

PARENTAL HEALTH BELIEFS AND RESPIRATORY ILLNESS  
CONSULTATIONS AT GENERAL PRACTITIONERS, IN  
MULTI-ETHNIC AND MULTI-CULTURAL AREAS.

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For Mary and Colin



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ABSTRACT

This research was concerned with how parents from different ethnic groups manage their children's respiratory and febrile illnesses, and their consultations at the general practitioner (GP).

A review of the few British studies looking at parental health behaviour revealed that parents are continually having to make complex decisions, in which the clinical characteristics of the illness and the behaviour of the child are the most important factors in predictions of what the parent will do.

Despite the belief among some GPs that their Asian patients consult more often and for trivial illnesses, we predicted that consultations, however many there are, will reflect rational decisions on the part of the parents. What may appear trivial to a doctor may not be for a parent.

Including our pilot studies, we interviewed parents of 159 children - aged between two and eleven years - from three general practices in the inner-city area of Leeds. These parents were either white and indigenous, Muslims, Sikhs or Afro-Caribbeans; and approximately half of the children had been taken to see the doctor in the previous fortnight with a respiratory/febrile complaint, whereas the other half had not been to see a doctor for at least four months.



The interviews covered sociodemographic information about the families, the parents' beliefs about, and perceptions of, their children's respiratory and febrile illness, a description of the most recent episode of such an illness in the target child, and their satisfaction with the practice and its staff.

Chi-square analyses revealed that parents from Sikh and Muslim groups consulted the GP more often than white or Afro-Caribbean parents for respiratory and febrile illnesses, which are potentially more threatening diseases to people from the Indian sub-continent. Multivariate statistical techniques allowed us to demonstrate that health beliefs which differed between the ethnic groups did inevitably shape the way parents managed these illnesses, but that ultimately the severity of the illness and the behaviour of the child were the most powerful determinants of when a parent would consult a medical practitioner - for all ethnic groups.

One of the main implications of this research is that the practice of medicine, and primary health care in particular, must consider ethnicity and cultural experiences before it can operate as a fully effective service.



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Notes on the text

- \* In the text, when mentioning the progress of the research, I alternate between 'I' and 'we' when describing the actor(s). This is deliberate. My supervisor was involved with this research at every stage, and I have tried to use 'we' whenever I recall a joint decision being taken. Having said that, any omissions or errors in the text are entirely my responsibility.
  
- \* When I have quoted parents in the text, they have ended with a code; for example "ACM14". This code holds three pieces of information. The first two letters, in this case, represents the ethnic group Afro-Caribbean. The third letter explains that it was the mother who said it, as opposed to the father; and the number is the number of the family interviewed. "SF82" would refer to something said by a Sikh father who was a member of the eighty-second family interviewed.



## CHAPTER 1. An Introduction and a Review of the Literature

In Newcastle, in the year 1978/79, the division for general practice, the department of child health and the health care research unit, all at Newcastle University, were awarded a DHSS grant to jointly study 'standards and performance in general practice' (see for example Irvine et al, 1986). One of the main concerns of this working group was the health and health-care of children, in the North of England. The research I will describe in this dissertation, which was carried out in Leeds and at the Department of Psychology at the University of Leeds, is linked to that large study in Newcastle.

In 1987, Sally Wyke submitted her Ph.D., which was also linked to the larger Newcastle based study and which, unlike the larger study which concentrated on the behaviour of doctors, looked at the reasons why parents consult general practitioners. Those reasons I will be returning to at various stages of this review, and it is to that research which this study is most closely linked.

Wyke (1987) was primarily interested in how parents respond to, and manage, their children's illnesses; and her research was carried out in a culturally uniform community; they were white, indigenous people of the North of England. In our research we wanted to expand this data-base into multi-ethnic and multi-cultural communities. We were particularly interested in the different beliefs which



parents have regarding their children's illnesses and how these beliefs influence their subsequent health behaviour, in particular the use of General Practitioner (GP) services.

An understanding of the health beliefs, attitudes and perceptions of the people using the services are vitally important to an understanding of why people use the services in the way they do; yet most of the knowledge we have concerning utilization has focused on more general patterns of attendance at health services, without really attending to the more specific things which affect the daily lives of families, and their management of illness.

So we planned a research programme, similar in many respects to that of Wyke, which would take us to the parents attending general practices in the multi-ethnic areas of Leeds, where we could ask them about their children's health and health care and their own personal health beliefs. Essentially we were involved in the relatively new area of 'health psychology'.

### 1.1 The layout of the literature review

The recognition of disease or illness by the 'lay-person' and subsequent reactions to that perception form a substantial component of human behaviour. It is not surprising that various professionals have tried to understand these processes which people go through, in attempts to make future predictions about health behaviour. The provision of good services can only really come about



when health professionals know why the 'user' is there in the first place. In this introduction and review, I will begin by looking at the emergence of health psychology as an approach within the study of health behaviour. I will then move on to look at some of the more established theories concerning health behaviour and at the 'health belief models' which have emerged in the past two decades; and at the psychological, social and cultural factors which play a quite complex part in the definitions of illness and illness behaviour.

A large part of the review will then be concerned with general factors which can influence the way in which people manage illness and use the health services, with most emphasis on the situation in Britain. Much of the literature is drawn from fields outside of psychology, in medicine, sociology and anthropology. Our task is to relate this highly relevant material to our own study of parental health beliefs and behaviour. The general factors are:

1. Inequalities in health, and the unequal distribution of health services.
2. Race, ethnicity and culture: aspects of health and health-care.
3. The doctor-patient relationship - communication, compliance and satisfaction.

The penultimate component of this chapter will introduce some of the large amount of literature on childhood respiratory illness. As did Wyke (1987), we decided to concentrate on asking the parents about their management of



these illnesses which make up a large proportion of the GP's caseload (Modell & Boyd, 1982). The extent of respiratory morbidity and its implications for later life will be discussed, once again in the context of the population we were to focus on.

Finally, the sections I decided to retain to the end of this chapter introduce research which has more specific relevance to this study. They describe how parents perceive and manage their children's illnesses, including the utilization of health services. I decided to introduce these topics towards the end because the various themes described beforehand will all influence parental behaviour to some extent.

## 1.2 Health Psychology, health beliefs and health behaviour

"Health psychology is the aggregate of the specific educational, scientific and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and the treatment of illness, the identification of etiologic and diagnostic correlates of health, illness and related dysfunction, and the analysis and improvement of the health care system and health policy."  
(Matarazzo, 1982)

The problem which health psychologists have had to face in the ten years which have elapsed since the inception of the first health psychology division - that of the American Psychological Association - is the lack of a common framework for achieving these goals suggested by Matarazzo. The psychological perspective in the field of health psychology appears to be in danger of being swallowed up the



huge field of medicine, in which psychologists have become specialists in particular areas, with no shared theory or method of application (Marteau & Johnston, 1987; Johnston, 1988).

In the last five years health psychology has emerged as a distinct discipline in Europe, with the result of renewing the effort to try to establish objectives and methods which will give the field a more distinct psychological perspective (Maes, 1988). In 1985, Krantz et al distinguished three possible relationships between behaviour and health: (a) Behaviour may have direct physiological effects on health; (b) unhealthy life-styles and behaviours may endanger health, and (c) the way in which people perceive and cope with illness may affect their health.

As I mentioned above, the lack of any shared theoretical perspective has led to a breakdown in communication between researchers and professionals in these three areas. This problem has been exacerbated by an imbalance in funding for research in the three areas. The first relationship, (a), takes psychologists into hospitals where they work with medical researchers studying, for example, heart disease, high blood pressure and cancers. The unhealthy behaviours in (b) are often the abuse of legal drugs, such as alcohol and tobacco, and the stress of the 'fast' life-style in Western nations. These two areas have been relatively well attended to by psychologists, highlighting the relationship between health and behaviour. Lucrative research contracts have been available, the



primary source of funding being from multinational drug companies.

The last of this trichotomy, (c), has been given less attention. It is this behaviour-health relationship which our research was particularly interested in; with parental behaviour being linked to parental attitudes, perceptions and beliefs regarding health and health-care.

Despite this, there has been one 'path' of research which has devoted itself to the particular relationship between beliefs and health behaviour.

#### 1.2.1 Health belief models and health behaviour

People become ill and go to the doctor where they get treatment for their illness. Yet not everyone goes to the doctor and not everyone gets better after seeing the doctor. Also, it seems, not everyone gets ill - at least not in the same way. In the past two decades, a growing body of research has attempted to understand the processes involved in the decisions which people make about health and health-care. Psychologists became involved, relying to a certain extent on the work of Lewin (1935) concerning motivation and goal-setting.

Sociologists had good input because, as they argued, this kind of research needed an in-depth knowledge of the social, as well as the psychological, components of the people being observed and manipulated. Mechanic (1961) defined illness behaviour as "the way in which given



symptoms may be differentially perceived, evaluated, and acted (or not acted) upon by different kinds of persons." (p.190).

Anthropologists pointed out that this kind of work needed a specialized knowledge of the different racial and cultural health belief systems. Social policy experts provided valuable input concerning the services available to be used and the policy changes which affect utilization. Of course, medically trained researchers were very much involved in this kind of research arguing that behaviour will be strongly influenced by the type of illness and symptoms experienced.

Taken as a whole - and like other fields dealing with socio-psychological phenomenon - there is little agreement among the professionals and research workers concerning the best way to monitor illness behaviour.

One of the first attempts to do so from a socio-psychological base, as opposed to a medical one, was by Mechanic (1959). He suggested that a given illness has certain characteristics which hold particular meaning for the sick person, and to a lesser extent those around him or her. Initially four characteristics were mentioned:

1. The frequency with which the illness occurs in a given population, ie. its commonality.
2. The relative familiarity of the symptoms among the social group.
3. The relative predictability of the outcome of the illness.
4. The amount of threat and loss which is likely to result from the illness (Mechanic, 1959).



The main feature of this original formulation - and possibly the reason that it did receive a lot of support - was that it made the case that individuals tended to perceive illness differently; and their perceptions would influence their subsequent behaviour with respect to the illness. In fact, what it did do was to set people thinking about the various processes involved in the decisions people make about their health and the pathways they choose when they perceive a breakdown in their normal functioning.

Zola (1973) points out that most studies to that date suffered from inadequate attention to these very processes. The attention of the researchers had been given to individuals who were already in contact with the services, that is, what happens to the individual subsequent to the reporting of the illness; and little was known about the dynamics of the initial decision to consult the services (Zola, 1973).

More recently, Marteau and Johnston (1987) pointed out that research of this nature needed to take account of the psychology of the people involved, arguing that health behaviour is influenced by rationally based decisions. If left to the medical profession, we would have two categories of health and illness behaviour: Compliant and non-compliant (Marteau and Johnston (1987)).

The result of this attention by sociologists and psychologists to health beliefs was the emergence of 'health belief models' in the latter part of the 1960's. One of the



most commonly used - particularly for health and illness in the above classification of Mechanic's (1959) - was the one developed by Rosenstock (1966), and subsequently expanded by Becker (1974). The model is based on two classes of variables:

1. The person's psychological readiness to take specific action.
2. The extent to which a specific course of action is believed to be beneficial (Rosenstock, 1966).

Thus, it involves a calculus of utility based on the perception of threat and the efficacy of the means to reduce it. Rosenstock (1966) suggests four variables that affect the process of decision:

1. The person's perceived susceptibility to a particular threat.
2. The perceived seriousness of the threat.
3. The perceived benefits of taking action.
4. The perceived costs or barriers to taking action.

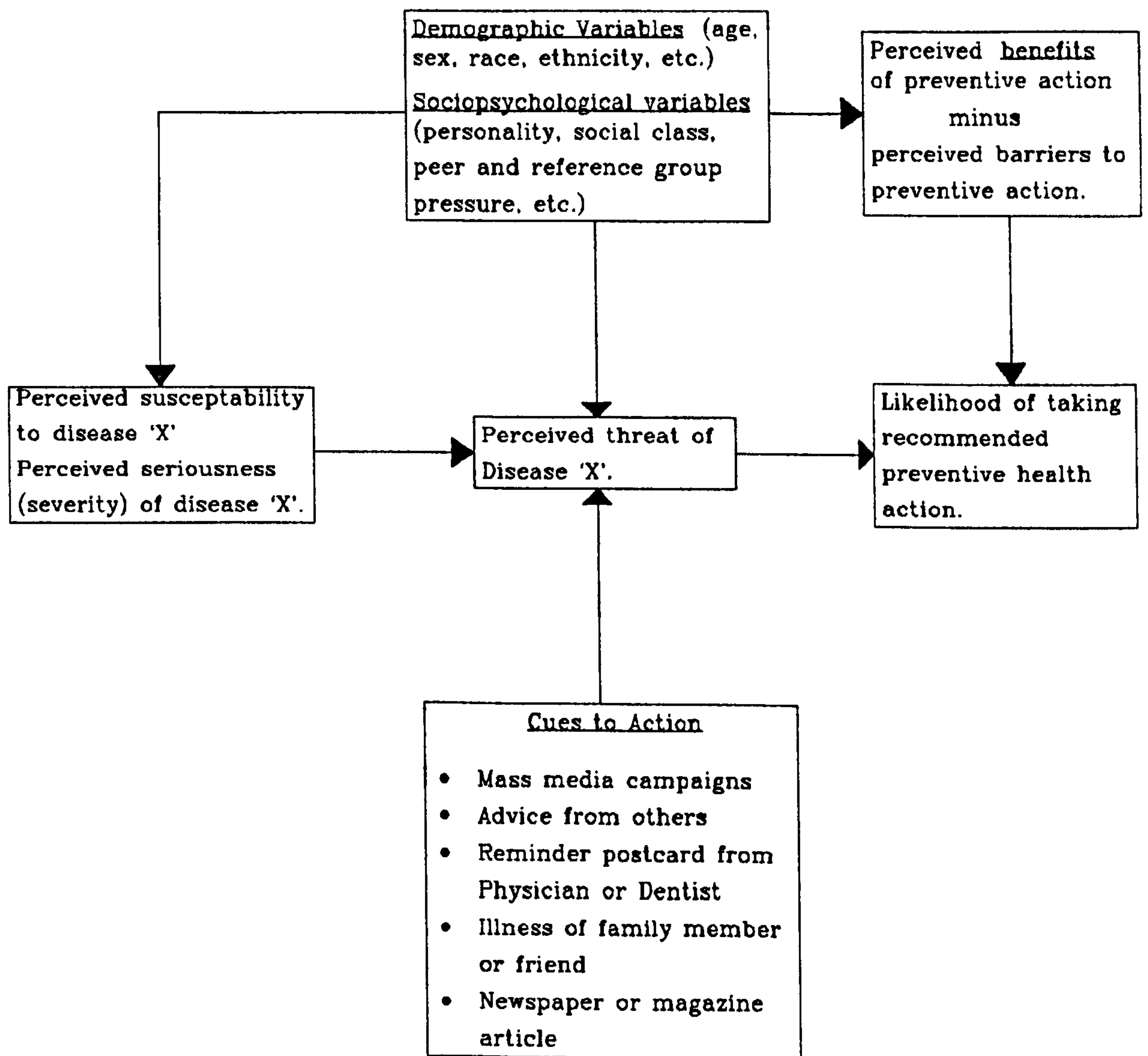
In addition to these four variables, Rosenstock included a further class of variables which he called "cues to action". These cues were situational factors which triggered behaviour at a particular time, for example mass media campaigns, or the illness of another family member.

In the early 1970's there was a noticeable increase in the emphasis on preventive health behaviour, particularly in the United States, and Becker's (1974) expansion to the model was a product of this change. It included two other



Figure 1a. The 'Health Belief Model' as predictor of preventive health behaviour.

INDIVIDUAL PERCEPTIONS      MODIFYING FACTORS      LIKELIHOOD OF ACTION



From Becker & Maiman (1975).



sets of variables which were more a stable part of the person's life. These were social and demographic characteristics, such as age, sex and ethnicity, and, what they called socio-psychological variables, such as personality, social class and peer groups (Figure 1a.).

This 'health belief model' has probably been the most extensively used in studies of physician utilization and originally it was felt that it would go some way to explaining the variation among the population in their uptake of preventive services, such as immunizations, attendance at screenings and dental check-ups. Yet it has had very little predictive success in any of the wide variety of situations in which it has been used.

A recent paper compared three of the main health belief and behaviour models to predict changes in smoking, exercise and consumption of sweet and fried foods (Mullen et al, 1987). They looked at the model conceived by Becker (1974); at one conceived by Fishbein and Ajzen (1975) called the 'theory of reasoned action'; and a model developed by Green (1974) called PRECEDE.

The 'theory of reasoned action' attempts to predict health behaviour through the decisions which people make based on intentions and attitudes. It is a theory which has had some success in predicting behaviour when the time frame is relatively short and the intent or attitude is clearly specified (Mullen et al, 1987), but it provides little room for emotional and fear-arousal elements such as perceived susceptibility to illness.



PRECEDE is an acronym for 'predisposing, reinforcing, and enabling constructs in educational diagnosis and evaluation'. This framework was developed by Green for evaluating health education programmes, and it differs from many of the other health-behaviour models in that it focuses on all behaviour which is related to health, not just behaviour directed towards health-care. PRECEDE was actually an extension of an older model which was developed with the purpose of predicting the utilization of health-care services (Anderson, 1968). This model (PRECEDE) has a largely heuristic framework which tends to subsume the health-belief model of Becker within it.

In the comparison of the three models, PRECEDE explained more variance for most of the dependent variables, which wasn't surprising as the number of variables used was actually three times that of the health belief model of Becker. The health belief model with the fewest questions was more powerful as a predictor than the Fishbein/Ajzen, and the authors concluded that it would probably be expedient to consider improving the health belief model by adding 'behavioural intention', 'self-efficacy' and 'social network', since none of the three models explained a great deal of the variation in behaviour patterns (Mullen et al, 1987).

Mechanic (1979b) took a closer look at the reasons for the particularly bad performance of these models at predicting behaviour. In this paper, his main contention was that the more common, large, multivariate studies found very



trivial psychosocial and organizational effects, in comparison to the smaller, qualitative studies, which have found any number of links in the decision to use the health services (for example, Kasl & Cobb, 1966a; Robinson, 1971; Mechanic 1978a). The larger, cross-sectional studies use more general measures, since it is usually their intention of covering a larger area. The smaller scale, illness-behaviour studies are by their nature more qualitative, gathering information in more intensive interviews, and paying closer attention to detail. As King (1984) points out, health beliefs can be highly idiosyncratic and vary according to somewhat spurious events. For example, there's the 'my mother smoked thirty a day and lived to be a hundred' syndrome. Also the influence of the media can be very strong (King, 1984), with the recent AIDS scare being a good example of a subject 'overkilled' by the media, to the extent where people become quite fatalistic about their health.

McKinlay (1972) in his very comprehensive review of the literature on health care utilization, suggests that it is a failure to distinguish between the many different types of service that is the source of the conflicting findings on utilization behaviour. He points out that he himself has shown "that different groups may utilize similar sources for entirely different reasons, or, given the same need, may turn to different services." (McKinlay, 1970c; p.120). He admits, though, that this is much more of a problem in the United States where affluence plays a major role in the type



of service used.

Berkanovic et al (1981) appeared to take the views of McKinlay and Mechanic on board. In their study they argued that the cross-sectional approach to service use was not necessarily the problem, but instead the low explanatory power of many of these studies was due to methodological difficulties. They presented data from a one year longitudinal Los Angeles health survey and made the point that their method differed from most of the other research in this area in two important aspects: i) They examined a multitude of factors which might affect the decision to seek medical care, instead of just one or two. So, simultaneously they observed (a) need, (b) social structure, (c) organization of care, (d) general social network patterns and health orientations and (e) social network influences and personal beliefs specific to the symptoms. ii) They examined whether an individual who recognizes her- or himself to be symptomatic, voluntarily initiates a visit to the doctor. Previous, large-scale quantitative research had tended to focus on overall consulting levels, whereas this study focused on one particular illness episode. With this method they were able to explain fifty-seven percent of the variance in the decision to seek medical care, which is almost three times that of the studies reviewed by Mechanic (1979b).

Particularly interesting was the finding that network influences and personal beliefs specific to the symptoms accounted for forty-two percent of the variance. These



network influences included the family and other members of the community, close to the individual. The personal beliefs specific to the symptoms tended to vary quite considerably across quite small communities and led the authors to conclude that "the allocation of the explained variance among the predictor variables raises some disturbing questions regarding our ability to understand the decision to use health services." (Berkanovic, Telesky & Reeder, 1981. p.693).

Perhaps what they really meant by this conclusion is that understanding will not come about by throwing age, sex, ethnic origin and a leaflet about AIDS into a multivariate analysis of the consulting levels of the greater Los Angeles population and acting on what comes out. Instead, what is needed is a more qualitative approach to the study of health and illness behaviour - to look at the meaning of the illness to the individual at that particular time and within specific social and cultural networks.

The development of models of health beliefs and how they can predict behaviour has been an extremely informative exercise, mainly because they have illustrated the complexities involved in human health behaviour and the difficulties experienced when trying to make predictions.

Kasl (1977) suggested that it might be useful to classify behaviour pertaining to health into three categories, in order to gain a clearer understanding:



1. **Illness behaviour.** This takes place in the presence of symptoms which affect the person's health, and the behaviour is directly related to those symptoms.
2. **Health behaviour.** This is preventive and takes place in the absence of symptoms. The key issues here are the effects of health education programmes and the cues or triggers for action at particular times.
3. **Sick-role behaviour.** This involves longer contact with health professionals and is most easily distinguishable from the other two because of the person's partial or total withdrawal from usual social roles.

This tripartite classification has proved to be quite useful, particularly for health professionals and researchers who had previously tended to group all three types of behaviour together, and to approach the study of them as if they were part of the same behaviour.

Under this classification the area we were specifically interested in with our research was 'illness behaviour': People developing symptoms, becoming unwell and making decisions about what they should do about it.

