	20	(83)	15	(79)	
Don't buy milk	-	-	-	-	
Significance	0.0093		0.6938		

Figure 6.55

Main sources of milk by households with and without children

Units: % Respondents

Sample: Households with children n = 70 (1987) 34 (1988)
Households without children n = 87 (1987) 85 (1988)

Source	1987		1988		Significance
Households with children					
Supermarket	10	(15)	5	(15)	0.7797
Milkman	58	(84)	29	(85)	
Don't buy milk	1	(1)	-	-	
Households without children					
Supermarket	21	(25)	28	(33)	0.5223
Milkman	62	(74)	56	(66)	
Don't buy milk	1	(1)	1	(1)	
Significance	0.2738		0.1006		

Figure 6.56

Main sources of milk by size of household

Units: Number of respondents(%)

Sample: Size of household
1 person n = 20 (1987) 24 (1988)
2 people n = 43 (1987) 43 (1988)
3 people n = 32 (1987) 20 (1988)
4 people n = 38 (1987) 22 (1988)
5+ people n = 22 (1987) 10 (1988)

Source	1987		1988		Significance
Single person housholds					
Supermarket	10	(53)	14	(58)	0.5769
Milkman	9	(47)	9	(38)	
Don't buy milk	-	-	1	(4)	
Two person households					
Supermarket	7	(16)	12	(28)	0.2783
Milkman	35	(82)	31	(72)	
Don't buy milk	1	(2)	-	-	
Three person households					
Supermarket	5	(16)	2	(10)	0.8381
Milkman	26	(84)	18	(90)	
Don't buy milk	-	-	-	-	
Four person households					
Supermarket	7	(19)	2	(30)	0.5216
Milkman	30	(81)	20	(91)	
Don't buy milk	-	-	-	-	
Five or more person households					
Supermarket	1	(5)	3	(30)	0.1391
Milkman	18	(90)	7	(70)	
Don't buy milk	1	(5)	-	-	
Significance	0.0134		0.0032		