### 1.3 Illness Behaviour

The study of illness behaviour has been neglectful of some important issues. This fault lies primarily with the Western medical systems' preoccupation with biological systems. So much so that the contribution of the medical profession, in Britain and the U.S. particularly, has been almost exclusively to 'disease behaviour'.

The biomedical orientation of our health care system has concentrated on the treatment of diseases. This has led



to the somewhat strange situation whereby it is possible to feel 'ill' without having an identifiable disease, in biomedical terms, and to have a biomedically-defined disease without feeling ill (Fabrega, 1975; Eisenberg, 1977). In Cassall's (1976) view, illness has become what the patient feels when s/he goes to the doctor, and disease has become what s/he has on the way home; illness is something a person has and disease is something an organ has. Yet it is evident that this distinction is almost completely meaningless, since the disease (if one exists) is part of the illness.

The concentration of medicine on biological systems has led to research being dominated by the goal of eliminating diseases. Pharmaceutical conglomerates pour money into research contracts which are established to combat 'diseases'. We now have many more drugs than identifiable diseases. This concentration on 'disease' rather than 'illness' has led to a problem for treatment of illnesses which originate and develop psychologically and sociologically, as well as biologically.

It is often assumed that disease unlike illness, is founded on immutable fact - presumably because the medical profession have drugs to treat diseases. Yet, as Fitzpatrick (1986) points out, the concept of disease is also socially determined. Representatives from the Royal College of General Practitioners collect statistics for the Office of Population Censuses and Surveys (OPCS) on sicknesses reported to GPs; and their classifications demonstrate that the basic classifications of medicine are quite heterogenous



in form, and knowledge about them varies in character (Fitzpatrick, 1986). This is obviously because much of the the GPs caseload is concerned with illnesses which have no obvious organic pathology.

The unnatural separation of 'disease' from 'illness' has removed our present-day practitioners from their traditional healing roles, in which 'illness' is a holistic term for suffering and which incorporates 'diseases'. This is probably best reflected when comparing allopathic medical practices with more traditional healing methods. Kleinman (1980) and Young (1983) suggest that 'healing' addresses more directly the distress or anxiety felt by the patient or the patients' family in relation to a sickness episode. In modern clinical medicine "...healing is an embarrassing word. It exposes the archaic roots of medicine and psychiatry... It suggests how little we really know about the most central function of medical care" (Kleinman, 1980; p.312).

Another problem created by the curative approach to health is a preoccupation with the type of problems which are brought to the doctor. Relatively little research has been devoted to the much greater proportion of illnesses which actually go completely unnoticed by the medical profession. Cartwright (1967) pointed out more than two decades ago that a very small proportion of illnesses and symptomatology actually end up in front of a medical practitioner. Consultations do appear to represent the 'tip of the iceberg' and a full understanding of illness behaviour must, of course, give attention to what lies under



the surface.

In more recent years the balance of the research into illness behaviour has been tipped slightly back as more psychologists, sociologists and anthropologists have become involved in areas pertaining to health and health-care, in an attempt to understand what goes on outside medical establishments:

"There is an intimate relationship... between questions of health and illness and the values and priorities of a particular society, social group or individual. Thus, it is essential to consider what health and illness mean to the people involved in any illness situation and what are the implications for themselves or others of 'being ill' and occupying the social position of patient. Only by attempting to understand what such things mean to the people involved can we say why 'a person' becomes 'a patient' and why one person with a particular illness condition consults about it when another person with apparently the same condition does not." (Robinson, 1973. p.36).

I will argue, like Robinson, that when a person is called 'ill', or calls herself ill, this has psychological and social implications, as well as biomedical ones. This is even more the case today in the Western, industrialized nations where the decline in the prevalence of infectious diseases has meant that the health status of society has come to reflect more strongly the behavioural and social factors involved.

Our next task is to look at these psycho-social variables and to look at the evidence for some of the 'folk' systems of illness definition and behaviour.



### 1.3.1 How laypeople define illness

Although illness behaviour is sensitive to more ephemeral situational factors, both it and illness beliefs are influenced by the society or culture which the ill person is part of. At the extreme end of this argument there is evidence that pain itself is culturally modulated (see Mechanic (1978) for examples). Certainly in terms of reactions or behaviour towards pain, culture plays a very important role (Zborowski, 1952). In this interesting study of different ethnic groups living in New York, Zborowski concluded that Americans of Italian origin were primarily concerned with the immediacy of the pain experience; Jewish Americans, however, emphasized the symptomatic meaning of the pain ("disease threat"); and 'old-stock' Americans, while also exhibiting future-oriented anxiety (i.e. "disease threat"), were relatively more optimistic.

Symptoms themselves are also modulated by a society or culture (Good & Good, 1981) and illness tends to be expressed in terms of whether the symptoms are normal or abnormal (Davis, 1963). For example, in our society in the U.K. the symptoms of the common cold are normal, particularly in winter. The different cold viruses which cause us to have runny noses and to sneeze have been adapted to by the indigenous people, and so there really has to be something abnormal about the symptoms and their persistence, to elicit a consultation with a medical professional. Severity of symptoms is important, but by no means the only



determinant of the decisions people make regarding their illnesses.

Various sub-groups within society will also have different ways of interpreting and responding to symptoms. If we take a sub-group of heavy smokers, as Wyke (1987) points out, a persistent cough will more than likely not be construed as an illness, but, instead, as normal. In their study of three generations of working-class women in Scotland, Blaxter and Paterson (1982) discovered some very different ways of construing illness and normalizing symptoms. The older women would often normalize their chronic conditions, that is, to dismiss the possibility that they were illnesses since they had become so used to their presence. Normalization of illness was very common with these poor families, even for children: "The type of things that 'people like us' could expect to suffer in large families." (Blaxter & Paterson, 1982. p.31).

In fact, the decisions which people make about their illnesses can be quite complex and unpredictable. Zola (1964; 1966) found that Italian-Americans seek aid when the symptoms interfere with social and personal relations - what he called "perceived social severity". Whereas Irish-Americans take health action after having obtained the approval of others ("social support/pressures"). On the other hand Americans of Anglo-saxon origin will visit a doctor after the symptom interferes with particular physical or volitional activities; more similar to the Italians than the Irish. (N.B. The wider area of race/ethnicity/culture,



health and health care will be discussed in a later section, with particular emphasis on the English condition).

Zola (1973) points out that the term 'sick' or 'ill' is much clearer to those who use it, namely the health practitioners and the researchers, than it is to those upon whom we apply it - the patients. One of the women in Koos' (1954) study responded:

"I wish I really knew what you meant about being sick. Sometimes I felt so bad I could curl up and die, but had to go on because the kids had to be taken care of and besides, we didn't have the money to spend for the doctor. How could I be sick? How do you know when you're sick anyway? Some people can go to bed most anytime with anything, but most of us can't be sick even when we need to be (p.71).

Or another statement from a woman on this side of the Atlantic (talking about her husband who had hurt his knee) who realized that there was a time and a place for 'sick' behaviour:

"It wasn't too bad whan he came in, just tender around the knee. It was stiff (on) Sunday and I said he'd have to go to the surgery on Monday... but he wouldn't. He started his new job with X's and you can't go sick on the first day. He'd have got his note no trouble last month. Last week he was home anyway (between jobs) I could have looked after him. Just rest and he wouldn't have needed the doctor. Trust him to do it when he can't be on the sick. Next week he can make out he did it on site. It's not that bad mind." (Robinson, 1971. p.82).

Both of these examples take us into a perspective where situational factors play a major part in the definition of illness. In the first case it was simply not possible for



that woman to be sick under any circumstances and in the second, illness was 'allowed' under certain conditions. Locker (1981), in his Ph.D. thesis concerning the expression of symptoms and illness, distinguished between two types of 'health' knowledge: Knowledge about health and illness per se - which could include feelings about, and manifestations of, the illness - and knowledge about the individual's own state, expressed in terms of biographies or weaknesses. In the light of the above two examples, it may also be useful to add to that, knowledge of the individual's own situation at that time, which evidently plays a part in the construction of health beliefs.

In the last few sections we have looked at some of the models which have been developed in an attempt to understand the health behaviour of the population and to make predictions from this knowledge. We then went on to review some of the literature which has exposed weaknesses in the studies using health belief models because of their emphasis on large-scale, multivariate projects. Research focusing on specific illness episodes and which address the health beliefs of the population under scrutiny, have had more success at explaining the variation in individual health behaviour.

The literature we reviewed regarding the psychological, sociological and cultural aspects of health and health behaviour gave us further indication why it is important to focus on specific illness episodes, as the variation and



complexity which these factors introduce can mean that the detection of behaviour patterns is particularly difficult. The focus of allopathic medical practice and research exacerbates the difficulties by its strong preferences for the biological models of 'disease', often disregarding the psychological, social and cultural components of 'illness'.

Another aspect of illness and illness behaviour which is often disregarded by both the medical profession and the research it does, is the wide epidemiological variation across different communities in Britain. If a particular community has a high incidence of illness, then we can state that they have a greater need, and expect this to have an effect on their health behaviour - especially with respect to their use of services. In the next few sections I will look at some of the more general factors which influence people's health and health behaviour, turning first to the evidence for growing inequalities in the health of the British nation, as well as inequalities in the provision of health services.

#### 1.4 Inequalities in health

In the United Kingdom, in 1980, the Government published a report titled "Inequalities in health", which was the culmination of three years of Government funded research by a team led by Sir Douglas Black. It became known as 'The Black Report'. The results of this report are summarized by Townsend and Davidson (1982).



The overall findings of that report - that the inequalities which exist in the health of the British population are actually becoming more divisive in almost every respect - were quite horrifying. For example, with respect to the diagnosis of general practitioners throughout the U.K., the percentage of people in the age class 40 to 64 suffering from chronic bronchitis rises with descending class from six percent in class I to twenty-six percent in class V (Townsend & Davidson, 1982). For boys 1-14, mortality ratios for classes IV and V in 1970-72 were both higher than for classes I and II for twenty-three of thirty-eight causes of death, compared with only one cause (asthma) where the ratios were lower. For girls, the ratios were twenty-two and zero respectively (Townsend & Davidson, 1982). In fact the list goes on and on; all the major killer diseases were found to affect the poor more than the rich (and so did most of the less common ones).

The Government of the day acknowledged the report and the problems identified, but decided not to endorse the recommendations of the working party, which, stated generally, were for the Government to begin taking measures immediately, in order to halt these trends. The reason which Patrick Jenkin, then Secretary of State for Health, gave for deciding to do nothing with respect to the group's recommendations was that they were "quite unrealistic in present or any foreseeable economic circumstances, quite apart from any judgement that may be formed of the effectiveness of such expenditure in dealing with the



problems identified." (Townsend & Davidson, 1982; p. 16-17). So the report was shelved.

In 1984, all European member countries, including Britain, endorsed a World Health Organization initiative which targeted thirty-eight aspects of world health. One of these was the reduction of at least twenty-five percent of the differences in health status between groups and countries, by the year 2000 (World Health Organization, 1980; 1985).

In 1987, the Health Education Council funded a review of the state of the nations health beyond 'The Black Report' and into the 1980's (Whitehead, 1987). Unfortunately, all the indications are that the divide is widening even further. Although there was a fall in all-cause mortality rates in Britain, these were not experienced equally across the population: "Non-manual groups experienced a much greater decline in death rates than manual groups, thus the gap between the two groups widened." (Whitehead, 1987. p.2). Like 'The Black Report', Whitehead drew on data collected by the Office of Population Censuses and Surveys. Possibly the most horrifying of all the statistics documented was the fact that babies whose fathers have unskilled jobs run approximately twice the risk of stillbirth and death before the age of one year, than babies whose fathers are professionally employed (OPCS, 1986).



#### 1.4.1 Inequality in the availability of health services

In 1968, Titmuss argued that the higher social classes know how to make better use of the health services. This argument he developed from information which intimated that the higher income groups tend to receive more specialist attention and can be found in more beds in better equipped and staffed hospitals. Yet this information also begs the questions, how are the services organized and distributed? And do all groups have equal access?

It certainly isn't headline news today that there are differences in the health services available to wealthy and poor people. As far back as 1957, Martin found that the average total cost of drugs per prescription was higher in wealthier areas. More recent research has actually demonstrated a positive correlation between community health expenditure and the percentage of the population in professional and managerial socio-economic groups (Noyce et al, 1974). One example these researchers gave was that nearly twice as much per 1000 in the population was spent in the South-West metropolitan hospital region than was spent in the Sheffield hospital region. Even before this report came out, most people researching the area would have been aware of Tudor-Hart's (1971) 'inverse care law':

"In areas with most sickness and death, general practitioners have more work, larger lists, less hospital support, and inherit more clinically ineffective traditions of consultation, than in the healthiest areas; and hospital doctors shoulder heavier case-loads, with less staff and equipment,



more obsolete buildings, and suffer recurrent crises in the availability of beds and replacement staff." (Tudor-Hart, 1971. p.412).

The story is the same when looking directly at the provision of child health services. Regional provision of GPs and health visitors is negatively correlated with the number of indicators of need (including still-birth rate, infant mortality and birth rate to teenage mothers) (West & Lowe, 1976). We can summarize this last section by saying that where the good health services are most needed, they are least likely to be found. So any studies of utilization of health services must consider the inequality in the geographical distribution of these services.

#### 1.4.2 Inequality and members of ethnic minority groups

"At any age people in occupational class V have a higher rate of death than their better-off counterparts." (Townsend & Davidson, 1982. p.51). And these differences in mortality are more marked in infancy and in childhood. People from ethnic minority groups living in Britain - particularly those from the Indian sub-continent or the Caribbean - represent a disproportionate number of those in the lower classes (through circumstances outside their control) (Fitzpatrick, 1986), and have the highest rates of mortality in Britain. Pakistani infants in Britain have the highest mortality rates of all, followed by infants from the Caribbean. In the early 1980's, infants born to Pakistani women were almost twice as likely to die as those born to



mothers whose origin was the U.K. (OPCS, 1984). Also, during the perinatal period, Indian infants have been found to be the most at risk group (Terry et al, 1980).

The most marked class gradients are from accidents and respiratory diseases, two causes very closely related to the socio-economic environment (Townsend & Davidson, 1982). Although full data is not available, this would indicate that people from the Indian sub-continent and the Caribbean would be more susceptible to respiratory illnesses, with young children particularly at risk. Towards the end of this chapter, I will address the literature on the specific issue of respiratory illness among different ethnic groups.

In a more general study of deaths of people born in India, Pakistan and Bangladesh, and living in England and Wales, Balarajan et al (1984) provided further insight into mortality differences. Observed mortality for these groups was found to be higher than expected for infective and parasitic disease, diabetes, ischaemic heart disease, cerebrovascular disease and cirrhosis of the liver. Fewer than expected deaths were due to cancer and bronchitis (Balarajan et al, 1984).

There are actually a large number of more specific studies pointing to the fact that the physical health needs of most of the immigrant groups living in Britain are greater than those of the indigenous population. When the statistics are interpreted, due consideration has to be given to the wide variety of different cohorts; for example, elderly people from many ethnic minority communities living



in Britain did not necessarily spend their childhoods in this country.

In the next section I would like to stay with the topic of ethnicity, but move away from talking about 'greater' or 'less' health needs, and introduce the concept of different health needs, and how the health services are responding to these differences.

#### 1.5 Race, ethnicity and culture: aspects of health and health care

When I introduced the earlier section addressing the factors involved in the processes of becoming ill, the issue of culture was raised as a powerful determinator of beliefs and behaviour. Different traditional medical systems do have an influence on the health beliefs of the population and the ways in which they use health services.

The issue of culture arises again here, but this time it is more specifically the interaction of ethnic and racial groups with the health services in Britain. Our research is specifically involved with this issue, and so it is important to look in some detail at the interaction between a multi-racial/multi-ethnic society and the British health services.

Through de-colonization, two world wars, and the acceptance of refugees and immigration in general, the U.K. has seen itself change from a mono-cultural to a multi-cultural society. In 1971, eight percent of the population of England and Wales were immigrants, of which



2.5 percent were from the New Commonwealth countries and Pakistan (NCWP). By 1977 this figure of NCWP immigrants had risen to 3.4 percent (OPCS, 1984). Today in 1988, there could be as many as one in twenty people from the NCWP living in Britain, which doesn't include those immigrant groups from outside the Commonwealth and Pakistan. In some area health authorities in 1971, the proportion of Asian people alone was as high as five percent (Wandsworth Council for Community Relations, 1978). This doesn't account for smaller communities where some general practices and hospitals are caring for an immigrant population thirty or forty percent of the total (Wright, 1983).

The National Health service (NHS) was formed in 1948 with one of its main objectives to make health-care provision more accessible to all sections of the population, based not on the ability to pay, but on health needs. This aim has not been realized for the population as a whole (Townsend & Davidson, 1982; Whitehead, 1987), which has ominous implications for those groups who have special needs, of which ethnic minorities are an example.

#### 1.5.1 The response of the health services to ethnicity

In a paper in 1984, Rathwell reviewed this particular area of health care and concluded that:

"...practices and patterns of medical care developed for an essentially ethnically homogenous population, are rapidly becoming inappropriate and unacceptable for an ethnically heterogenous population. Ethnic minorities have different conceptions and perceptions of health; cultural differences that may inhibit



their uptake of health services; language barriers that prevent the doctor and patient from reaching the necessary understanding for the prescribed treatment to be successful; and, in general, a lack of understanding by the health services of the 'needs' and demands of ethnic minorities (Rathwell, 1984, p.123).

I will look in detail at some of the points raised by Rathwell.

#### 1.5.2 The language barrier

Trained interpreters are needed to be able to deal with the various languages of the NHS clients, particularly those of the Indian sub-continent who make up by far the largest proportion of non-English speakers (table 1a):

Table 1a. The language barrier to immigrants from the New Commonwealth and Pakistan.

	Percent speaking English only slightly or not at all.
African Asian men	19
Indian men	26
Pakistani men	43
African Asian women	41
Indian women	60
Pakistani women	70

(Wandsworth Council for Community Relations, 1978).



Generally the service has failed miserably in establishing any kind of consistent interpreter service (Wandsworth Council for Community Relations, 1978; National Extension College, 1984). Doctors - particularly GPs - have no option but to encourage non-English speaking adults to bring another member of their family with them to do the interpreting. Quite often the children are the only ones in the family able to speak English, which is learned in school and with friends.

### 1.5.3 Susceptibility to different illnesses

Various myths abound over this issue, probably mainly due to the lack of attention this topic has been given. The idea that the incidence of tuberculosis is higher in Asians because of their race is one such myth. Bandaranyake (1986) points out that the incidence of this disease is higher in Asian groups because they tend to be in the lower socio-economic classes and to live in damp and overcrowded conditions.

Sickle Cell Anaemia is a genetically-transmitted disease and 'trait' which affects one in 500 babies of Afro-Caribbean or African origin. Asian and Mediterranean people are affected to a lesser extent. The indigenous people of the U.K. are not affected. The NHS has provided little facilities to cope with this disease which has a devastating effect on the lives of many black people (Torkington, 1983), suggesting that when diseases do affect



ethnic groups in different ways, the response of the services is still inadequate. In fact there is strong evidence on this specific issue that the NHS has actually institutionalized racism (Torkington, 1983).

#### 1.5.4 Cultural eating habits and related health problems

When rickets became a serious health problem of poorer malnourished families before the last war, margarine was fortified with Vitamin D (a lack of which causes rickets) and rickets was almost completely eliminated. In the 1950's and 1960's it became a problem again (Goel et al, 1977), predominantly among the population of Asian and African-Asian immigrants, who were mainly poverty-stricken and missing the vitamin D supplement given by the sun's rays. There was a campaign to get the authorities to fortify the Asian people's basic foodstuff - chapatti flour - but this was ignored, and instead, dietary education was believed to be the answer (McKay, 1978).

The attempt to change cultural eating habits was not particularly well received and another serious criticism of this campaign was that any attempt to change the dietary habits of the Asian population, would expose them to diseases which they were not prone to suffer from - principal among which is coronary heart disease, which is linked to the fatty diet the campaign recommended. Today the DHSS exhorts the British public to decrease its consumption of meat, eggs, refined carbohydrates and fatty



foods, and increase intake of fresh fruit, fibres, pulses and lentils. The final irony of this is that this recommended diet is not too unlike the diet of many Asian communities - and rickets, although decreasing, still afflicts some Asian children.

#### 1.5.5 Health beliefs, attitudes and behaviour

In 1981, Brent Community Health Council produced a document called "Black People and the Health Service", which concluded that racism was rampant in the NHS. Health professionals and other 'experts' were talking about inferior health behaviour among immigrant groups (Martin, 1965) and modifying Black people's cultures to improve their health (Lobo, 1978). The evidence suggests that this is a case of victim-blaming. Poorer health standards among immigrant and minority groups is probably a combination of a lack of understanding by the health service of different health beliefs and practices (Satow & Homans, 1982; McNaught, 1983; Donovan, 1983) and the terrible living conditions which the majority of people in these minority groups have to endure (Watson, 1984; Bandaranyake, 1986).

The health beliefs which people hold do, for the most part, reflect the historical development of health, illness and medical care beliefs within social and cultural boundaries (Fabrega, 1975; Chrisman, 1977; Kleinman et al, 1978; Mechanic, 1978; Good & Good, 1981; Pfifferling, 1981; Ballard, 1983a & 1983b; Brodsky, 1983; Helman, 1984). Among



the Asian population of the U.K., evidence suggests that traditional health beliefs are still prevalent, even among second-generation immigrants (Davis & Aslam, 1979; Bhopal, 1986b; Bal & Cochrane, 1988). Yet only approximately one-fifth of the Asian population of Britain consult traditional healers at any time (Aslam, 1979). The reason I mention this is because it makes it quite apparent that here in Britain we do have people with traditional health beliefs from other cultures interacting with our allopathic health services, on a large scale.

For Afro-Caribbean people we have a similar situation, although generally without the language barrier. Research on Afro-Caribbean health behaviour practices has pointed to the fact that a small percentage openly state their preference for 'going private' (Donovan, 1986), but this is still an interaction with allopathic procedures.

Many of the list of authors (above) are anthropologists or medical sociologists. They gather information concerning the historical development of a health 'belief system', the integration of minority beliefs within the framework of majority beliefs, and how minority groups interact with that dominant system. Most of this kind of research has been carried out in the United States, but there is recognition now that the need for such research in the U.K. is pressing. Some researchers would argue that we actually need to develop a separate subject for research in this area:

"Ethnomedicine, the study of how members of different cultures think about disease and organize



themselves towards medical treatment and the social organization of treatment itself."  
(Fabrega, 1975).

Fabrega's thesis argues that this science is needed because the practice of trying to treat all illness using the one technique of the dominant culture has failed. To understand fully why it has failed is to understand that the medical practitioner cannot only treat symptoms, but must also address the beliefs of the client. These beliefs can concern aetiology, treatment or prognosis and if they are not addressed only part of the job has been done. Without a foundational knowledge of the ethnomedical science the practitioner cannot even begin to address this particular aspect of care, because, except in cases where the practitioner is of the same cultural background, there will rarely be a common starting point.

For example, many Asians classify illnesses, medicines and foods according to an aetiological and therapeutic system which derives historically from Hippocratic humoral theories of disease. Ayurvedic medicine is a folk system which has thrived in India since circa A.D. 400. It is based on theories regarding the importance of balance between humours (dosha) for good health; imbalances are treated by a wide range of foods and herbs (Fitzpatrick, 1986). Sometimes 'Hakims' are consulted for advice in this medical system in which they specialize (Eagle, 1980). It is sometimes known as the 'Hot-cold theory of disease': Fevers, inflammations and pregnancies are examples of 'hot' conditions, which carry a prohibition of 'hot' foods, such as legumes and



pulses. 'Cold' conditions have similar dietary prohibitions. If the allopathic practitioner is unaware of this belief, then there are many dangers, particularly since some medicines and pills are also classified as 'hot' or 'cold' (Ballard, 1983a).

"It is not, by and large, minority patients who are the problem. Rather it is health care staff who lack the capacity to respond adequately to their distinctive lifestyles, and so lack the ability to distinguish between what is truly pathological and what is merely incomprehensible" (Ballard, 1983a, p.15)

Another example, from a different cultural health belief system, was reported of a 63-year-old Chinese woman complaining of 'heaviness in her chest' at an American family practice. For eight months she was tried on various cardiac medications which led to a variety of side effects with no release from the original symptoms. It was only after a seminar discussion of culture and depression that the clinicians involved realized that it is quite common for Chinese people to express depression and distress in somatic terms. The 'pressing on' and the 'pressing into' the chest was actually the weight of sadness. Following long discussions with the clinician about her personal history, the client reported feeling better (Good & Good, 1981).

The above authors argue that the clinical practice of biomedicine is not in touch with a multi-cultural population, which has had limited contact with this curative approach:



"Psychological, social and cultural factors strongly influence the way a particular biochemical condition will be experienced by an individual and manifested clinically...Interpretation of patients' complaints as though they directly reflect biological processes ignores a growing body of evidence of cultural patterning of symptoms." (Good & Good, 1981. p.172).

Various authors have made this observation whilst looking at the experience and mode of expressing symptoms (Brodsky, 1983; Helman, 1984), patterns of care-seeking (Chrisman, 1977; Mechanic, 1978) and evaluation of therapeutic treatment (Pfifferling, 1981). The need to integrate - but not reduce - all cultural constructions of health and illness has been emphasized (Kleinman, 1977; Kleinman et al, 1978). Clinical practice which recognizes that psychological and socio-cultural issues are equally important as biological issues will offer a vastly improved service. The medical client is an intricate and active individual, expressing him- or herself in a way which has meaning to them. He, she is not a passive machine to be cured or fixed by a specialized knowledge of biology (Kleinman et al, 1978).

Recall from the introduction that I outlined some of the things which will influence the way in which people use the services. I began by looking at how definitions of what constitutes illness can differ. Then I pointed to the inequalities which exist in the health of the people of Britain, and also the unequal distribution of health services (geographically). Third, I introduced the area of ethnicity and health and gave a variety of reasons why any 'fair and equal' health service must understand that



cultural beliefs will influence health-related behaviour.

Now I would like to turn attention to what happens to people when they come into contact with health professionals, and subsequent to that encounter.

## 1.6 The doctor-patient relationship

This is an area in which psychologists have made a large contribution to our knowledge in recent years. One of their focus points has been on the doctor-patient interaction, monitoring things like the length of consultations, the type of information that doctors give to patients, and the type of questions which patients ask doctors (if at all). Since this is a large area, and is not central to our main purpose, I have decided to keep this part of the review quite brief by choosing the most relevant topics. (Refer to Pendleton & Hasler (1983) (eds.) for a fairly extensive review of this subject).

### 1.6.1 Doctor-Patient Communication

There is evidence to suggest that the amount of information which doctors volunteer to patients is negligible (Comaroff, 1976). Comaroff interviewed the doctors after the consultation and asked about this specific point. It was discovered that many doctors tend to see their role as allaying fear and anxiety and so withhold information on the grounds that it only causes the patient to worry (Comaroff,



1976). When observing doctors' styles, Plaja and Cohen (1968) discovered the most common approach fitted the category of 'bureaucratic, task-oriented'. The authors concluded that this style was not particularly sensitive to the needs of patients as individuals.

Byrne and Long (1976) suggested that the majority of the 2500 interviews which they analyzed between doctors and patients were 'doctor centred'. In a review of the evidence on doctor-patient interaction, Waitzkin and Stoekle (1972) suggested that maintaining an air of uncertainty about the patient's problem was a strategy adopted by most doctors in order to mask the doctor's own uncertainty, maintain patients' beliefs in the efficacy of medicine and limit patients' role in decision-making.

Poor communication has frequently been attributed to barriers created by differences in class and status between doctors and their patients. Those patients in the lower classes tend to ask fewer questions in the consultation, be given less information by doctors and, therefore, have shorter consultation times than their middle-class counterparts (Cartwright & O'Brien, 1976; Pendleton & Bochner, 1983).

Similar, only more accentuated, problems arise in a cross-cultural encounters (Bochner, 1983). These authors point out that it is not enough just to know the language of another person, because without at least a basic knowledge of the other's culture, the participants can be unaware that they are sending unintended messages and distorting incoming



information. This point was covered to a large extent in the previous section.

Pendleton and Bochner (1983) point out that this 'culture conflict' does not only arise in encounters between people from different ethnic groups. They suggest that the very nature of the demographic characteristics of most doctors (middle-class, white males) will set up a 'cultural gap' which varies depending on how many of these characteristics the patient shares with him (her).

There is much evidence that consultation times in general practice are progressively becoming shorter overall. Five minutes has become the norm in the U.K. A reasonable indictment of this 'throughput' mentality came out of that same study of Cartwright and O'Brien (1976) in which doctors tended to be more satisfied with consultations where the conversation time was not more than five minutes and the patient did not ask more than one question!

#### 1.6.2 Compliance and satisfaction

Obviously satisfaction and compliance with the medical regimen will be directly linked to what happened in the consultation. The disparity between doctors' and patients' social class, age, sex and culture, as well as the increasingly shorter length of the consultations, are bound to create problems for compliance and levels of satisfaction; and the satisfaction with the encounter does not only apply to the patient.



Doctors have been known to become exasperated with patients who either forget what they have said, or who quite simply do not comply with their instructions. Certainly the indications are that the incidence of forgetting and non-compliance, at a primary care level, are noticeably high (Ley, 1976). Yet the evidence suggests that it is the way the information is imparted from doctor to patient which is the single most significant factor here. If the information from the doctor is kept reasonably succinct, important aspects are stressed, and strict medical terminology is removed, then not only will the patient retain more of the information from the consultation (Ley, 1976), but also satisfaction levels will be higher, and satisfaction has a strong association with compliance (Kincey et al, 1975).

Locker (1986) suggests that "the most consistent finding of studies of patients' views of medical care is that more tend to be dissatisfied with the amount and nature of the information they receive than with any other aspect of their treatment" (p.98); and in situations where a culture gap already exists, that is, where fewer beliefs are shared to start with, good communication is likely to be particularly important.

So it seems that one of the reasons for the forgetting of information and the high levels of non-compliance could be that there just isn't enough information being imparted by the doctors, and not enough time for any that is given, to be taken in by the patient. A seemingly rushed consultation can lead to the patient feeling that the doctor



did not attend to his/her complaint, showed little understanding, and was not accepting of him/her as a person (Jaspers et al, 1983). The exasperation felt by doctors towards their patients could well be a product of the huge case-loads and packed waiting rooms which face them every day. Five minutes is really only enough time for a diagnosis to be made and a prescription to be written.

In these last few main sections I have taken some general themes and looked at the implications they might have for the use of services in a multi-ethnic/multi-cultural society. Put very briefly, our argument is that health service use will be affected by how often people get ill, the geographical distribution of health services, the recognition by the services of ethnic and cultural diversity, and people's satisfaction with the service.

Those themes have a quite general relationship to the research we proposed to do. In the remainder of the review I would like to turn to research which is more specific to our intentions: the types of childhood illnesses on which we decided to focus, and the ways in which parents manage childhood illnesses - including their utilization of services.

## 1.7 Childhood respiratory illness

Our research concerns parents' management of their children's respiratory illnesses (and associated symptoms) and their decisions regarding the consultation of a general



practitioner. Which begs the questions, why look at only one type of illness and why respiratory illness?

Recall that many of the studies using health belief models generally failed to explain the variation in consulting behaviour or closed with quite ambiguous results. One of the main criticisms levelled at these studies was that they tended to be far too general in both the types and numbers of illnesses identified (Mechanic, 1979). Berkanovic et al (1981) decided to introduce more detail and so looked at one specific illness episode. This method proved to be more successful in explaining the variation in consulting behaviour. We also decided to look at one specific illness episode, and opted for even more attention to detail by looking at one type of illness.

We concentrated on respiratory illness - as Wyke (1987) had done - rather than any other childhood condition, for three main reasons. Firstly, respiratory illness makes up a large proportion of the GPs paediatric caseload. Secondly, these particular illnesses do seem to have implications for the health of individuals into adulthood. Finally, there is evidence of inequalities in the experience of childhood respiratory illness between social and ethnic groups.

I have already touched upon the main findings of Wyke (1987), which it would be useful to summarize here. She found that parents' reasons for consulting a doctor are most strongly linked to the clinical symptoms of the child's illness, and the behaviour of the child. If the child had difficulty breathing, pain when coughing, needed more



attention and comforting and was particularly distressed, then the parents were more likely to consult their doctor than if these symptoms and behaviour patterns were absent. Sociodemographic factors which were implicated with more frequent consultations among the lower classes, could be explained by more frequent illnesses in these groups (Wyke, 1987).

#### 1.7.1 Childhood respiratory illness and the GP

There have been a few studies which have looked specifically at the illnesses parents take to the general practitioner, and the general agreement would seem to be that respiratory illnesses are the single most frequent reason for a parent making a consultation for a child.

Modell and Boyd (1982) concluded that upper respiratory tract infections (URTI) were the reason for a high proportion of paediatric consultations. (N.B. URTI's include things like sore throats, dry coughs, earache and stuffed or runny noses. The lower respiratory tract infections (LRI) such as asthma, bronchitis and tuberculosis are at the more severe end of the spectrum).

In Mayall's (1986) study of how 135 mothers in inner London managed their children's illnesses, she found that respiratory conditions were by far the most frequent cause of a decision to visit the GP. Thirty-two percent of all consultations mentioned in this study were for a respiratory illness.



Campion and Gabriel (1984) found entirely similar results. They looked at all children's consultations at one general practice in Dundee, over a twelve month period, and found that they were highest for respiratory conditions.

In Blaxter and Paterson's (1982) study of three generations of working-class families in Aberdeen, the most worrying group of illnesses for the mothers of young children were respiratory conditions. Both consultations at the GP and home visits were most frequent for respiratory illnesses in pre-school children, and were the most common reason mentioned by the mothers for a consultation for older children.

Many of the symptoms of upper respiratory tract infections, such as blocked noses, sore throats or slightly raised temperatures do seem to be a particular worry for parents of young children; and yet they are among the illnesses which many general practitioners would regard as minor or trivial (Knox, 1984). Perhaps the parental anxiety stems from not knowing what has caused it, or a fear of what it might develop into; research in this area has demonstrated the fear that some parents have of the infection getting to the child's chest (Blaxter & Paterson, 1982; Wyke, 1987). I will go into this in more detail later.

Whatever the reasons, though, it is important for the GP to know why parents respond in the way that they do to their children's illnesses. Knox (1984) wrote a paper about consultations for minor illness and made this observation:



"One of the greatest therapeutic dilemmas facing the general practitioner dealing with minor illness, especially upper respiratory tract infections, is an absence of a rational basis for prescribing antibiotics. Perhaps an acknowledgement of this fact and its wide acceptance by the medical profession would lead to a reduction in what seems to be a widespread overuse of antibiotics."  
(Knox, 1984; p.1506).

When a client consults a GP a transaction takes place. The parent wants something from the doctor and the doctor feels that s/he needs to be doing something. With consultation times becoming increasingly shorter, it has become more convenient for the GP to 'do something' by writing out a prescription; and yet the evidence from the study by Blaxter and Paterson would suggest that the reasons for many consultations for children is to alleviate the worry and anxiety - to get the child checked over.

#### 1.7.2 Long term effects of childhood respiratory illness

Not surprisingly the very nature of doing the type of longitudinal study necessary for effective research into long-term effects, has meant that there isn't an abundance of literature on this topic. Despite this, there are enough completed studies to be able to discern the patterns. What we are interested in is how respiratory illness persists in later life, independent of the type of social/ environmental conditions in which individuals live. Concentration on a cohort of very young children followed through their development into adulthood has proven to be the best way to proceed with research of this nature (Blaxter, 1981).



LOWER respiratory illnesses have received more attention from researchers working in this area. Leeder et al (1976a, 1976b, 1976c) followed a cohort of 2000 children from just after birth. They found that those who had had bronchitis or pneumonia in the first year of life were more likely to be wheezing at the age of five.

Data from the third national longitudinal study of child health - Child Health and Education in the Seventies (CHES) - found similar relationships (Butler & Golding, 1986). Of all the children they looked at who had ever had bronchitis, sixty percent had a history of wheeze; and of those who had had bronchitis, fifty-two percent had a history of wheeze.

Holland et al (1978) observed 1300 Kent school-children at the ages of five, eleven and fourteen years. These same children had been studied by Bland et al (1974), when they uncovered a definite link between respiratory symptoms at the age of eleven with a history of bronchitis under the age of five. Holland and colleagues revealed that this relative risk was still as divisive at the age of fourteen and that "these relationships could not be explained by social class effects, and were probably not due to parental bias in reporting." (P.256).

And there is evidence that these symptoms persist even longer than this. The National Survey of Health and Development, reported by Kiernan et al (1976), showed quite clearly that the occurrence of bronchitis or pneumonia before the age of two increased the likelihood of



respiratory illnesses at the age of twenty. Once again this relationship was independent of social class and of smoking at age twenty.

Possibly the most worrying aspect of these cohort studies is that respiratory symptoms seem to persist beyond childhood even when disadvantaged environments do not. This makes early detection and, especially, the appropriate treatment vital for these more severe respiratory conditions in childhood.

### 1.7.3 Inequalities in childhood experiences of respiratory illness

I have already referred to the two most extensive reviews of the state of the British nations health, and their documentation of inequalities which exist across the social classes for all age-groups (Townsend & Davidson, 1982; Whitehead, 1987). The evidence suggests that these inequalities are widening into the 1980's.

Respiratory illness is the second most frequent cause of death, after accidents, in children aged between one and fourteen years (Townsend & Davidson, 1982); and in fact it is these two causes of death - respiratory illnesses and accidents - which constitute almost all of the difference in mortality rates between social classes I and V. It is not surprising, then, to find that both of these problems have been correlated, with social, economic and environmental circumstances.

It is quite probable, though, that deaths from



respiratory illness represent the tip of the iceberg of morbidity. The research which we were to embark on was specifically interested in the more common respiratory conditions which are highly represented in GP consultations. Do these conditions also correlate with measures of social class?

In an American study, Gardner et al (1984) monitored 131 children in Houston, Texas during the first year of their lives. They found significantly higher levels of lower respiratory disease (LRD) among infants in lower socioeconomic classes, and a definite trend to increasing amounts of LRD was seen with increasing family size.

The findings from this American study are quite unusual in the literature, as few researchers have actually uncovered a direct link between social class per se (as measured by the occupation of the head of the household) and respiratory illnesses. Leeder et al (1976a, 1976b, 1976c) in their study of 2000 children living in Harrow found a link between respiratory illness and the number of siblings, smoking by the parents and a history of wheeze or asthma in the parents, but no independent effect of social class.

Parental smoking behaviour has been frequently linked to respiratory illness in children. One such study of slightly older children looked at the incidence of upper respiratory illnesses, in the form of coughs. This study of 15,000 nine to nineteen year olds in northern England showed a positive correlation between parental smoking and the reporting of frequent coughs among children who themselves



had never smoked (Charlton, 1984). Another similar large study of 6,000 secondary school children in Derbyshire found that parents who smoked were more likely to have children reporting coughs and breathlessness (Bland et al, 1978).

Air pollution has also been linked to respiratory illness (Douglas & Waller, 1966). This study followed a cohort of nearly four thousand children in the U.K. and discovered that lower respiratory tract infections were associated with higher levels of air pollution from the age of two all the way through to fifteen years. Lambert and Reid (1970) also found an association between air pollution and lower respiratory disease. Air pollution, like smoking, is an indirect link to inequalities in the occurrence of respiratory diseases across the social classes. The most polluted environments are in the inner parts of big cities; places where many of the most deprived communities have resided since the industrial revolution.

Another social class indicator is the condition of the house in which the family lives. A recent study in Edinburgh has shown damp housing and the presence of fungal mould to be associated with higher levels of childhood respiratory symptoms (Martin et al, 1987). This finding was independent of parental smoking behaviour.

So all the indications are that social class indices are correlated with a wide range of respiratory illness morbidity in childhood. Children whose parents smoke, who have a high number of siblings, who live in more polluted environments and who live in damp houses are more likely to



suffer from - and to die from - respiratory diseases, than their coevals who have less siblings, parents who don't smoke and who live in less polluted environments and dry houses.

One of the more common, and debilitating childhood respiratory illnesses which has more rarely been linked to these lower social class indicators, is asthma. It seems that between ten and twelve percent of all children suffer from asthma, with a wide spectrum of morbidity (Morrison-Smith et al, 1971; Gregg, 1977; Lee et al, 1983).

The treatment of childhood asthma has changed radically in the past two decades, particularly because of the new drugs which continually become available. Yet this change has not been accompanied by an improvement in mortality rates (Office of Population Censuses and Surveys, 1986). One study in London looked at the drug treatment of childhood asthma (Anderson et al, 1983). They discovered that the diagnosis of asthma was far more likely to lead to treatment with drugs, but less so if the father was in the manual occupational social classes, or if the mother had a history of mental illness or had left school before the age of sixteen. This study indicates that the diagnosis and treatment of asthma depends to a large extent on social and situational factors unrelated to the illness. And it certainly draws attention to the fact that medical practitioners should review the care they provide for sufferers of asthma and other respiratory illnesses.

Speight et al (1983) maintained that asthma in



childhood was being underdiagnosed. In a study of seven-year-old children in Tyneside, they discovered that of all those children who had had at least one episode of wheeze since beginning school only twelve percent had been diagnosed as suffering from asthma. And only thirty-five percent of those experiencing twelve or more episodes a year had the diagnosis. This finding was important for subsequent treatment received. Few children without a diagnosis of asthma were given the aid of a bronchodilator.

Leeder et al (1976a) point out that the diagnoses of asthma, bronchitis and acute wheezy chest are not clearly defined. In their study of a cohort of 2000 children in the U.K. they reported little relationship between asthma in the first five years and other family, social or environmental factors. Yet at the same time they did find that attacks of wheezing were closely associated with bronchitis and pneumonia during the first year of life. Bronchitis and pneumonia in the first year have, in turn, been shown to be associated with, for example, parental smoking habits (Colley et al, 1973). In addition to this, they found that asthma was reported more often in children of upper class parents, which led to the speculation that social class trends could reflect differences in reporting behaviour among parents (Leeder et al, 1976a). If such a relationship does exist, then it is of no real surprise that asthma does not correlate very highly with the social and environmental conditions normally associated with the lower classes. Since this is the case, it could make more sense for researchers



to observe the effects of social and environmental conditions on symptoms which are associated with a wide range of identified respiratory illnesses. Two such symptoms would be coughing and wheeze (Wyke, 1987).

#### 1.7.4 Childhood respiratory illness prevalence and ethnicity

Arthurton (1972) made observations of the attendance of Asian children at paediatric outpatients and paediatric wards of hospitals in Bradford. The author discovered that upper respiratory infection was the single most presented illness at outpatients, whereas upper and lower respiratory infections, followed by asthma, were the three most common illnesses admitted to the hospitals. The presentation of these illnesses among children of Asian descent was thought by Arthurton to be higher than for the indigenous population, but no objective comparisons were made. Two reasons which this paediatrician did postulate for a higher attendance, s/he linked to the beliefs of the parents: "...a cough with its presumed association with tuberculosis is apt to cause undue concern." (p.127). "Dissatisfaction with previous advice may arise from the tendency of some Asiatics to imagine that different medicine is required to relieve each of many symptoms caused by one disease, possibly because they have a greater faith in the value of drugs prescribed." (Arthurton, 1972; p.128).

Morrison-Smith et al (1971) looked at the prevalence of asthma and wheezing in school children in Sheffield. They



found that asthma diagnoses were on the increase.

Comparisons of prevalence were made between Asian, West Indian and indigenous children. They concluded that for children born outside of England - in the West Indies, Africa and Asia - the prevalence of these illnesses was significantly lower, but West Indian children did have a similar prevalence to the European children if they were born in this country. The Asian children, on the other hand, appeared to have retained their lower resistance to respiratory problems even if born in this country.

In 1981, Morrison-Smith and Cooper reported the results of a much larger study looking at the prevalence of asthma and other atopic diseases in more than 2000 school children - this time in Birmingham - over a period of ten years. This time they concluded that a higher proportion of children born in England, of all ethnic groups, developed asthma within the first four years of life, than children born abroad - including Asian children. The sex ratio of two boys to every girl with asthma was consistent across the ethnic groups. The authors also suggested that any variation they found between groups could be explained by differences in social and environmental conditions, and were unlikely to be of genetic origin.

This latter point is important because it indicates that there was variation in the incidence of respiratory disease which could be explained by some of the social, economic and environmental factors which were discussed in the previous sections. In fact there is no concrete evidence



of a direct genetic link to any respiratory illness, although asthma is strongly suspected. One observer of the plight of Asian groups in Bradford wrote:

"The fact that Asians tend to aggregate in the lower socio-economic classes, and to live in some of the worst housing areas and in overcrowded conditions, increase the likelihood of them having or contracting the disease (TB). Because it is an infectious disease, tuberculosis is spread more effectively under certain environmental conditions as found in the inner-city areas of Bradford." (Bandaranayake, 1986; p.91).

One of the things it is important to bear in mind regarding the evidence on childhood respiratory illness, is that despite the piles of literature which have accumulated on the subject (some medical journals are devoted almost exclusively to it), many of the important questions still remain unanswered. It does appear that social and environmental factors are correlated with respiratory illnesses - as indeed are psychological factors - but clear cause and effect relationships have not been established.

In this final section of the review I will introduce research which has a more direct bearing on the study we proposed to do. This is concerned with the few studies which have looked directly at how parents manage their children's illnesses, including the utilization of health services.



## 1.8 Parents' perceptions and management of their children's illnesses

Although it is not quite the same as doing something for one's own illnesses, there will be similarities in the processes involved in the acknowledgement that something is not right, and subsequent decisions about what to do. But what is of particular interest is the change from the 'I' being ill, to the 'you' being ill. The knowledge of never being entirely sure what the other person is thinking or feeling is exacerbated in the case of young children who, in many cases, will not be able to convey the information verbally, to the extent that adults can.

Mayall (1986) suggests that an element of doubt has led mothers to believe in the 'naivety' of the young child's behaviour. In her study, in which she interviewed 135 mothers of young children about their perceptions and management of illness, she discovered that, unlike the somewhat complicated procedures which adults go through in their self-diagnosis of illness, mothers are more direct in their diagnosis of illness in their children. Children's behavioural changes and/or bodily symptoms are seen as an involuntary reaction to being ill or unwell (Mayall, 1986).

That is not to say that with every change in the child the mother will be found at the health clinic. A large amount of children's illnesses are considered either minor or normal (Field, 1976). In fact, what Spencer (1984) argues is that most, perhaps even as much as ninety percent, of all health problems and symptoms affecting infants and children



are dealt with by the parents - mainly mothers - at home.

Mayall (1986) found mothers believed that the kind of things that 'ordinary' people do are more important than any intervention by health professionals, for the promotion of their good health in their children. But what evidence is there that mothers - or parents in general - can care for their children's health by making the right decisions at the right time?

First of all, in order to make a decision regarding care, the parents must obviously show an appreciation of their children's symptoms. In an American study of 203 families registered with the Maternal and Child Health Clinic of John Hopkins University in Washington D.C., Stine and Chuaqui (1969) concluded that mothers, who were generally of low-income and living in the city, had a poor understanding of respiratory illness and of sepsis. They also found that 'appropriate answers' to a list of questions asked about these illnesses were positively correlated with the mother's educational level, family income, use of health literature in the home, use of clergy for solving problems, and joint solution of problem by parents.

The 'appropriate questions' of this study were essentially tapping the medical knowledge of the mothers. In this respect, this paper did not really tell us anything we didn't already know: Mothers who have had access to higher levels of education appear to have access to certain sorts of health knowledge - usually the sort which is given credibility by health professionals. It is important to



emphasize - although these authors didn't - that an appreciation of symptoms and illness does not necessarily mean a knowledge of the medical terms involved. Parental skills with respect to knowing what to do for a sick child at the right time is not the same as medical knowledge per se, yet is far more important for managing children's illnesses. (Spencer, 1984).

Studies which have asked the parents to keep health diaries of all health problems, symptoms and action taken, in both the U.S. and in Britain, have all found parental skills to be well developed (Alpert et al, 1967; Spencer, 1980; Pattison et al, 1982). The last of these studies discovered mothers reported making decisions about their children's health on seventy-five percent of all days which the diary covered (Pattison et al, 1982). Admittedly, though, the mothers were keeping diaries on very young infants in this study. Spencer (1984) argues that studies of primary care which emphasize the use made of available services for young children tend to ignore the fact that most of the primary care occurs before the services are even contacted, and that more research should look at the ways in which parents recognize and manage their children's illnesses.

It turns out that the assistance of a health professional is sought for a very low percentage of the occasions when parents perceive symptoms to be present. It was as low as six percent of all days in Pattison et al's (1982) study - but these were very young infants and so the



mothers would presumably notice more changes as well as having more visits from a health visitor. In Spencer's (1984) study a medical practitioner was consulted on seventeen percent of all occasions when symptoms were recorded by the mothers. Hannay (1978) also concluded that only a small proportion of illness and disease is dealt with in medical establishments. That study looked at the prevalence of symptoms in all age groups, yet it doesn't appear as though children's illnesses at any age, and the way they are managed, depart from this observation.

With respect to the action parents take in response to their children's symptoms, various authors agree that there tends to be a sequential strategy which naturally varies in relation to the problem. Alpert et al (1967) found that parents took no action for twenty-five percent of all symptoms reported. Quite often, though, this was not simply a case of the parents ignoring the child's illness, but instead the illness would either come within what the parents considered to be 'normal' limits for that particular child (Davis (1963) elucidates what is meant by the 'normalization' of symptoms), or that the parents were adopting a 'wait and see' policy (Spencer, 1984).

Another stage in the action taken was to seek lay advice (Mayall, 1986), with grandparents being a prominent source (Pattison et al, 1982). Medication - and occasionally advice - from the chemist was another part of the process, used by most parents at some time (Mayall, 1986; Cunningham-Burley & MacLean, 1987). Although, as



Jefferys et al (1960) points out this kind of self-medication for children is not used as an alternative to consulting the doctor, but instead as supplementary. This latter study which looked at the consumption of medicines on a working-class housing estate also found a class difference. Families in social classes I and II were more likely to give their young children (under five years) non-prescribed medication than were those families in classes V and VI (Jefferys et al, 1960).

One of the main themes which came out of Spencer's (1984) work was that parents will quite often seek professional help even if the child is not actually perceived to be ill at that particular time. The consultation can be elicited because of symptoms which are anxiety-provoking or that are thought to develop into something worse - those that are potentially serious. Quite often these are associated with a previously defined weak spot which the child is perceived to have (Locker, 1981).

The difficulties inherent in making any clear-cut definitions about what constitutes illness, from the layperson's perspective, is even more evident in Blaxter and Paterson's study of "Mothers and Daughters - A Three-generational Study of Health Attitudes and Behaviour" (1982). The sample of families in this study carried out in Aberdeen were almost all from social classes four and five, and the beliefs about health norms were noticeably different from those at the other end of the class spectrum, as well as from the medical profession. Good health was defined in



terms of not having a debilitating illness or not being in hospital. The authors described one mother whose daughter had suffered recurrent ear infections, scarlet fever and coughs saying that she had "never had a day's illness." (p.29). Minor illnesses which had become 'normal' were simply shrugged off:

"I think a cold comes naturally and will go away the same way - on its own" (p.54).

"Just a sore throat, I knew it was just tonsillitis" (p. 54).

"It's just his normal cough - it's quite usual for him to have a cough" (p.59).

"Things like caulds and a' thing like that I dinna think means onything because a'body gets things like that . It's just big illnesses, they canna be helped, they're there, and they winna go away..." (Blaxter & Paterson, 1982. p.34).

This is the kind of attitude which Blaxter (1981) had previously placed within 'the culture of poverty'; a culture very similar to the one in which people have to evaluate what they can afford to define as illness. One in which illness is really only defined as such when you can't go to work or when you end up in bed or in hospital. I mentioned this phenomenon already when looking at the meaning of illness in adults (see for example Robinson, 1971 or Koos, 1954).

Four other aspects of children's illnesses which Blaxter and Paterson (1982) found mothers more likely to respond to were 1) persistence of symptoms: Those defined as relatively unimportant in the first instance are perceived



as more serious if they last for a few days without improvement, ii) a combination of symptoms: For example, cough and vomiting or headache and fever (in fact the study of Pattison et al (1982) found that the total number of symptoms present in an illness episode was the greatest predictor of a consultation), iii) the time of year: One mother mentioned that her son was prone to chesty coughs in winter and another that she kept her daughter out of nursery in winter because her colds might develop in to bronchitis, and iv) unknown etiology: When the parent's cannot offer any explanation at all for what caused the child to be ill (Blaxter & Paterson, 1982; p.56).

Illnesses which involved the child's chest or lungs were a common 'trigger' to a professional consultation mentioned in various studies (Mayall, 1986; Spencer, 1980), even that of the 'low threshold' families of Blaxter and Paterson (1982):

"We aye keep a check on the chests, ken - when they hae coughs, to see it disnae go into their chests. We fairly check on that." (p.55).

Other factors which have been related to consulting a medical professional have been family size (Tessler & Mechanic, 1978) (this U.S. study found, among other associated variables, that larger families have less annual medical care contacts) and the failure of home remedies (Blaxter & Paterson, 1982). Not surprisingly, this latter point is actually quite a complicated issue, which we will address in our research. Spencer (1984) also suggests that



anxiety provoked by the symptoms is a reason for consultations, which is not something likely to be overlooked, but it is worth highlighting because of the allusion by doctors to 'maternal anxiety' or 'neurotic motherhood' (Cartwright, 1967; Mechanic, 1974). Some GPs put these messages across, whether or not it is their intention to do so:

"There's this thing about doctors, you're scared of wasting their time. They're like gods sometimes - it's silly, I don't know why. It's their job, they're paid to see patients. I've seen me going down one week with one of them and then again the next week with the next, and I think - oh, no, they'll say not me again." (Blaxter & Paterson, 1982. p.162).

Yet this attitude among doctors continues despite the evidence which suggests that mothers, and parents in general, tend to consult doctors for illnesses which doctors themselves would recommend a consultation (Campion & Gabriel, 1985; Wyke, 1987). In fact, Campion and Gabriel's study found that the presence of a 'doctor-defined serious or significant illness' was one of the main predictors of a consultation. One of their conclusions was:

"The tendency for doctors to attribute consultation for 'trivial' childhood problems to 'maternal anxiety', may be correct in so far as we have shown that anxiety is correlated with consulting, but to make a general judgement that such anxiety is inappropriate or abnormal cannot be justified." (p.329).

Virtually all of the research which has looked specifically at the parents' evaluation of their children's health and



the reasons why they consult a doctor for their children, has mentioned the wisdom of the parent (usually the mother as primary carer) when making these decisions. It is not only the symptoms of the illness, but the behaviour of the child which is important (Spencer, 1984; Cunningham-Burley, 1986). The child needing more attention or comforting or sleeping more during the day are equally strong predictors of a parental consultation as the more severe physical symptoms (Wyke, 1987). But perhaps the sagacity of the mother goes beyond even that, to something much more difficult to measure or quantify. One of the mothers in the study by Blaxter and Paterson (1982) said: "A mother knows, you know when your child's not right. It's instincts." (p.51). And in Cunningham-Burley's (1986) study one of the mothers said that it's, "just a sense that she was going to be ill", leading this author to conclude that "there is a whole culture of motherhood, ways of believing and behaving, which is probably most important."

Many studies have been made of health service utilization, covering all age groups and all types of health care. A lot of this work focussed on the numbers of the different groups in the population who used a particular service at a particular time. For a comprehensive review - at least of those studies before 1970 - see McKinlay (1972).

Psychologists have been far less involved with this kind of research than say epidemiologists have, but what is



of interest to us in our research are the reasons why certain groups of people do under- or over-utilize a particular health service. The last group of sections of this review have given a clear indication as to the many factors which could potentially influence utilization behaviour, but we haven't discovered what actually does happen at the group, or community, level of health services attendance.

The reason for including this section of the review at the point in the discussion of parental management of children's illnesses, is because, ultimately, our main interest in health service utilization concerned parents.

But before getting to parental consultations I would like to first of all summarize the research which has been done on health service utilization in general, with its emphasis on social class comparisons, and then move on to the work which has concentrated on health service use by different ethnic groups. It should emerge that predictions of what people will do can be extremely difficult to make. What can appear to be a straightforward prediction of increased use in certain groups, due to an increased need, can often be counterpoised by barriers to consultations, through, for example, discrimination or lack of services.

We have already learned that the health belief models didn't have much success at processing all of this information into reliable predictions. It is most likely that the relevant variables were not taken account of, or not given due attention. Many of those relevant variables



will emerge in these last sections.

## 1.9 Health 'needs' and utilization of health services

In the United States all the early evidence suggested that people from lower classes were less likely to consult the health services for common illnesses (Koos, 1954; Greenlick et al, 1972; Coburn & Pope, 1974). Then in the late seventies, this trend appeared to reverse itself and the poor were using the services more often (Wilson & White, 1977; Dutton, 1978). This change was not mysterious, but instead could be attributed to the improved health insurance schemes introduced in the 1970's and which, therefore, improved access to the services for the poor (Rundall & Wheeler, 1979).

Since 1948, and the introduction of the NHS, Britain also improved access to its health services for all groups. Two recent studies suggest that the lower social classes (IV and V) use the primary care services more often in this country (Blaxter, 1984; Crombie, 1984). The latter of these studies looked at first time and repeat consultations at the general practitioner. The author concluded that because there were more repeat consultations among the lower classes, the general practitioners were actually more caring with these patients by giving them more repeat appointments (Crombie, 1984).

Blaxter (1984) also found higher consultation rates among the social classes, but she also decided to look at



the types of illnesses which they were consulting for. Not surprisingly she found a greater need among the lower social classes: poorer people got more, and more severe, illnesses. The study by Crombie was criticized for not taking the important need factor into account (McPherson et al, 1984). This point was consolidated in a study by Brotherston (1976) in which a 'use/need ratio' was calculated for each social class. The ratio was calculated by dividing the number of consultations at the GP by the number of restricted activity days and, in this way, indicated that when needs are accounted for, the consultation rates actually decline when going from social class I to social class V (Brotherston, 1976).

In fact, there is evidence that very disadvantaged groups (Wedge & Prosser, 1972; Blaxter & Paterson, 1982) and those living in more rural areas (McKinlay, 1970) in Britain, do under-utilize the health services, amounting to quite major differences when need is estimated. Other less obvious factors play an important role in the utilization figures.

One study demonstrated the difficulties inherent in doing utilization research and how misleading it can be if only the numbers of patients are considered. Harris (1975) examined the use of hospital beds in fifty-six counties in New York state. In some of these counties the use of the beds increased dramatically in short periods of time, whereas in others the numbers remained very much the same. He discovered that the increases did not correlate with any



discernable change in the need or demand of hospital beds, but instead that physicians were responding to the acquisition of new beds by increasing admissions and lengthening patient stays (Harris, 1975).

Thus, "the availability of hospital services has a direct effect on the norms of medical practice which, in turn, affects the number of individuals who will be labelled as 'sick enough to be in hospital'" (Waxler, 1981; p.290). This phenomenon has obvious links with the literature on the inequality in the distribution of health services already discussed.

#### 1.9.1 The use of health services and ethnicity

There are indications that some of the minority ethnic groups in Britain tend to use the health services more often than the indigenous population. Some of the reasons given for this is that they tend to consult inappropriately and for trivial reasons - particularly groups of Asiatic people (Wright, 1983). Given what we already know regarding the encounters of different cultures (Bochner, 1983) and the different health belief systems (Ballard, 1983a; Fitzpatrick, 1986), it would suggest that this is a very 'inappropriate' assertion for anyone to make.

In 1983, Wright reported the results of a study which questioned general practitioners about their Asian patients. Thirty-nine doctors replied to the questionnaire in an area of London where the author estimated that just over fifty



percent of the Asian population attended a practice with at least one doctor who spoke an Asian language. Fifty-one percent of the GPs felt that their Asian patients consulted more often and sixty-four percent reported that these consultations took longer. Now although Wright was particularly interested in language problems and geared her questions accordingly, she concluded that:

"The evidence of the Asians' poor knowledge of English and the lack of interpreting facilities in the practices suggests a problem of some magnitude... However, the commonest comments made spontaneously by the GP's were not about language, but about their Asian patients' tendency to complain about trivial matters (described by one doctor as the 'foreign ambience syndrome')." (Wright, 1983. p.103).

The problem would appear to be a combination of language and beliefs; what can often appear trivial to a doctor is not so for the client.

Johnson et al (1983) pointed out that what could be construed as making unnecessary demands on the services, is often perfectly reasonable when the client's needs are also considered. In this research in the West Midlands, he found this to be exactly the case. The Asian and Afro-Caribbean people attended the curative services more often in some areas, which could be demonstrably linked to sociological or geographical inequalities, such as income or environment. These conditions also affected the usage by the white communities (Johnson, 1986).

Similarly, an American study of how race affects hospital use (Griffith et al, 1986) found that blacks used



the services more often than whites, with the difference explained by a greater need: On average blacks were substantially worse off in health and socio-economic terms.

### 1.9.2 Ethnicity and health consultations for children

Two American studies pointed to isolation (Slesinger, 1976) and powerlessness (Morris et al, 1966) as factors obstructing black mothers' contacts with the preventive health services. When socio-economic factors were taken into account, both of these studies found a lower rate of uptake of the child-health services by the black mothers in the populations of Washington D.C. and North Carolina respectively. Although the deterrents to the use of health services in the U.S. will probably be more pervasive, because there is no equivalent 'free' health service to that of the U.K.

Pless & Hood (1967) interviewed 100 mothers of Afro-Caribbean origin in a study of "West Indian one-year-olds; a comparative analysis of health and service utilization". This research, which was carried out in the Paddington area of London, found that West Indian mothers used medical services at least as often as non-West Indian control subjects. In addition, they suggested that West Indian children had minor illnesses more often and were admitted to hospitals more often, and that West Indians lived under more deprived conditions and that the mothers worked to a much greater extent than the controls.



The authors suggested that with these factors operating in the lives of West Indians in Paddington, it meant that the mothers' overall 'qualitative' use of the health services was lower than that for the indigenous group. When speculating on the reasons for this the authors gave more weight to the lack of communication between medical workers and the immigrant group, than social conditions per se, although the fact that West Indian mothers were far more likely to be out at work must play some role in their overall use of health services, which are often only open during 'working hours' (Pless & Hood, 1967).

Ronalds et al (1977) found no difference between Asian immigrants and British-born white mothers in their use of general practitioner and maternal/child welfare services. The study, which was carried out in Nottingham, was limited to antenatal, postnatal and infant care in one general practice area, with the information collected from general practitioner and health visitor records, and by an interview with the mother. The authors point out:

"Neither of these studies\* measured the medical need of these two immigrant groups, but the demand they made on the health services was comparable to local white families. Both studies suggest that the need may be more than is apparent from the expressed demand". (p.283)

(\* The other study being that of Pless & Hood (1967)).

Watson (1984) reported a study which compared the health of Bengali infants with those of the indigenous population in the Tower Hamlets area of London. This study is more



informative since it does incorporate qualitative use of services, by considering social conditions, health beliefs, and satisfaction with the services and interviewing the mothers in a longitudinal study design.

Bengali mothers were equally likely to have visited their GP within the first eight weeks of life as indigenous white mothers and English-speaking immigrant mothers (who were the two control groups). Yet morbidity was higher in the Bengali children than the others, due in part due to their poorer housing conditions.

General measures of satisfaction were relatively similar across the groups, but when individual aspects of care were monitored, for example, mothers' estimation of waiting time at antenatal clinic, the Bengali mothers reported much longer waits.

The author points out that "the Bengalis are hampered by their lack of knowledge of what is considered good health practice in this country." (p.134). Yet at the same time their children are suffering from more and different health problems, mainly due to the appalling social and environmental conditions they have to endure. One Bengali mother said: "In Bangladesh we don't bother. We never need a doctor." (p.131).

What I have attempted to do in this chapter is to review the literature which has relevance to the research we were about to undertake. We were aware that our chosen research area



impinged on a wide variety of academic disciplines, and so on many occasions we simply had to select articles which were most prominent in their particular fields, rather than review everything published.

The second chapter is devoted to the pilot work for the research we carried out in Leeds, and particular emphasis is given to the development of the methodology. Given that we had very little previous relevant research to go on, we decided that we would put a lot of time into the pilot work through two different studies.



## CHAPTER 2. Two Pilot Studies

We began this research with our main purpose being to find out how parents manage their children's illnesses, with particular emphasis on the reasons for consultations at the GP.

To gather the information of interest to us we felt it was best to proceed with an interview questionnaire - designed for the the primary health carer(s) of the children. A 'childhood respiratory illness' questionnaire had been developed in the larger Newcastle study; this was tried and well tested (see for example, Wyke, 1987). We decided to use as our foundation the questionnaire used by Wyke in her 234 interviews.

The interviews in Wyke's study took, on average, one hour to complete and these were all with parents indigenous to Britain. We decided to make our interview schedule shorter than this in length, at least in the pre-pilot feasibility work, because we knew that we would be interviewing some people who did not speak English particularly well, and so we felt that understanding of the questions and responses might take longer. Adding components to the questionnaire, if it worked well, would be straightforward.

Initially, we had four main components to the interview schedule:



## 1. Social and demographic information

These questions covered all of the sociodemographic information about the families which we believed to be important, such as, occupational social class measured by the employment situation of both parents, the weekly income of the household, housing tenure and car ownership. We believed that reliance on the occupation of the male 'head of the household' as the single measure of social stratification would be entirely inadequate, given the increasing doubt over its use as a measure of social position (for example, Scrivens & Holland, 1983; Hart, 1985), and with the number of women in the workforce increasing, as their roles diversify (Heath & Britten, 1984; Stanworth, 1984). Also, since we would be interviewing in the inner areas of a Northern English city, we expected to find a high level of male unemployment.

We also included the levels of maternal and paternal education and the ages that they left school, since research had recently demonstrated a relationship between maternal educational levels and consultations at the general practitioner (Campion & Gabriel, 1985); although in using this variable we were aware of the difficulties inherent in any cross-cultural comparisons, particularly if some parents had actually had their formal education in countries other than those of the U.K.



Environmental conditions we already know to be very important with respect to the respiratory health - and health in general - of the children, and so we included questions concerning parental smoking behaviour (Colley et al, 1973; Bland et al, 1978; Fergusson et al, 1981; Modell & Boyd, 1982; Charlton, 1984; Butler & Golding, 1986), whether or not their house had damp (Martin et al, 1987), whether they could keep warm enough in the house in winter and the number of children in the household (Leeder et al, 1976a; 1976b; Gardner et al, 1984

Finally, this section included questions which recognized the racial and ethnic diversity of the community. The parents would be asked which country they were born in, how long they had lived in Britain if not born here, and their ethnic/religious group affiliation, if this was not clear already.

## 2. Information about a recent consultation

One of the main aims of this research was to determine the severity of the children's illnesses, particularly of those which are taken to the doctor. We decided that we would identify children who had been taken to see the doctor and then ask the parents how they perceived the severity of these illnesses.

The main component of this section was questions about severity, which had been developed by the paediatricians in



the Newcastle project, and used by Wyke (1987) in her doctoral research. The information we hoped to obtain here was of the kind a clinician would obtain in the history taking, rather than in a physical examination. Questions included reference to actual physical symptoms - such as, was the child coughing, the type of cough, was there difficulty breathing, sore throat, rash, etc. - as well as questions referring to the behaviour of the child, such as, needing more sleep during the day and needing more attention and comforting.

This straightforward severity measure of one specific illness was important information with respect to the parents' consulting behaviour. As Wyke (1987) points out in her report - and as I have already mentioned in the literature review - investigation of consulting for one specific illness was a method very rarely employed by studies of this nature. One study which did look at specific consultations was able to explain a greater proportion of the variance in consulting behaviour than those which had gone before (Berkanovic et al, 1981).

We took other information in this section in order to get a fuller picture of the consultation and the reasons for it. It was important to ascertain whether this was an initial contact or a repeat for the same illness, although when selecting subjects (as I will later describe) I took as much care as possible to obtain families making an initial contact. Other decisions which the parents took at this time



we felt to be important for the overall analysis, for example, how long the child had been ill before the parent decided to consult the doctor, whether the parents had tried any other treatment before visiting the doctor and the nature of the consultation, that is, was it by telephone, or did the parent just go straight to the surgery; or did the parent feel that the doctor should have made a home visit for the child.

Finally in this section we included some questions concerning the child's respiratory history, both more general ones regarding the child's life history and some specific to the previous twelve months. Obviously this kind of previous experience can have an affect on consulting behaviour.

### 3. The practices and measures of satisfaction

This section was most closely based on that used by Wyke and researchers in the Northern Regional Study. It was designed to determine how parents perceive their accessibility to doctors and the care they and their children receive when in contact with the practice. The basic satisfaction questions were formulated from an American scale of satisfaction with primary care (Zastowny et al, 1983).

There were three components of the scale, which, in the analysis, would be treated separately:



- (a) Ease of access to the practice and doctor. Questions here included appointments, difficulty in getting to the surgery and waiting times.
- (b) Satisfaction with the methods used by the doctor: How careful, concerned and willing the doctor is, as well as the length of the consultation and the amount of information the doctor gives.
- (c) General satisfaction with the way the practices were organized; for example, whether the doctors are too busy to spend enough time, or whether it was felt that the doctors or the receptionists just didn't care.

#### 4. Vignettes

We used six hypothetical situations of a 'what would you do if...?' nature. We were aware that the parents would describe to us illnesses which were not completely the same for any two families, even although the symptoms might be very similar. So we decided to include some scenarios to present to all parents and record their responses; we couldn't control for previous experiences and beliefs, but at least in these situations the stimulus would be the same, and we would have a standard measure by which to compare responses.

These six scenarios which we decided to introduce in the second pilot study, covered a wide spectrum of respiratory and febrile morbidity - similar to some of those used by Campion and Gabriel (1985) and almost identical to those used by Wyke (1987) - and were devised by the research general practitioner on the Northern Regional Study (AH):



- A The child's cough has lasted seven days and s/he has also been sick, usually when s/he coughed.
- B The child is normally well, but for the past month has been getting a tight chest and wheezy when running.
- C The child's cough has lasted for three weeks and has not got any worse, but neither has it got any better. S/he has no other symptoms.
- D The child has been wheezing for the last twenty-four hours, so s/he couldn't go to school or playgroup and s/he couldn't play with other children.
- E The child is off his/her food and has a slight temperature, but no other symptoms.
- F The child quite suddenly had difficulty breathing and his/her lips changed colour to blue in a short period of time.

### Feasibility work

At this stage we needed to locate parents who used general practitioners for their children, in order to pilot the questionnaire and the whole interview schedule methodology. Basically, we needed to find some general practitioners who were not only sympathetic to this planned research, but who would also help us to make the procedures run as smoothly as possible. For the main study we wanted to involve a few different general practices, but for the pilot studies we felt that working from one general practice would be sufficient.

At this time I had been a regular attender at a Community Health Education Centre, 'Barrack House', which had particular emphasis on the health of the different



ethnic groups of the inner-city of Leeds. This was an enormous help, as I was able to mix freely with many of the groups who used the centre. These included Asian and Afro-Caribbean mothers' group meetings, out of which four or five individuals helped me with the feasibility of the questionnaire. I did this by interviewing these mothers and then asking them for feedback on the interviews. I also tape-recorded these interviews and so was able to use the transcribed information along with their feedback to re-evaluate the questions asked, and the way in which they were asked. This pre-pilot work was invaluable. Most of the advice I gained from the women amounted to simplifying the questions as much as possible.

It was also through Barrack House that I established contact with a paediatrician who worked part-time in a general practice in an area with a high proportion of Sikhs. He was very interested in the research. By coincidence, my supervisor, Jenny Hewison, had been introduced to the manager of the same practice in the Sikh community. He was also very interested in the research and was quite willing for us to do a pilot study based in his practice. I was ready to begin the pilot work.



### Pilot study 1

This study was done with the cooperation of the three GPs and the two receptionists who worked in the general practice CR. The practice was situated in an inner-city area of Leeds, with a catchment area including a salubrious, semi-suburban area to the North; an impoverished housing estate at an approximate distance of three-quarters of a mile; and a large, lower-middle class Sikh community surrounding the practice. It also incorporated small groups of non-Sikh Indians, Pakistani Muslims, Afro-Caribbeans and Chinese people, who lived in the Chapeltown area in which the practice was situated.

### Procedure

Between the dates of June 1st and August 31st, the two receptionists at the practice placed a marker against the names of all children between two and eleven years who had attended at the practice. In this way every consultation for this age group was recorded over a period of three months. The marker was put in the attendance book. This procedure did rely on the memory of the receptionists to carry out this task, but since they were involved with it continuously, they were, as they told me, constantly reminded by the nature of the task, to go back and check that they hadn't missed any. If they had any doubt over the



age of the child, then I asked them to place a marker anyway, since I would check the dates of birth of all children 'marked'.

Each marked name was then checked by me in the children's records for that consultation, to ascertain what the consultation was for. Initially we desired to contact only consulters for respiratory illness, which we felt would be quite clearly defined in the doctor's records. But the records weren't so clearly developed as that. The doctors informed me that a record of a 'cold' could have been a high temperature, or it could have involved a slight cough as well. Similarly, a record of an upper respiratory tract infection (URTI) may not have included a cough; perhaps only a sore throat. Because of this possible source of confusion, we decided to include febrile symptoms which were either linked to a respiratory illness as the doctor recorded it, or which were recorded as a 'cold', 'temperature', 'fever' or 'flu' in their own right. In this way we would exclude febrile symptoms which were linked to other illnesses like mumps or chicken pox.

If the complaint was respiratory or febrile in nature, then the date of birth, sex and address of the child was recorded from the age-sex register. This procedure was followed over a period of three months (although interviews were only carried out during the first half of this period). In this way, accurate numbers of all respiratory illness consultations could be monitored for the age group of two-



to eleven-year-olds (see table 2b.). Home visits were not used because they were not recorded in the attendance book, and were quite often emergency visits from doctors, not partners in this particular surgery. I will describe at the end of this section what we did with the records of the number of consultations.

During the period from June 1st to July 15th, all of these consultants became candidates for an interview, except those whose parents had previously consulted with a sibling during this time and who would have already been contacted.

A standard letter was compiled (appendix IVa) and sent out addressed to the parents of all the children who had consulted in the first half of the aforementioned three month period. The children had to fit the correct criteria. This included the illness description, first-time contacts for that particular episode and no siblings previously dealt with.

The letter was written in English and contained a brief description of the project which was endorsed by the doctors, and told them that they would have the choice of participating in the study when an interviewer called at their homes. It was felt that a written reply would produce too few responses given the overall numbers of respiratory consultants.

Letters were sent out approximately ten days after the consultation and followed up approximately five days after this. This was to ensure that all interviews took place



between two and three weeks after the consultation, but also to make sure that the parents had enough time to make a decision concerning participation. If the parent who was responsible for the primary health-care of the children was not at home, then they were followed up not more than two days later. If the parent was not at home on three occasions then they were crossed off the list of possible interviewees.

Interviews were all conducted with the parent who had the most responsibility for the health-care of the children, but it was considered important by me that the parent who made the consultation was present, since some of the questions referred specifically to what happened at the doctors. This was almost always the same parent. I encouraged the presence of both parents, but did not ask for it.

I, as the only interviewer, went to the homes of the families I had sent the letters to. Once there, I explained to the parent(s) that it was my letter, a little bit more about the project and asked them if they would like to take part in an interview which would last for about thirty minutes. At this stage, only one parent out of thirty-nine declined to take part and a further one family had to be discounted because none of the parents spoke sufficient English for me to be able to conduct the interview.

I explained the questionnaire and what sort of questions I would be asking. This was done briefly as the



questionnaire carries explanations throughout. If it was possible, and if the interviewee consented, the interview was tape-recorded. A surprisingly high number of interviewees preferred their voices not to be put on tape or seemed uneasy and reluctant about it. These were mostly Asian women. As this phenomenon became more apparent to me, I decided to check on the amount of information parents were relating on taped and non-taped interviews. It was clear that on most occasions when the interview was not taped the parents were more loquacious and, subsequently, the interviews were fuller. Because of this, tape-recording was terminated approximately one half of the way through the thirty-seven interviews.

#### Consultation rates

Besides the interviews, we were also interested in how often the different ethnic groups were coming to see the doctor for these particular illnesses. This is why we kept marking consultations after the interviews had stopped; we wanted to establish a reasonable time period over which to make comparisons.

We actually obtained two different measures over this three month period: Numbers of consulters and numbers of consultations. The difference between them would be the number of return visits. Obviously some children would have been brought back more than once during this period if the



illness persisted.

Ideally, I would have counted the numbers of children in each of the ethnic groups registered at the practice, but, unfortunately, the practice didn't record this information. The only information which I could use to distinguish the children was their family names. This presented difficulties. Sikh people can often be distinguished by their names, but not always from other Asian families. Pakistani Muslims and other Indian families could not be distinguished by my untrained eye. Some Afro-Caribbean names are obvious; others indistinguishable from English names. The Chinese were most apparent, but only constituted about one percent of the practice population. So the only clear-cut distinction which made any sense was that between Asians and non-Asians. Remember that this distinction was not a problem in the interview study, simply because I could ask the parents this information.

### Subjects

All parents interviewed had attended the doctor between the dates of June 1st and July 14th, 1986, and were interviewed between the dates of June 10th and July 27th, 1986. The actual number of 'marked' consultations for this age group during this six week period of identification was fifty-six. Fifteen of these families had returned with the same child or with a different child. This left forty-one families who



I sent out letters to. Two parents were not at home on three separate occasions when I went to visit them. One parents did not wish to participate; and one family had no members who could speak enough English to take part in the study.

This left thirty-seven parents who were interviewed. I mentioned that we wanted to interview the primary health carer, but also I wanted to make sure the parent who initiated the contact with the doctor that particular time, was present.

As it turned out thirty of the interviews were with the mother of the child, three with the father, three with both parents and one with the child's grandmother, who was the legal guardian and surrogate mother from the time of the child's birth. The parents' ages ranged from eighteen to forty-nine, with a median of twenty-nine. Four of the mothers I interviewed were single.

Table 2a. gives the distribution of the ethnic groups interviewed in this pilot study:

Table 2a. The ethnic group affiliation of the families in pilot study 1.

Ethnic group	N
White, indigenous	17
Sikh	12
Non-Sikh Indian	3
Afro-Caribbean	2
Pakistani Muslim	2
Chinese	1
<hr/>	
T = 37	



Of the children, nineteen were female and eighteen were male. Their ages ranged from two to eleven, although fifty per cent were aged either two or three. All of the children were born in this country.

#### Results of pilot study 1.

I will present the results in two stages. The first of these will address the consultation rates of the Asian and non-Asian groups; and the second will look at the issues which we were primarily interested in concerning the interviews and parental management of their children's illnesses (N.B. We were not using the results of the interview study to generate findings, but instead to test the efficacy of the questionnaire and the methodology, with the intention of pursuing potential areas of interest in a larger study. These interviews were strictly pilot work.)

First of all we will turn to see what emerged from our data on consultation rates. Table 2b. gives the numbers of children, in the two- to eleven-year-old age group, who were taken to see the doctor in this three month summer period, for a respiratory or febrile illness.



Table 2b. Numbers of Consulters for respiratory illnesses, over three summer months at practice CR, for 2-11 year olds.

	Asian	Non-Asian	(T)
No. of consulters	33	27	103
No. of non-consulters	127	190	267
No. registered	160	217	370
(Chi-square = 4.02; p = 0.046).			

Table 2b. does not include those children who had repeat consultation in this three month period (33 Asian & 16 non-Asian), as this would breach the main assumption of the chi-square analysis. Even without these numbers, though, the analysis does indicate that the Asian families consult more frequently than the non-Asian families.

Since the Asian population at practice CR are largely Sikhs, it would probably not be unreasonable to generalize this finding to Sikh families. This raises an interesting issue for our approach to the analysis of the pilot interviews. Perhaps the Sikh children of this age are getting more of these type of illnesses? We can look at the number of illnesses the parents reported their child to get when we come to look at the responses to the interviews.

But it also raises some questions which we will have to tackle beyond these pilot studies. It would be interesting to know whether it is just Sikh families who consult more often, or does this also apply to other Asian groups? And do



they consult more often for all illnesses, or is it just those of a respiratory or febrile nature? We know that the pilot interviews cannot hope to answer all of these questions, but hopefully our future studies can.

Results: Interview study

I will look first of all at the parental responses to the question I just referred to: 'How often does your child (the child for which the parents consulted) tend to get illnesses of this nature in a year?' (table 2c.):

Table 2c. Parents' recollections of the number of similar illnesses child had in previous twelve months.

	<u>No. of illnesses</u>			(T)
	none/one	two/three	four or more	
Asian	7	7	3	17
Non-Asian	11	1	8	20

(Chi-square = 7.44; p < 0.025).

Table 2c. indicates that there are statistically significant differences between the Asian and non-Asian parents concerning their estimates of the number of illnesses that particular child had previously. Yet the outcome is, if anything, the opposite to that which we might have predicted from the consultation figures. If parents' memories for the



last twelve months are a reliable guide to the actual numbers of illnesses these children are getting, then we might have expected to see higher numbers reported by the Asian families, to account for the higher consultation rate. Yet this wasn't the case. The non-Asian families tended to report more, although the unusual distribution of responses suggested that the difference may simply be one of response styles.

Given the strong link between social and environmental conditions and health (respiratory conditions in children being particularly sensitive to this link), we wondered whether there was any indication from the interviews that higher Asian consultations could be related to poorer living conditions. Table 2d. gives the numbers of families falling into each of the registrar general's social class categories. Two families from each group had no one in employment and these are not included.

Table 2d. Social Class From Main Earner by ethnic group.

	I	II	III	IIIm	IV	V	(T)
Asian	0	4	4	3	3	1	15
Non-Asian	2	5	2	5	2	2	18

Numbers are noticeably sparse, but there is no discernible pattern from table 2d. A chi-square analysis of manual



social classes versus non-manual groups suggested that the groups are very similar with respect to social class.

Another question we asked concerned the income of the household, and the parental reports indicated that the social class measure can be misleading - at least with respect to this direct economic measure (table 2e.):

Table 2e. Weekly earnings by ethnic group.

	<£70	£71-£140	£141-£200	>£200	(T)
Asian	0	7	7	0	14
Non-Asian	4	4	7	4	19

The family income reported by those parents who knew, and were willing to disclose this information, gives a much clearer indication of the economic homogeneity of the Asian (Sikh) population attending this practice (table 2e.).

As we have previously established, poor living/housing conditions are known to have deleterious effects on the respiratory health of those people who live in such situations. Children are at particular risk of bronchitis, asthma and sometimes tuberculosis if conditions are particularly bad. Two questions which related specifically to the house were, 'Are you warm enough in winter?' and 'Do you have any damp in the house?' The two groups we compared were quite similar with respect to the parental responses on



both of these questions: Twenty-six percent of the non-Asian group reported not being warm enough in winter, compared to eighteen percent of the Asian group. And thirty-two percent of the non-Asian families reported having damp in their houses, compared to the same three (18%) Asian families who reported being cold in winter.

A further 'home' factor which a lot of research has compounded with children's respiratory health is the smoking behaviour of the parents (table 2f.). In fact some researchers have gone so far as to suggest that parental smoking may be the main factor involved in the high morbidity and mortality rates from respiratory illness, in children from social classes IV and V (Modell & Boyd, 1982).

Table 2f. The number of families in which at least one parent smoked by ethnic group.

	Smokers	Non-smokers	(T)
Asian	0	17	17
Non-Asian	13	7	20
(Chi-square = 14.83; P < 0.0002)			

Sikh people who follow the Sikh teachings, as most do, believe that smoking cigarettes contaminates the body. Most Muslim families believe that smoking cigarettes goes against the teachings of Islam. The result of this was that none of the Asian families interviewed had any parents who smoked



(table 2f.).

Finally among the socio-demographic variables, we looked at the employment of the mother. The information we do have on maternal employment is compounded by various factors. Some researchers have found a higher consultation rate among mothers employed in manual occupations (Wyke, 1987). But when ethnicity is considered, the patterns could well be different. For example, Pless and Hood (1967) found that Afro-Caribbean mothers consulted less and suggested that part of the reason for this was that they were more likely to be in full-time occupations (through economic necessity) and had less time available to visit the doctor.

The Asian and non-Asian mothers in our study were equally likely to be in employment, although the (non-significant) tendency was for the Asian mothers to be more often employed full-time (table 2g.):

Table 2g. Nature of Mothers Employment by Ethnic Group.

	Full-time	Part-time	(T)
Asian	8	3	11
Non-Asian	4	6	10

I should reiterate that the main aims of this study were to pilot both the method and the questionnaire, and not to generate findings as such. We wanted to know whether our



questionnaire was understood by the parents, and what methodological problems we were likely to encounter - if any. In this respect the pilot interviews were explorative.

Most parents in both groups reported that they tried their own treatments for the child, before going to see the doctor: Fifty-three percent of Asians did and sixty-five percent of non-Asians. The chemist's cough mixtures were the most common treatment mentioned by both groups, followed quite closely by Calpol (this is a remedy containing paracetamol, and is recommended by both GPs and chemists for young children, especially for high temperatures).

There did appear to be a difference in opinion between the two groups concerning the efficacy of the treatments tried. Thirty-eight percent of the non-Asian group who tried something felt that it helped in some way, compared to only eleven percent of the Asian group. We were dealing with very small numbers here, and so couldn't perform any statistical analysis on this data.

Parents on the whole were very quick to consult the Dr. Two or three days after the onset saw almost all parents initiate a consultation. It is important to remember, though, that many of these questions were putting the parents' memories through quite a stiff test. It can never be a clear certainty, with questions of this nature, that we collect information on what actually happened, as opposed to what the parents believe they would have done. Or what they want me to believe they did. The problems with the



retrospective interview will be addressed more fully in the discussion chapter.

A question was put to the parents which read, "What was it that made you consult the doctor on that particular occasion?" We were interested to see what the responses of the Asian and non-Asian parents would be, to determine whether there was any symptom, or illness pattern, which seemed to elicit a consultation more often in one group than the other.

The clearest aspect of the responses to this question was that 'a cough' was mentioned most often by both groups. More than fifty percent of both Asian and non-Asian parents mentioned this as the trigger symptom. The next most often mentioned symptom was a high temperature or a fever, something which doctors are more likely to consider trivial. This is interesting in the light of a study by Campbell (1975) in the U.S. This study concerned, among other things, how mothers attribute signs and symptoms as indicators of illness in their children. Almost 98% believed fevers and high temperatures to indicate illness in their child, dropping to 85% for earache and sore throats and down to only 57% for coughs. Campbell interviewed only white families in this study.

Although we didn't look at any severity measures for the illnesses which the parents had consulted for, we did compare the two groups for indices on each symptom. For example, the numbers of parents who described their children



as having a chesty cough, a runny nose, coughing up phlegm and being very distressed by the illness, were calculated for Asians and non-Asians. One of the ideas we had in mind with these comparisons was that the Asian children may get more severe illnesses, and this is why we found a higher number of parental consultations for them. Yet both groups described very similar illnesses; this was the case with the clinical characteristics of the illness and the behaviour of the child. All indications were that the children in these two groups of families got illnesses of similar severity, were taken to the doctor with illnesses of similar severity, and that parents assessed these situations very similarly. Having said that, we were aware that by interviewing consulters we would get only a part of the picture at the more severe end of the respiratory illness spectrum. At this stage we already had ideas to include 'non-consulters' in our second pilot study, which will be described shortly.

One aspect of the questionnaire which we asked the parents and haven't introduced yet concerned what they believed caused this particular illness. Table 2h. lists the five most often mentioned replies to this open-ended question:



Table 2h. What the parents thought caused the child's illness by ethnic group.

	Bugs/ Virus	The weather	Certain foods	Prone- ness	Dont know	(T)
Asian	4	3	4	0	4	15
Non-Asian	9	0	0	2	6	17

The ubiquitous Western virus/bug/germ was, not surprisingly, much more of a favourite with the non-Asian parents, which was virtually all indigenous families. The Asian parents preferred more specific events to explain the onset: "There was a sudden change in the weather that day", and "He had eaten some greasy food earlier and so when he drank the coca-cola this set him off coughing". The mixture of greasy food and fizzy drinks were believed by more than one Asian parent to have started their child's illness, and it was related to coughs in particular. All four parents who mentioned food or drink as the cause, were all from Sikh families and all mentioned either or both of these consumables.

We knew that to get a clearer picture of the parents' beliefs, we would have to look more closely at their beliefs in general and not only at those regarding a specific illness episode. For example, a parent may be quite sure that a child had 'caught' a cold through being out in the rain, but this may not reflect that parent's general beliefs concerning how children get colds. This was something we



decided to explore fully in the main study.

In summarizing this pilot study I can first of all say that our main aims were realized. The method and the questionnaire worked extremely well in this multi-ethnic community of people. Also, and probably most importantly, the responses of the parents were very encouraging, with an extremely low number of refusals.

Practice CR gave us the opportunity to monitor consultation rates, and over a period of three months we found the Asian families (mostly Sikhs) consulted more often for respiratory and febrile illnesses than did the non-Asian families. None of our explorations through socio-demography, severity or health beliefs gave us an explanation for this finding, but then we were dealing with quite small numbers. We planned a larger study which could deal with this issue more deeply, and, before doing so, a second pilot study which would bring in another general practice to our research, and which could also introduce some issues which developed out of the first.



## Pilot study 2

It was decided that the second pilot study would be very useful for trying a new component of the questionnaire: Parents' general perceptions of, and beliefs about, these illnesses. It would be a smaller study at a different general practice (I had already established links with one) to try out the efficacy of this.

This 'health beliefs' section included questions like, 'how do you think children get colds (coughs)?', 'do coughs always occur with colds?', 'how long do you think coughs (colds) last normally?' and 'what do you think is the best treatment for a cold/cough/temperature/ etc? An important question we also added here was, 'do you think that colds (coughs) should be immediately taken to the doctor?' and, if no, 'what would the illness be like if the child did need to see the doctor straight away ie. what symptoms?'

Another addition to the methodology which we wanted to pilot in this study was the inclusion of parents who had a child within the same age-group, but who had not been to see the doctor recently for any of their children, with an illness of this nature. We believed that contacting 'non-consulting' parents about their children's illnesses could actually be just as important for formulating the patterns which parents go through when dealing with their children's illnesses. We would be addressing the question, do parents who had not been to see the doctor recently



simply have healthier children, or is it because they have a different procedure for handling their illnesses?

This pilot study also introduced the vignettes, which I explained previously. These six hypothetical scenarios would hopefully give us some standardized measure of parental consulting behaviour.

One of the more important reasons for doing this second smaller pilot study was to establish contact with the Pakistani Muslim population. This community of people are the largest group of immigrants in Leeds, and also have the highest numbers of non-English speaking adults of any of the larger immigrant communities in Britain. This is particularly the case for the women of this group, and so is bound to have implications for the way they use the health services for their children. Although I had established contact with some families in this group already, the practice we chose for the second study was situated in one of the more impoverished areas of the Leeds inner-city. It was important for us to know how I would be received by the people living in these areas, and would my contacts be practical and informative?

Again we used just one general practice (HR) in this study, which was a single practitioner general practice. The GP was from Bangladesh and spoke Bengali and Punjabi fluently, with a good understanding of Urdu and Hindi. So with respect to doctor-patient communication, language was rarely a problem at this general practice.



Procedurally, most aspects of this study were identical to that of the first pilot, so I will restrict my descriptions to those that differed. One of the reasons for choosing this practice was that it afforded us the opportunity of contacting ethnic groups quite different from those of practice CR. The GP assured me that he had very few Sikh families registered at the practice and so this practice gave us the opportunity of monitoring consultation rates for the Pakistani parents (Asian names would be mostly those of Pakistani Muslims). To do so, though, we relied very heavily on the receptionists being in a position to mark down the information that we wanted. Unfortunately, at the time of conducting this study, practice HR was in a period of receptionist transition and so it was impossible to obtain records of consultation rates. Yet we would be able to do this later in the year, during the period of the larger study.

The main difference with the interview procedures in this study from that of study 1., involved the use of interpreters. I mentioned the large number of Pakistani women in Britain who spoke English only slightly, or not at all (Wandsworth Council for Community Relations, 1978). In 1978 it was seventy percent. I managed to procure a research grant specifically to employ people to interpret the letters I was sending out, and to accompany me to the homes of families who did not speak sufficient English. I will explain this procedure in more detail in the next section.



## Procedure

Between the dates of February 1st and February 17th, 1987, letters were sent to families previously identified, with identical information to the first study. These were all followed up with a house-call approximately ten days afterwards. Twenty letters were sent altogether, and of these households, three were not at home on more than three occasions, one family refused to participate and one family had no members who could speak enough English, to carry out preliminary negotiations. This brings me to the explanation of the interpreter.

Leeds Interpreter Services (LITS) said that they would be happy to provide me with professionally trained interpreters for this research, with one or two days notice. Before contacting them, I obviously had to find out if they would be needed, and if the parents were agreeable to both myself and an interpreter conducting the interviews. When initially calling at the family home, I established first of all that none of the parents spoke English. This was done through anyone at the house who spoke English, which was usually the younger children. If neither of the parents spoke sufficient English, then I asked if there was any other relative who lived there who would be willing to interpret from English. On one occasion I asked this of the eldest child who immediately volunteered to do it. I felt



that using the children in this way would be okay if they were older than fifteen, particularly since I then established that the older children in such households were actively involved in the health care of the younger children.

If there was noone available in the family to interpret, I then asked the parent (through the child) if it would be okay to return again, at a specific time and day, with an interpreter. Both parents I asked this of agreed quite readily. These two interpreted interviews were both with Pakistani Muslim women, who spoke Punjabi. The same interpreter, a woman of the same ethnic origin as the interviewees, accompanied me to both of these families. She agreed with me that both of these interviews went very well.

The main problem with this procedure was, not surprisingly, when I arrived at the house in the first instance. The young children interpreting for me had a little bit of difficulty getting the information across to their parents and consequently I wasn't entirely happy that the women knew exactly what they were agreeing to. To make sure of this, I asked the interpreter to explain everything again and once more ask the mother if she agreed to do the interview.

Every other part of the procedure was the same as the first study, except for the recruitment of the non-consulting families. The ten families I had chosen as consultants were matched, in the age-sex register, with



non-consulters. This was done by choosing the child nearest to the consulting child's age, who had not been taken to see the doctor in the six months previous to February, 1987. So the children were matched by age and sex only. Consultations were again recorded from the doctor's records. In this way, twenty children were identified, ten consultants and ten non-consulters; of which fifteen interviews emerged, seven with consultants and eight with non-consulters.

### Subjects

Fifteen interviews were carried out with parents registered at practice HR and who had at least one child between the ages of two and eleven years. Eight of these families had consulted at the general practice for their child's respiratory or febrile illness between the dates of January 25th and February 10th, 1987. The other seven families were matched to the 'consulters' by the child's sex and age, and these families had not attended the GP for any of their children in the six months previous to the study. These were the 'non-consulters'.

Table 2-1. gives the ethnic group affiliation of the families in study 2:



Table 2i. Ethnic group affiliation of the families in pilot study 2.

Ethnic group	Cons	Non-cons
Pakistani Muslim	4	3
Afro-Caribbean	1	2
White, indigenous	2	1
Indian Hindu	0	1
Polish	1	0
T =		8
		7

Twelve of the interviews were with the mother only, two with both parents present and one with the father only. Two of the parents interviewed were single, both Afro-Caribbean mothers. Of the children, nine were male and six female, with an average age of 4.9 years.

### Materials

The section of the questionnaire on illness severity was changed to accomodate non-consulting families. They were asked if their child had had a respiratory or febrile illness recently (cough/cold, high temperature or the flu) and were subsequently asked the same questions about this illness. If the child hadn't had one, or the parents couldn't remember any of the details, then this section was skipped over. I found that parents could remember reasonably well up to about six months in the past, but after that some informed me that they would really be guessing as to the



specific symptoms involved. As we were in the middle of a cold winter, most had a recent illness to talk about anyway; and in fact only one mother informed me that her child had not had any such illnesses in the previous twelve months.

I had the letters of introduction worded in the same way as the first study (with only the doctors name changed), but I also used LITS to translate it into Punjabi, Urdu and Bengali (Appendices IVb, IVc & IVd). Including the English, four versions were sent to the Asian families. All other families got the English version only.

## Results

The small numbers interviewed meant that we weren't so much interested in what the parents said, but rather whether or not the interview schedule and the questionnaire 'worked'. On both counts we were very encouraged by how smoothly this whole study did operate, considering that we were trying to communicate with a community who had a large proportion of people who did not speak any language which I understood. The two interviews using a professional interpreter worked extremely well, as did one interpreted by an older child. The response I got from the parents was very encouraging.

A couple of interesting outcomes did emerge from the 'new' section concerning general beliefs and perceptions. In response to how children get coughs and colds, most parents from both groups favoured the cold weather as an



explanation.

In response to the question: 'How do you know when your children have a cold? What sort of symptoms do they get?', the most often mentioned symptom by the parents was 'runny noses'. Although, having said that, the Asian parents were equally likely to mention a cough and a high temperature or fever; symptoms which Campbell's (1975) mothers tended to believe were indicators of illness. The non-Asian parents didn't mention these symptoms. The possibility that Asian parents attribute more serious illness indicators to their children's colds will be addressed in the main study.

We wouldn't be the first to discover that beliefs and perceptions of colds and coughs were culturally determined. Harwood (1971) asked Puerto Rican people about their health beliefs and specifically about the cold:

"Common colds are seen as quite serious by many Puerto Ricans, since they are viewed as the start of a possible chain of illnesses, brought on by repeated chills and failure to effect a cure. Thus, an untreated or chronic cold is believed to lead to chronic shortage of breath or wheezing (fatiga), which in turn may develop into bronchitis or even tuberculosis (Harwood, 1971, p.1154).

Many Puerto Ricans adhere to the 'hot-cold' theory of disease, as I previously described as a feature of the main Asian traditional medical systems (Ballard, 1983b). If the Asian parents do perceive their children's colds to be indicators of more serious illnesses, then we would expect them to consult the doctor for these illnesses more often



than indigenous people to England would.

Something which made us even more certain that we were tracking a real phenomenon, was a communication from a GP working in a multi-ethnic practice in Lancashire (Molyneux, 1987). He decided to record the numbers of consultations for febrile (mainly upper respiratory tract infections) and non-febrile illnesses in his Asian and caucasian one- to six-year-olds over a period of twelve months. Looking first at non-febrile illness, he found that the peak consultation rate was zero, for both Asian and caucasian children (with high numbers of individual consultations less frequently observed). Interestingly, he found a difference when he plotted the chart for febrile illnesses. The caucasian chart looked the same - a peak at zero and falling away - but the chart for the Asian children showed it to increase from zero and to peak at three, then to fall away. That is, consultations rates were higher for Asian children, but only for febrile illness. Admittedly, though, the numbers of Asian children of this age group in the practice was relatively small (twenty in total), but it did serve as another useful pointer to possible different beliefs about illness, which we would approach in the main study.

### The vignettes

We obtained quite a wide range of responses from the parents to these scenarios, from consulting a doctor immediately to



doing nothing at all and letting it pass; although they did produce a slight ceiling effect towards consulting a doctor (table 2j.):

Table 2j. The percentage of parents who said they would consult a doctor for the 6 vignettes used in pilot study 2.

Vignette	% who would consult Dr.	
Vignette A	100	(81)*
Vignette B	79	(91)
Vignette C	71	(62)
Vignette D	64	(63)
Vignette E	36	(34)
Vignette F	100	(93)

\* The bracketed percentages are from Wyke's (1987) study based on 476 responses.

The much larger number of responses in the study by Wyke produced quite similar numbers of 'consult a doctor' replies. We planned, at a later stage of the research, to interview the GPs and ask them what they would recommend the parents to do in these situations. This would give us some sort of comparison between parent and GP beliefs.

### Summary/Discussion of the pilot studies

The main purpose of the pilot studies - to put the questionnaire and interview schedule to the test - was carried out satisfactorily. The GPs we contacted were



interested in the research and happy for me to contact their patient population in the procedures which I described.

Generally, there was a very favourable response among the respondents, both concerning the nature of the research and participation. Of the sixty-three families contacted only four decided that they did not want to participate. On the whole the interviews went very smoothly - including three in which interpreters were used - although, as expected, the phrasing of the questions did have to be simplified occasionally.

These fifty-two interviews also gave us many leads and ideas to pursue in the larger study. We discovered that the Asian population in one of the practices (which was mainly Sikhs) consulted the doctor more often for their children's illnesses. We have indications from another general practice that this phenomenon may only occur for specific illnesses, ie. respiratory and febrile. This is another aspect of consulting behaviour which we can explore in the main study.

We feel that the parents' beliefs about their children's illnesses is a particularly interesting aspect of this work and the pilot studies have given us a few more specific ideas to follow. What parents perceive as the main causes of these illnesses is one such area of interest.

We also developed some possible reasons for the higher consultation rates. One was that the Asian population actually get more serious symptoms and are more worried that these 'common' coughs and colds may develop into something



more serious. These ideas will be important for the final formulation of questions.

The second pilot study was analyzed in the spring of 1987. I would like to move on now to a new chapter which describes the methodology we employed to carry out the main study in the summer of 1987.



### CHAPTER 3. The Main Study: Aims, Methodology & Description

#### The aims of the research

Our primary aim was to collect information from parents, in a variety of ethnic groups, about their children's health and health care. We planned to interview families who had recently consulted a doctor for their child's illness, and families who had had an ill child, but who had decided not to see a doctor. In this way, we would obtain children with a wide spectrum of respiratory and febrile morbidity, and, more importantly, we could make comparisons of 'consulters' and 'non-consulters' on aspects of socio-demography, illness severity, parental beliefs about their children's illnesses, and their satisfaction with the primary care provided. The important point being that we could make these comparisons across different ethnic groups.

Another aim of the study concerned consultation rates. It was a bonus to our data collection when we discovered that all three practices were willing and able to help us to monitor consultation rates. We wanted to determine i) the numbers of Asian and non-Asian consultations for children at all three practices, and ii) whether patterns of consultation correlated with specific respiratory and febrile conditions, or whether they did for all illnesses.

It was also our aim to try and make sense of the



patterns of consultation among the Asian and non-Asian groups by carefully considering the information to emerge from the parental interviews. We were aware that these patterns could be influenced by a complex mixture of socio-demography, severity, beliefs & perceptions, and satisfaction. Our purpose was to try and provide as clear a picture as possible from all of these variables.

Consultation rates could also be influenced by practice policy and the beliefs and attitudes of the GPs towards their multi-ethnic population. One final aim we had was to interview all of the GPs involved in the study - specifically about these issues - to try and get a more complete picture of what happens at the practices and of any practice differences. These GP interviews will be described in more detail when the particular section on 'practice differences' is introduced in the results.

The main hypotheses tested in this research were:

1. That parents have a rational, logical approach to the health care of their children, including decisions regarding consultations at the general practitioner. Therefore, the best predictor of what a parent is likely to do in any situation where s/he has to make such a decision, will depend first and foremost on the clinical condition and the behaviour of the child.
2. Parents' ethnic background and cultural experiences will have some profound effects on their health beliefs, and, therefore, their perceptions and management of their children's illnesses. In specific childhood illness situations we would expect these experiences to influence the decisions which the parents make for the child, including decisions to consult the doctor.



### The Practices involved in the main study

Both practices CR and HR agreed to continue to help me throughout a larger study scheduled to take place in the summer of 1987. We felt that it would be useful to include at least one more practice in order to get a wider distribution of families across the city and to boost the numbers, since we had decided that using the same families again would be inappropriate for this research.

Between the four doctors at the two practices, four suggestions were made regarding GPs who might be sympathetic to this research and therefore willing to help. I wrote to each of these four GPs informing them about the research to date, the help which I had obtained from the two practices, the doctors who recommended them, and asking them for their help (Appendix V). One of these four replied to me and suggested that he and his colleague were both interested and willing to help. After I had met with them and described the procedures which we had gone through in the two previous studies, they both gave me the go ahead to use the same procedures, with the same access to the children's records, as before.

This practice (WR) was part of a large family health clinic in which many more GPs operated, either singly or in groups. Geographically they were further away from the recognized 'inner-city' area of Leeds, although slightly closer to the town centre, near the university. The largest



minority ethnic group was, like practice HR, Pakistani Muslims, with a noticeable Afro-Caribbean contingent. In addition there were a distinct group of middle Eastern and far Eastern nationalities, probably because the practice was situated close to the university.

This practice was also in a period of transition, this time with the doctors integrating a third GP into the practice. As this was only in the preliminary stages, it was agreed that I would use only those families registered with the two original GPs (N.B. the incoming member of the group was already practising at the clinic). Table 3a. summarizes some aspects of the three practices we operated from in the main study:

Table 3a. A description of the three general practices of the main study.

Practice	Description
CR -	This was a group practice with three GPs, situated in a semi-detached, converted house in the inner-city of Leeds. One GP was male and the other two females. All were white and indigenous people. The practice population comprised of a large group of Sikh people and an indigenous people covering all social class groups, as it embraced some semi-suburban areas. A number of Afro-Caribbean people also attended this practice.
HR -	This was a single GP practice, situated in a converted terraced house, also in the recognized inner-city. The GP was a Bangladeshi male. There was a very large Pakistani Muslim population registered at this practice, with people from other areas of the Indian sub-continent and from the West Indies, making up the other minority ethnic groups.



WR - This practice comprised two GPs working in a large, modern health clinic in a central, university area of Leeds. One GP was male, the other female; both were white and indigenous. The largest minority ethnic group registered with the practice was Pakistani Muslims, followed by Afro-Caribbeans and some middle and far Eastern people. Unlike the other two practices, they had ready access to computerized records, health visitors and interpreters.

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### The sample for the interviews

For our sample, we wanted to interview people from as wide a variety of ethnic groups as possible, which was why we chose practices in these localities. We also wanted to talk to those parents who had consulted very recently with their child and to those who had not done so in the recent past. This involved specific criteria for selection of the families. When a family consulted with a child (within the specified dates), in the target age-group and for the target illnesses, then they immediately became target families; that is, assuming that I hadn't contacted them before, a letter was sent out to their home address. Those who were subsequently interviewed from this group became the 'consulting' families of the study. There were fifty-nine in this group in the main study.

For each consulting family interviewed, a matching child was searched for who had not been taken to see the doctor in the previous six months. These children were



matched only on sex and age, and were located by taking the child closest to the consulter by date of birth and checking the records for previous consultations, doing this systematically until a child fitted the criteria.

This procedure eventually began to develop some problems. There simply were not enough children of this age group who had not been to see the GP for that length of time. As this became evident to me, I decided to reduce the elapsed time without a consultation from six to four months. This was okay, although towards the end of the interviews I was running short of candidates for this criteria also!

Another problem I encountered when obtaining a suitable non-consulting group occurred at the interview stage. Three children who, according to the practice records, had not been to see the doctor in the previous four months, actually had done so. It became apparent that these were errors in the records, as on two of these occasions the child had been taken in within the previous two or three weeks, and the third approximately two months before. One of the two most recent consultations was for a respiratory condition and so this family joined the consulters. The other was for an immunization booster and as the mother told me that she had not taken the child to the doctor that year for a cough or a cold, I decided to include this family in the non-consulting group. The third was more difficult to place, since the consultation at two months previous was for a cough. I decided, as the family did not meet the specified criteria



for the non-consulting group, to put them in the consulting group, although they hadn't actually been quite as recently as the others.

If we had perfectly matched every consulting child then we could have expected equal numbers in these groups. The problem which I just explained accounted for some children (originally non-consulting matches) ending up in the consulting group. Also, I had more problems locating non-consulting families at their homes. I discovered quite soon that this was because some of them had actually moved away, forgetting to notify the doctor. A new match was looked for on all of these occasions, but as the time towards the end of the study came closer and non-consulting target children became scarce, inevitably not all of the consultants were matched up.

There were forty-eight non-consulting families interviewed in the main study. Of these, thirty-five reported that their child had had an illness of a respiratory or febrile nature during this time, but had not consulted for it; and thirteen reported that their child had had no illness of this kind during the previous six months. This latter distinction is important, since the thirteen families reporting no illness will not be included in the analysis of illness severity. This is made clear in the results section on 'severity'.



### Number of families contacted and refusal rates

Over the period of ten weeks, between June 8th and August 18th, 1988, I sent letters (see Appendices IVa, IVb, IVc & IVd) to 141 families registered at the three practices previously described. Table 3b. shows what happened to those initial contacts.

Table 3b. Potential interviewees contacted by letter.

	N
Letters sent out	141
Families not at home on three occasions	19
Families with no English speaker at home	5
Families who refused to participate	5
Families who had moved home	4
Families whose homes I failed to reach	1
Total No. of interviews = 107	

There were a surprisingly high number who were not at home on three separate occasions. One reason for this could have been that some families were on their summer holiday.

The one family I failed to reach was an error on my part which I detected after the interviews were complete.

As with the pilot studies, refusal rates were noticeably low: Five out of the 117 families contacted. Including the two pilot studies, refusal rates were only five percent of the total number of families contacted.



### Ethnicity and the interviewees

Table 3c. Ethnic group affiliation of the interviewed families.

<u>Ethnic group</u>	<u>N</u>
White, indigenous	36
Pakistani Muslim	28
Sikh	23
Afro-Caribbean	16
African	2
Indian Hindu	1
Iranian Muslim	1
<hr/>	
T = 107	

Ethnicity is a concept which has defied definition. There is no clear-cut agreement as to what actually constitutes ethnicity. It could be country of birth, cultural or religious homogeneity or even nationality. For the purposes of our main analysis of the interviews, I decided to integrate the four families not part of the four larger ethnic groups. The Hindu family I grouped with the Sikhs as they had an Indian birthplace in common. The Iranian Muslim family I put with the other Muslims. And the African families I put into the Afro-Caribbean group.

I make no claims that they actually belong to these ethnic groups. We felt that it was important to have the Sikh and Muslim groups separate, due to their different religious beliefs. I have described why it wasn't possible to do this for our study of consultation rates, which relied



on the family name as a distinguishing feature. Table 3d. illustrates the numbers of families in each of the groups:

Table 3d. The families in the main study by consulting behaviour and ethnic group.

	Consulters	Non-consulters	(T)
White	20	16 (5)*	36
Muslim	17	12 (3)	29
Sikh	12	12 (4)	24
Afro-Car.	10	8 (1)	18
(TOTAL)	59	48	107

\* These bracketed figures refer to the numbers of families where no illness was reported for the child.

It is important to realize that the figures in table 3d. are not a measure of consultation rates - even although there may be a relationship - since one of our aims was to try and get as equal numbers as possible in the consulting and non-consulting groups.

### The questionnaire

We were reasonably happy with the format of the questionnaire and the time it took to work through with the parents, so no drastic changes were incorporated. A few more questions were added at this stage, though, in the light of what we had learned from the pilot work and subsequently. These



additions were primarily to the section on the parents' general beliefs about the children's illnesses.

We felt that it would be useful to introduce some questions specifically about temperatures and fevers, in order to determine if some groups in the population actually have children who get more of these illnesses or whether they are more likely to judge an illness in these terms. We developed two questions for this purpose:

42. Sometimes when young children get colds they develop a high temperature or a fever. In your experience does this happen often with your children, or is it more rare?

One of the GPs in the Newcastle study was concerned that some parents react by wrapping the child up when they have a high temperature, which is basically the wrong thing to do. So we asked the parents:

43. If your child has developed a high temperature or a fever, what do you think is the best thing to do?

This question was left open-ended and a verbatim response was recorded (the coding will be explained later in this section).

We also wanted to explore the parents' perceptions of the development of the cold, in the light of Harwood's (1971) findings that some ethnic groups are more worried by what common colds can develop into. We included a question which asked parents:



34. In your opinion, what would happen if you just left your child's cold alone? If you did nothing for it?

And we prompted this with, "Do you think that they would get worse if left alone, or do you think that they would tend to get better?" Again this question was left open-ended.

Another question we added to this section was prompted by a recent study by Gillam (1987). In this study, the author found that the Asian population went to the general practitioner more often for antibiotics than did the indigenous population. We wondered if this was also the case with parents consulting for young children. We included the question:

35. In your opinion, what is the most important thing to receive from the doctor when you take your child (one of your children) for a cough or a cold.

### The vignettes

Recall that in the second pilot study we obtained a slight ceiling effect on the number of parents saying that they would consult a doctor. We decided to include two less severe scenarios in the main study, to try and get the balance more even. We felt that the GP in the Northern Regional study who devised the vignettes (AH) would be the best resource for these. He sent us these:



The child has been hot and miserable for 24 hours, drinking plenty of fluids, but refusing food.

The child has had a runny nose and a fine rash for the last 24 hours. There are no other symptoms.

### Summary of main questionnaire content

This is probably best summarized in a table (3e.):

Table 3e. The main sections of the questionnaire

<u>Order of appearance</u>	<u>Section description</u>
1.	Socio-demographic information
2.	Parental beliefs about their children's respiratory and febrile illnesses.
3.	The vignettes
4.	The severity of the reported illness and parental management.
5.	Parental satisfaction with the primary health care given to their children.

(see Appendix I for the full questionnaire).

### The Interviews

All of the 107 interviews were carried out between the dates of 15th June and 26th August, 1987. The length of the interviews varied enormously, ranging from twenty-three minutes to seventy-one minutes and averaging forty-seven



minutes. Six of the interviews were interpreted; three by the same professional interpreter of the second pilot study and three by relatives of the family. One Sikh mother's sister interpreted for me and in the other two with Muslim families, a sister-in-law and an eldest daughter did the interpreting. All three of these relatives were young mothers themselves. The three professionally interpreted interviews were all with Muslim families.

### Coding the Interviews

Most of the questions were precoded, with a range of possible replies which I had specified. The range of replies came both from the previous work of Wyke (1987) and colleagues in the Northern regional study and the pilot studies, although there was always a space for 'other' responses.

The precodes were developed in four ways. Firstly, for many questions coding was fairly straightforward and these invariably involved 'yes/no' responses. For example:

21. Do you have any damp in the house? (Yes = 1; No = 2)

Secondly, some of the questions were precoded through our knowledge that there could only be a certain number of possible replies. For example:



146a. How do you normally make the appointment?

Own telephone	= 1
Another private telephone	= 2
Call in	= 3
Public call box	= 4
Other (SPECIFY).....	= 6

Thirdly, for a large proportion of the questions, we were able to develop precodes from the range of responses in the pilot studies. For example:

82. Could you hear any sounds from X's chest?

(Yes = 1; No = 2)

IF NO GO TO 83.

IF YES ASK: (a) What were they like?

Wheezy	= 1
Chesty	= 2
Catarrhal	= 3
Heavy breathing	= 4
Other (SPECIFY)....	= 6

The pilot question had been open-ended and these range of replies were all of those which the parents had given in response to this question. Also, for questions in which the range of replies was particularly large, and from which the respondent may give more than one response, we coded it in such a way as to include all replies given. For example:



90. Did you try any treatments for X before  
you saw the doctor? (Yes = 1; No = 2)

IF NO GO TO 91.

IF YES ASK: (a) What did you try?

(RECORD ANY MENTIONED AS 1.  
OTHERWISE RECORD AS 9)

Calpol.....	[]
Cough mixture.....	[]
Vick.....	[]
Junior disprin.....	[]
Paracetamol.....	[]
Honey & Lemon.....	[]
Milk of Magnesia...	[]
Hot drinks.....	[]
Ventolin inhaler...	[]
Garlic tablets.....	[]
Other (SPECIFY)....	[]

These would each be recorded as present or absent.

Finally, when coding the questionnaires, we included some open-ended questions, for various reasons. One was that by writing down verbatim what the parent said, we would be getting a completely unabridged version of the initial reaction to the question. This was sometimes preferable, especially for those questions relating to health beliefs, which could produce some of the more surprising responses. Also, as I have previously mentioned, we added some questions after the pilot work and so hadn't collected any responses which we could precode. Unless these questions were straightforward, one-word answers, then it made more sense to leave them open-ended.

### Consultation rates

Consultation rates at the three practices were recorded independently of anything we did in the sampling for the



interview study. The higher Asian consultation rates recorded in the first pilot study prompted us to look at these rates for all three practices. Our procedures for collecting this information was identical to that described in the first study. The receptionists would place a marker in the attendance book against any consultation for a child within the two- to eleven-year-old age group. I would then check the nature of the consultation from the doctor's records. One difference in this procedure from the pilot was that we recorded rates for non-respiratory illnesses, as well as respiratory illnesses. Once again we identified the ethnic groups of the children by names, and so we used the same Asian/non-Asian comparison as before. The results of the consultation rate study are introduced first in the results section following.

The methods which I have described in the last two chapters will be given some critical evaluation in the final chapter. Now I will move on to describe the results which came out of the main study.



## CHAPTER 4. Results of the Main Study

Before presenting the results of the main study, I would like to give a short preamble to this long chapter and its various sub-headings, to establish the plan we had for the analysis.

I will first of all look at the results of the consultation rate study (4-1). It is important to establish the pattern for this study before looking at the interviews, simply because the outcome could influence the way in which the responses to the interviews are best interpreted.

For the remainder of the results chapter I will be preoccupied with making sense of the data from the interviews. We decided to take each of the five main sections of the questionnaire in turn and look at the responses of our interviewees. These main sections were outlined in the previous chapter, but as a reminder they are:

- 4-2. The socio-demography of the families.
- 4-3. The severity of the reported illnesses.
- 4-4. The vignettes.
- 4-5. The parents' beliefs about, and perceptions of, respiratory and febrile illness in childhood.
- 4-8. The parents' satisfaction with the health care available for their children.

These five sections are introduced as sub-chapters and the results are discussed very briefly in this chapter. We included two other sections in this chapter which were not



major components of the questionnaire. These were:

- 4-6. Whether or not the child had a history of respiratory illness or 'wheezy chest'.
- 4-7. Possible practice differences.

One of the questions we asked all of the parents concerned the respiratory illness history of the child, and comparisons were made between those who had such a history and those who hadn't.

The 'practice differences' was our attempt to establish or detect anything which may happen within the practices and which influenced the way the parents believe and behave. This was supplementary to the measures of satisfaction. We looked to see whether the practice attended affected the parents' responses throughout the questionnaire, as well as interviewing the GPs. These procedures will be described later.

#### The variables by which we compared the families

The feature of all the sections in this chapter is the two variables by which we sub-divided the families:

1. Ethnic group affiliation. The main reason for doing this research was to establish patterns of parental health beliefs and behaviour within a multi-ethnic community. We sub-divided the groups by the four ethnic categories outlined in the previous chapter.
2. Consulting behaviour. This was essentially a dichotomous variable concerning whether the child had recently been to see the doctor, or had not been for some time. We felt



that this variable was likely to be related to variables in any of the main sections of the questionnaire, and if this was the case, it would give us a clearer understanding of the predisposing factors involved in decisions to seek primary medical care.

Within the group of non-consulters, thirteen families had the distinction that they did not report an illness. If we had found that these families had a child who did not suffer from coughs and colds, then it would have made sense to create a distinct category for them. But for most families in this group this wasn't the case. I would suggest that the children involved here did have fewer illnesses than average, but the reason that an illness wasn't reported was more often because the parents couldn't recall the details of a minor cold six months after the event. Because of this, we felt it was quite legitimate to include this group within the group of non-consulting families for the analysis. Except, of course, for the analysis of the severity of the specific episode, as there was no data there for this group.

These two variables will be analyzed to see how they relate to the questionnaire variables and how they interact with each other. The main analytical tests we used were chi-square tests, analyses of variance, and a relatively new descriptive technique called log-linear modelling. This latter test is used with categorical data and substitutes for the clumsy method of using multiple chi-squares on the same variables; and because it is relatively new, I will describe it in detail when it is used.



#### 4-1. Consultation Rates

Between the dates of June 1st and August 31st, 1987 all consultations for two- to eleven-year-old children were marked in the attendance books - in the manner previously described - by the receptionists at the three practices. We were interested in how these rates of consultation corresponded with the ethnic group of the family. So judging by the names of the consulters in the attendance book, I split the consultations into those for Asian, and those for non-Asian, families. Table 4-1a. illustrates these consultation rate figures, separated into the type of illness the consultation was for: Respiratory or febrile versus non-respiratory or non-febrile. Also included in this table is the numbers of children in this age group registered at the practices. We needed these figures in order to make consultation rate comparisons meaningful.

Table 4-1a. The number of consultations at the practices over a three month period, by ethnic group.

	Asian	Non-Asian	(T)
No. registered	603	791	1394
No. of respir/febrile cons.	192	138	330
No. of 'other' consultations	119	164	283
<u>Total no. of consultations</u>	<u>311</u>	<u>302</u>	<u>613</u>



Table 4-1a. shows some interesting patterns. It is apparent that the total number of Asian consultations is quite high considering there are almost 200 less Asian children registered than non-Asian children. It is also noticeable that this high rate of consulting is probably explained by the high rate of consulting for respiratory and febrile illnesses; the Asian children make up fifty-eight percent of all consultations for these specific illnesses, and only forty-two percent of consultations for non-febrile illnesses.

We couldn't perform chi-square analyses on these figures as such, because the numbers of consultations can include the same child twice, and this breaks one of the fundamental rules of the chi-square test. What we could do, though, was to use the numbers of consulters only, and exclude all repeat consultations from the analysis. The numbers of repeat visits were relatively small anyway. This comparison is illustrated in table 4-1b:

Table 4-1b. The numbers of consulters and non-consulters at the practices, over 3 months, by ethnic group.

	Asian	Non-Asian	(T)
No. consulters	250	238	488
No. non-consulters	353	553	906
No. registered (T)	603	791	1394
(chi-square = 19.15; p < 0.0001)			



The association between the number of consulters and the ethnic group of the consulters is highly significant, indicating that the Asian families do consult more often than the non-Asian families (with respect to the numbers of children registered). This finding was not influenced by the sex of the child ( $p > 0.2$ ).

Given that the three practices were situated in areas with different ethnic communities, and also that there were unequal numbers of children registered at the practices, it was important to see if this finding was actually consistent for all three. Similar chi-square analyses performed on each showed that there was quite a lot of variation between the three practices. For practice HR (largely Pakistani Asians) there was an equally strong association ( $p < 0.0001$ ), indicating that the Asian families in this practice consult more often than the non-Asian families. For practice CR (largely Sikh Asians) this effect was very much reduced ( $p = .064$ ). The figures here were quite consistent to those we had found in the pilot study at this practice (see table 2b.), when it just significant at the five percent level. Finally, for practice WR (largely Pakistani Asians) this effect was even further reduced ( $p = .23$ ).

Why there is this large difference between the rates of consultation at the two practices with high concentrations of Pakistani Asians is not clear, although one possible reason is that practice HR was the one with the Asian GP who



spoke Punjabi and Urdu, the languages which the Pakistani people would most often use. But before pursuing this further it will be worthwhile to see what the patterns are for respiratory/febrile illness consultations at the three practices.

### Respiratory and Febrile Illness Consultations

What was of further interest to us was the relationship between each of the variables and the type of illness the parents took to the doctor. Particularly in the light of the findings from the Lancashire practice where the Asian parents consulted more often, but only for illnesses of a respiratory or febrile nature (Molyneux, 1987).

Once again we were faced with a problem over how to analyze these frequencies. This time we couldn't overcome the problem by looking at consulters only, simply because the same child could still be counted in the same cell twice - if, in that three month period, s/he had been a respiratory/febrile consulter and a consulter for another illness. We decided just to present the table for consultations - sub-divided by ethnic group, type of illness and practice attended - and see if any patterns were apparent (table 4-1c):



Table 4-1c. Consultations sub-divided by ethnic group, type of illness and practice attended.

Prac.	Resp. & febrile ill.s.			Other illnesses		
	Asian	N-Asian	(T)	Asian	N-Asian	(T)
CR	56	39	(95)	21	58	(79)
HR	60	36	(96)	44	49	(93)
WR	76	63	(139)	54	57	(111)
(TOTAL)	192	138	(330)	119	164	(283)

Asian families do seem to be more likely to consult a doctor for their children's respiratory or febrile illnesses, than they are for other illnesses. Table 4-1a. has already demonstrated this pattern. By glancing at table 4-1c. we can see that there is some variation between the three practices, but they all seem to confirm this trend. Of course we have to consider the relative numbers of Asian and non-Asian children registered at the practices, but given that the non-Asian group outnumber the Asians at all three practices, we can safely say that this finding is quite consistent.

The implications of the consultation rates for the results

In summarizing the consultation rate study, we can say that the Asian population of Muslims and Sikhs, do consult more often for their children than the non-Asian population, although this difference wasn't detected at one of the



practices (WR), which has a large Muslim population. We can also say that the Asian population appear to consult more often for their children's febrile and respiratory illnesses than they do for all other illnesses, although we couldn't corroborate this statistically, because of the nature of the data.

When we set out to do this research the issue of consultation rates was not something at the forefront of our minds. One reason for this was because we had no idea how feasible it would be obtain these figures at the practices. So although we were aware of the increasingly popular theory that Asian people use the health services more often, our questionnaire was not especially designed with this in mind. Yet now that we have established some consultation patterns at the practices - albeit somewhat complex - it will be very worthwhile bearing them in mind when analyzing the responses of the parents.

The various sections of the questionnaire could provide us with links to these findings. It may be that the children from Asian families suffer from more and/or more severe illnesses, which could be reflected in the information regarding the social and environmental conditions in which the families live. Or perhaps the Asian families have a lower 'threshold' for consulting medical practitioners. If so we might expect this to be reflected in the severity of the illnesses which the parents described as eliciting a consultation. On the other hand it could be more strongly



related to the beliefs parents have about their children's illnesses, with cultural factors playing a role in the perceptions of specific illnesses (perhaps respiratory and febrile conditions). Each of these possibilities will be addressed in the analysis of the interviews, starting first of all with the socio-demographic section.



## 4-2. The Sociodemographic Variables

We felt that a useful starting point for the analysis was to profile the 107 families I interviewed, from the social and demographic information, to give us a better understanding of who these families were (table 4-2a):

Table 4-2a. Characteristics of the children and their families.

### THE CHILDREN (N = 107):

- (1) Numbers: Males = 53; Females = 54.
- (2) Average age: 4.5 years (M = 4.2; F = 4.8).  
Ranging from 2 to 11.

### THE MOTHERS (N = 105):

- (3) Average age: 32.0 years.  
Ranging from 20 to 47 years.
- (4) For those mothers not born in Britain,  
the average length of time that they had  
lived in this country was 15.7 years.
- (5) Percentage of single mothers: 17%
- (6) Percentage of mothers with a paid job: 34%  
(58% of which were part-time).
- (7) Percentage in manual occupational  
social classes (IIIm, IV and V),  
measured by mother's occupation: 56%
- (8) Percentage of mothers who had  
qualifications from school or elsewhere: 55%
- (9) Percentage of mothers  
still in full-time education: 2%



## FATHERS (N = 91):

- (10) Average age: 34.7 years.  
Ranging from 20 to 55.
- (11) For those fathers not born in Britain,  
the average length of time that they had  
lived in this country was 17.4 years.
- (12) Percentage of single fathers: 1%
- (13) Percentage of fathers with a paid job: 75%  
(94% of which were full-time).
- (14) Percentage in manual  
occupational social classes  
as measured by father's job: 62%
- (15) Percentage of fathers who had  
qualifications from school or elsewhere: 76%
- (16) Percentage of fathers  
still in full-time education 4%

## THE HOUSEHOLDS (N = 107):

- (17) Average number of children in the families  
was 2.7. The range was from 1 to 8.
- (18) Mothers' and fathers' places of birth:

Place of birth	Mothers(%)	Fathers(%)
Britain	41.5	33
Indian sub-cont.	42.5	49.5
West Indies	8.5	6.5
East Africa	4.5	6.5
Elsewhere	3	4.5
	<hr/> 100	<hr/> 100

- (19) Percentage of  
families owning their own house: 66%
- (20) The average weekly income was £148,  
with a range of £34 to £450.
- (21) The average number of rooms in the  
houses was 5.1, ranging from 2 to 10.



- |  |     |
|--|-----|
| (23) Percentage of parents who thought that their heating was inadequate:                            | 30% |
| (24) Percentage of families who had damp in their house:   | 33% |
| (25) Percentage of families with at least one smoker:<br>(20% of mothers smoked and 29% of fathers). | 36% |
| (26) Percentage of families with a car:  | 66% |

All of the families lived in the greater Leeds area and were registered at three general practices in the inner-city areas of Leeds. We knew, through observation, that the housing environments and the quality of life of the families differed enormously. The listed information allows us to be more specific about that kind of information. For example, we discovered that the male unemployment rate in our sample was 25%, almost twice as high as the national average (14%); and that the range of incomes in our sample went from £450 weekly at the top, all the way down to a single mother trying to live off £34 supplementary benefit.

We found that our sample tended to be employed in the manual occupations, that 34% lived in rented accommodation and that we had a fairly high proportion of single mothers in the sample (17%). We also found that the average number of children in the families was high at 2.7 per household. The national average has been declining steadily in recent years, falling below two at the end of 1987 (OPCS, 1988).

Obviously we had a some very large differences between the families in our sample which we could explore further.



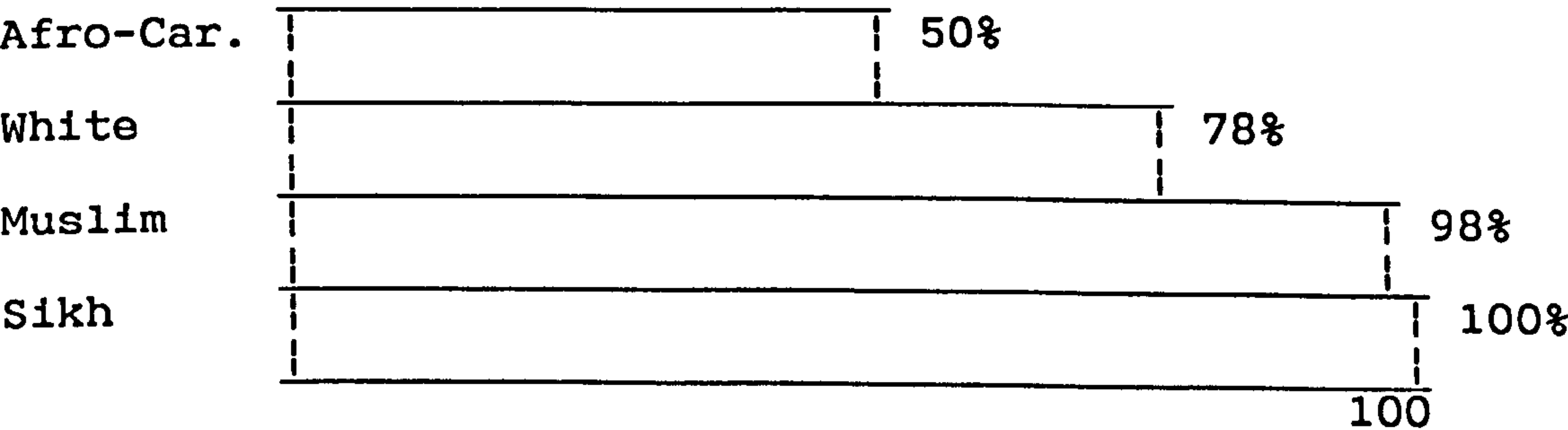
As I have mentioned previously, our overall plan was to compare the families with the two variables that we were most interested in: (1) Ethnic group affiliation and (2) Consulting behaviour.

Sociodemographic comparisons

First of all we had a look at the ethnic group comparisons on all of the thirty-seven sociodemographic variables in the questionnaire (see Appendix I). All of those variables which were significantly associated with ethnic group are tabulated (statistically significant associations were determined using chi-square tests).

Table 4-2b. Proportion of parents in each ethnic group by the sociodemographic variables.

(a) Is interviewee married?

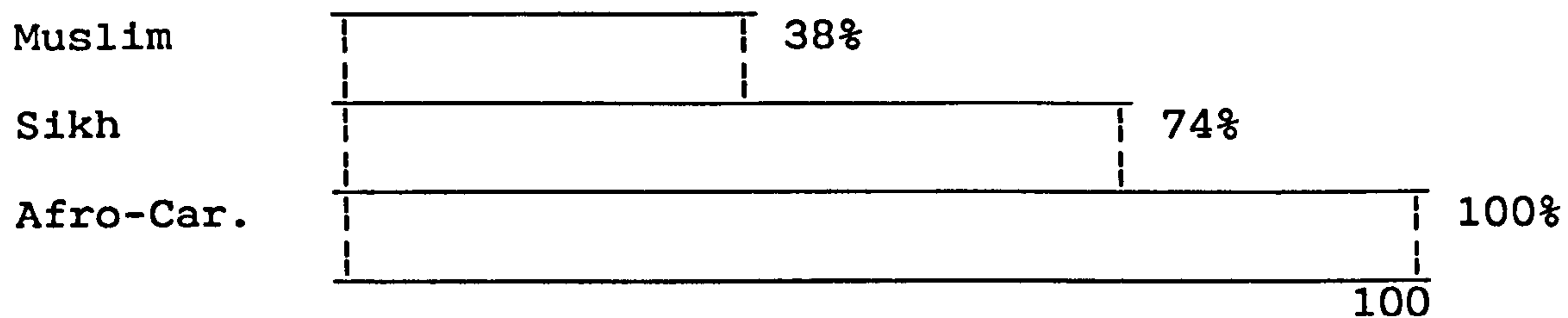


Percent of interviewees in each group who were married.

p < 0.0001



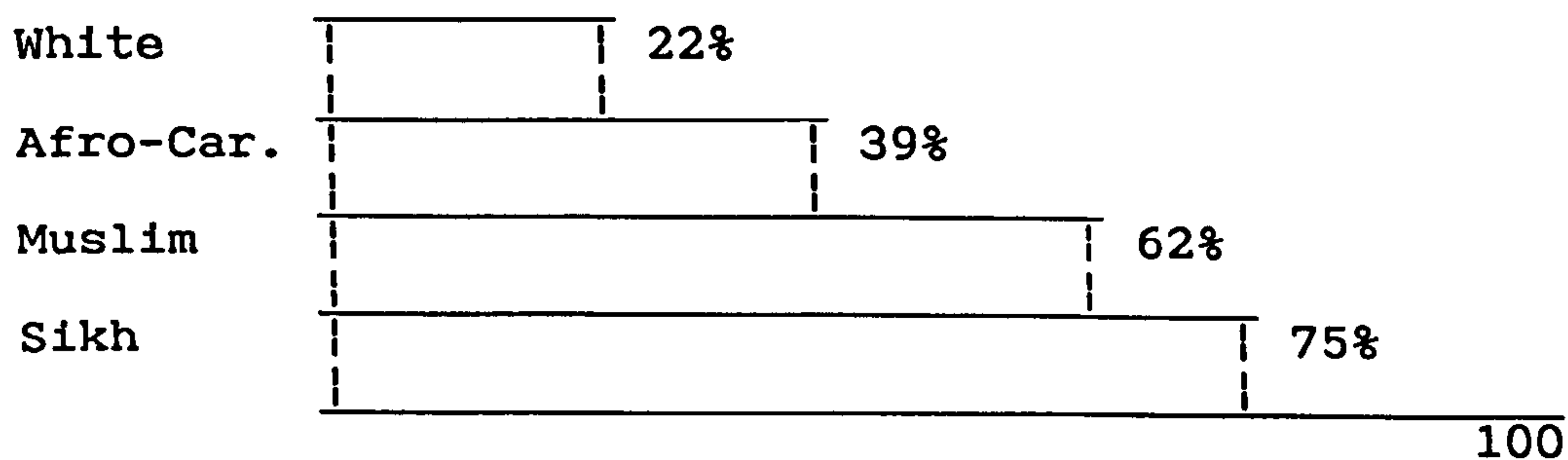
(b) Length of residence in this country for those mothers not born here.



Percentage of mothers in each group who had lived here for 15 years or more.

$P < 0.001$

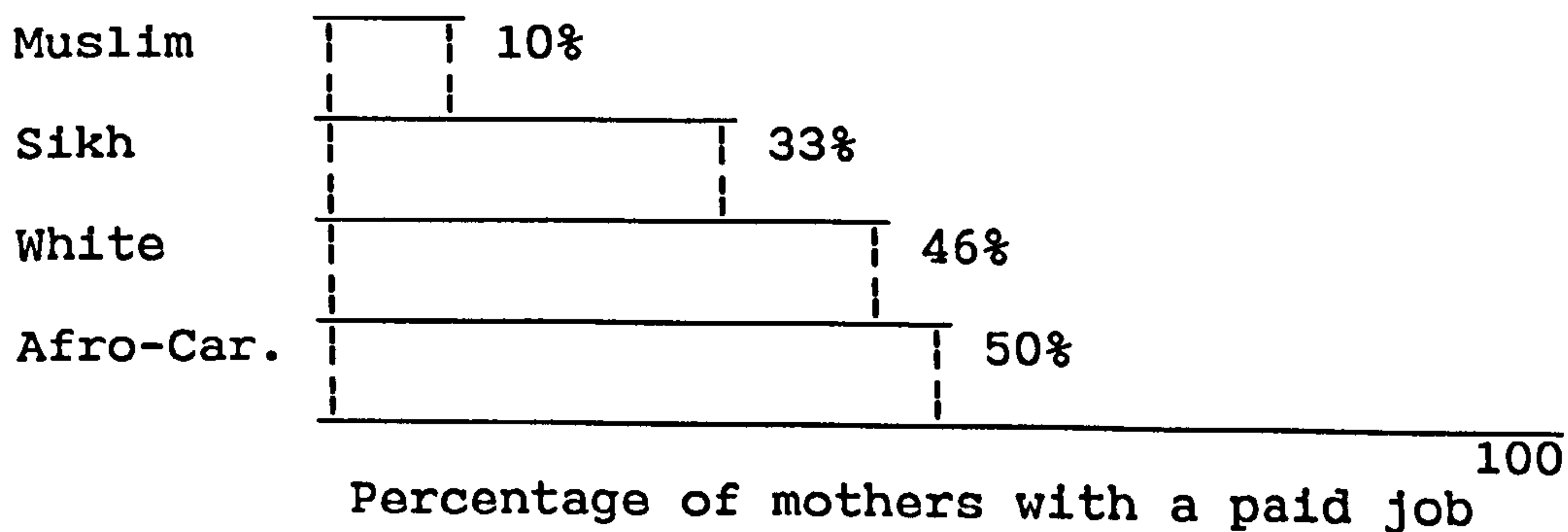
(c) Number of children in the family



Percentage of families with three children or more.

$p < 0.001$

(d) Does mother have a paid job?

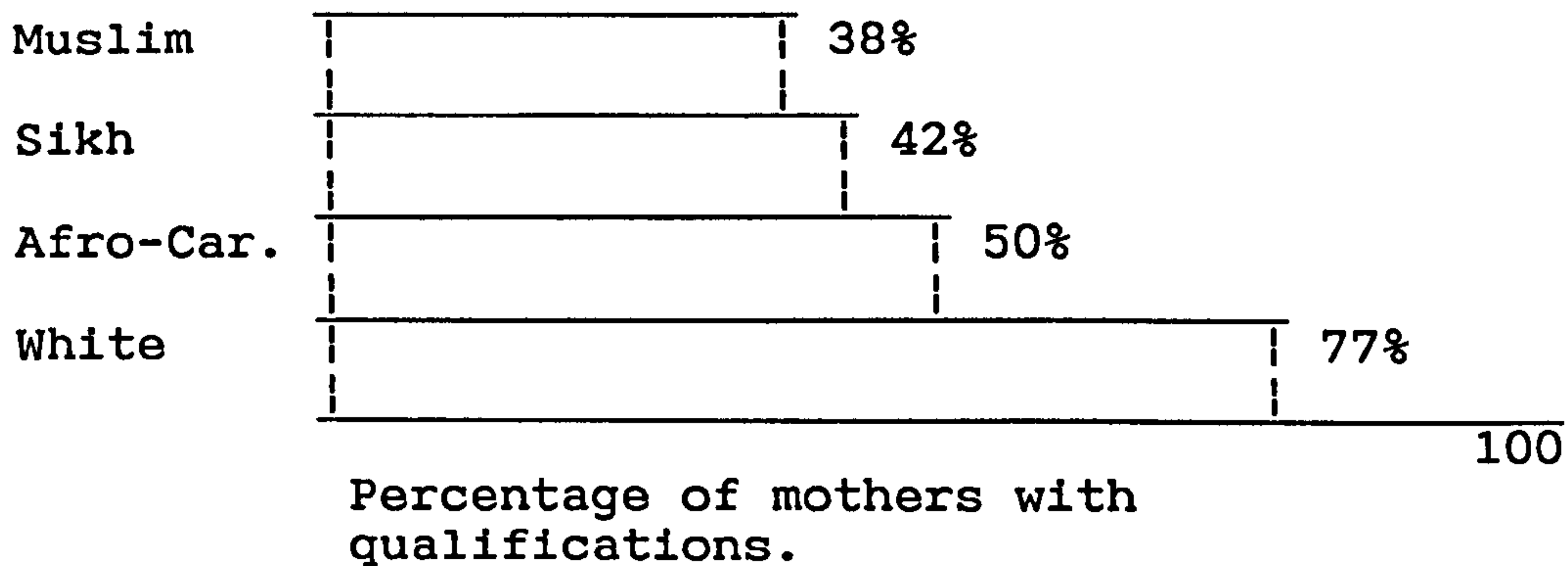


Percentage of mothers with a paid job

$p < 0.01$

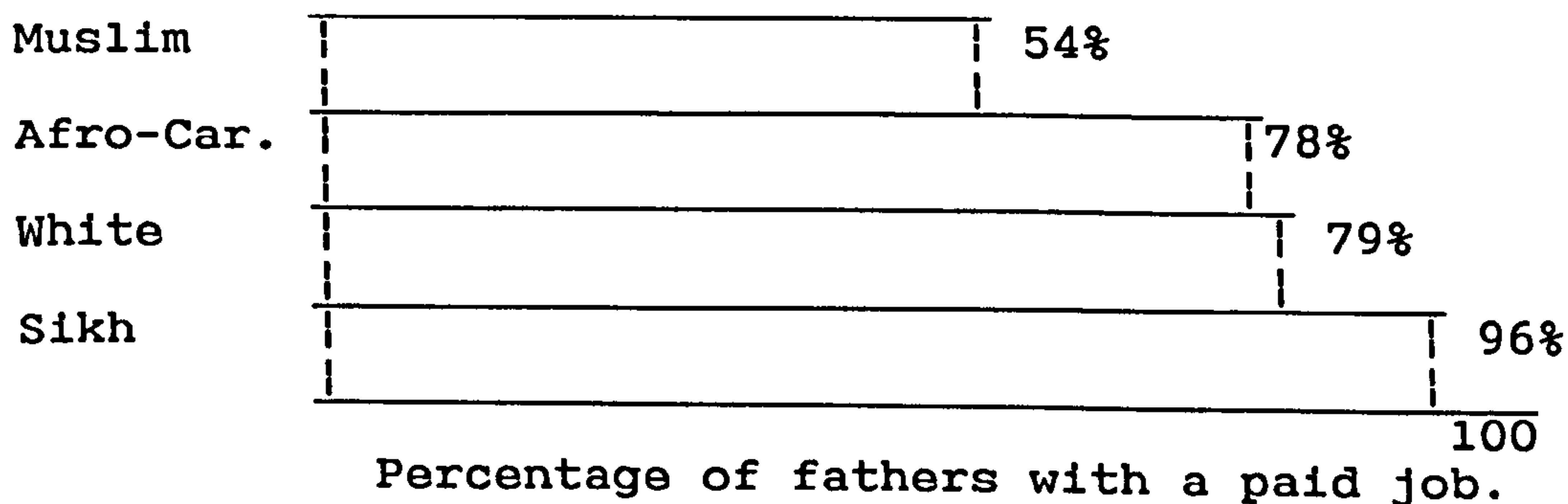


(e) Does mother have qualifications from school or elsewhere?



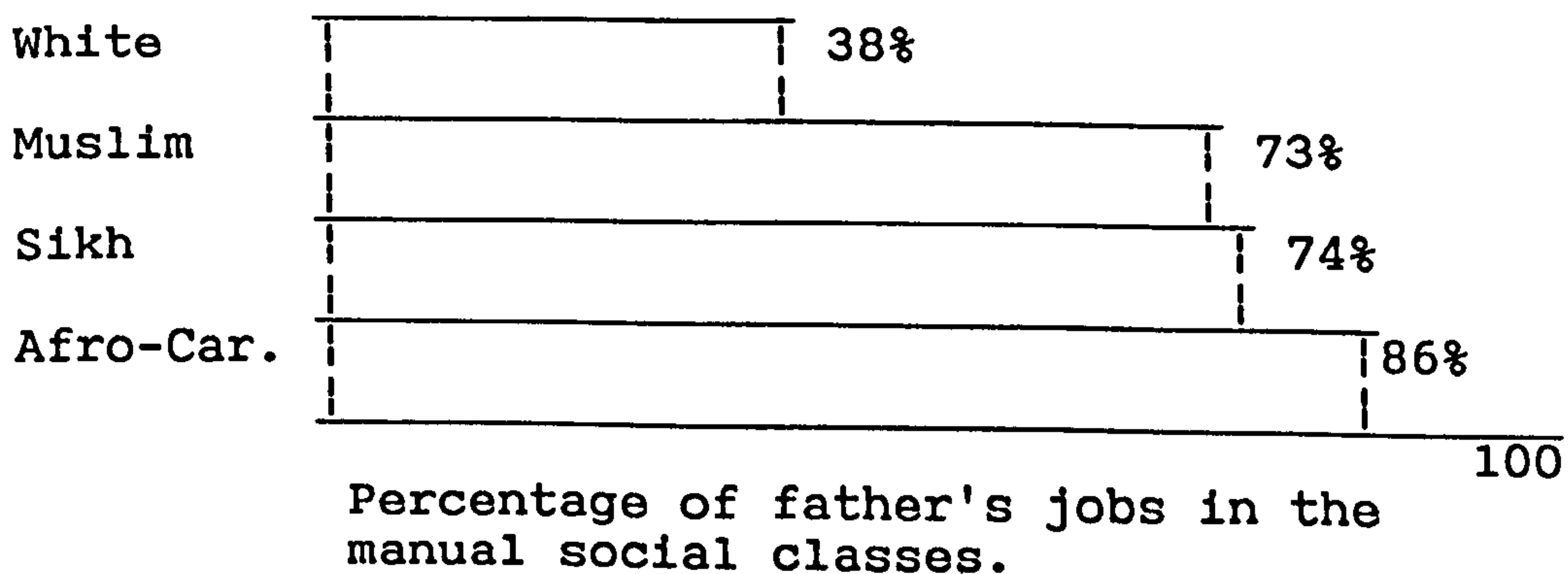
$p < 0.01$

(f) Does father have a paid job?



$p < 0.005$

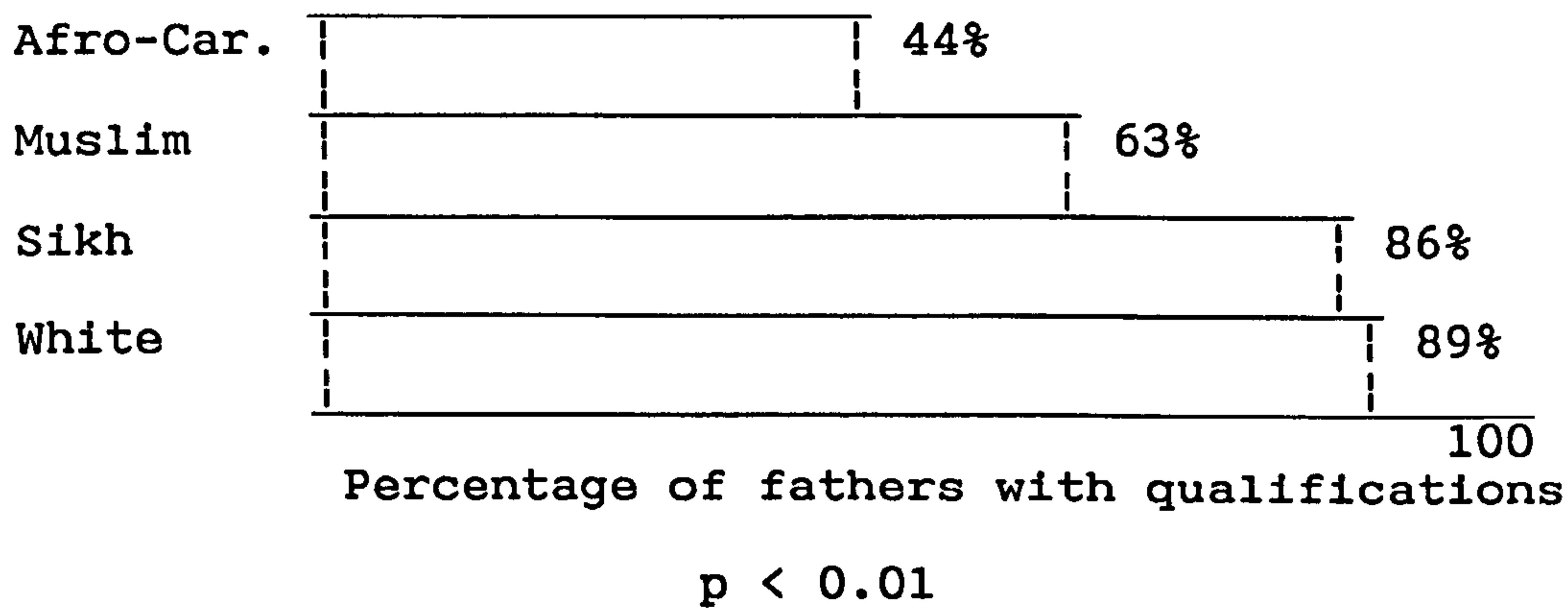
(g) Is father's job in the manual occupations/social classes?



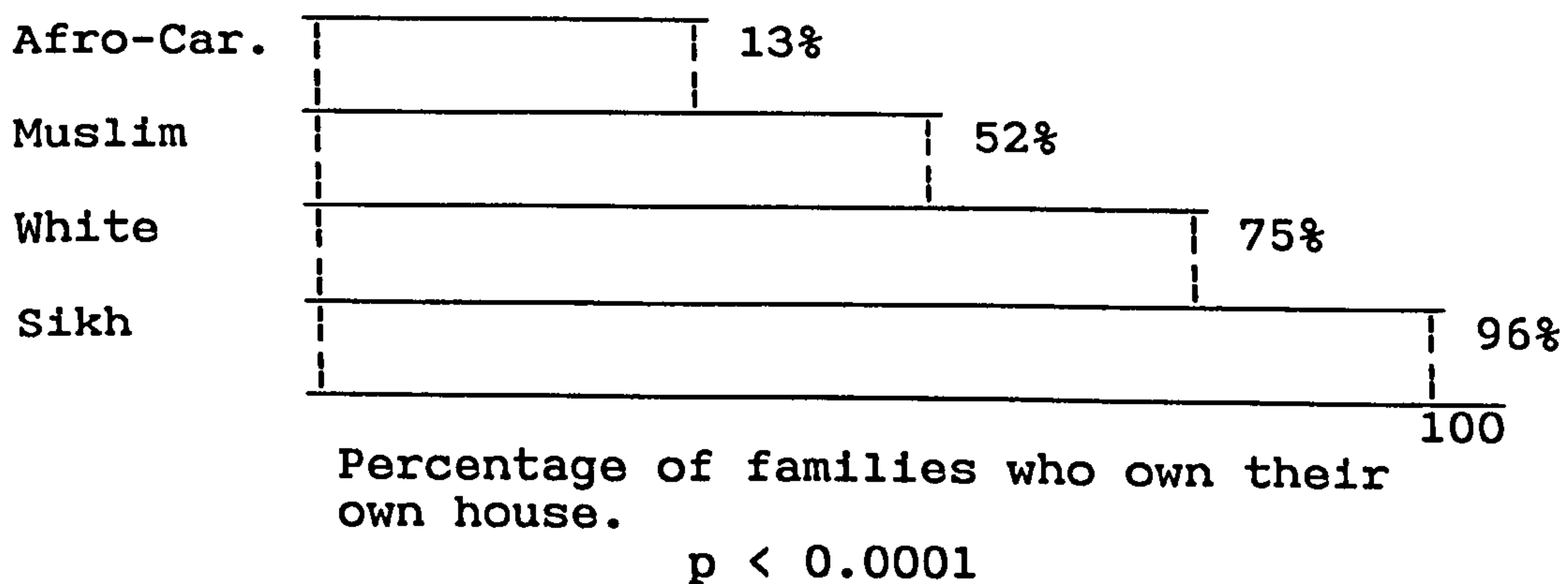
$p < 0.025$



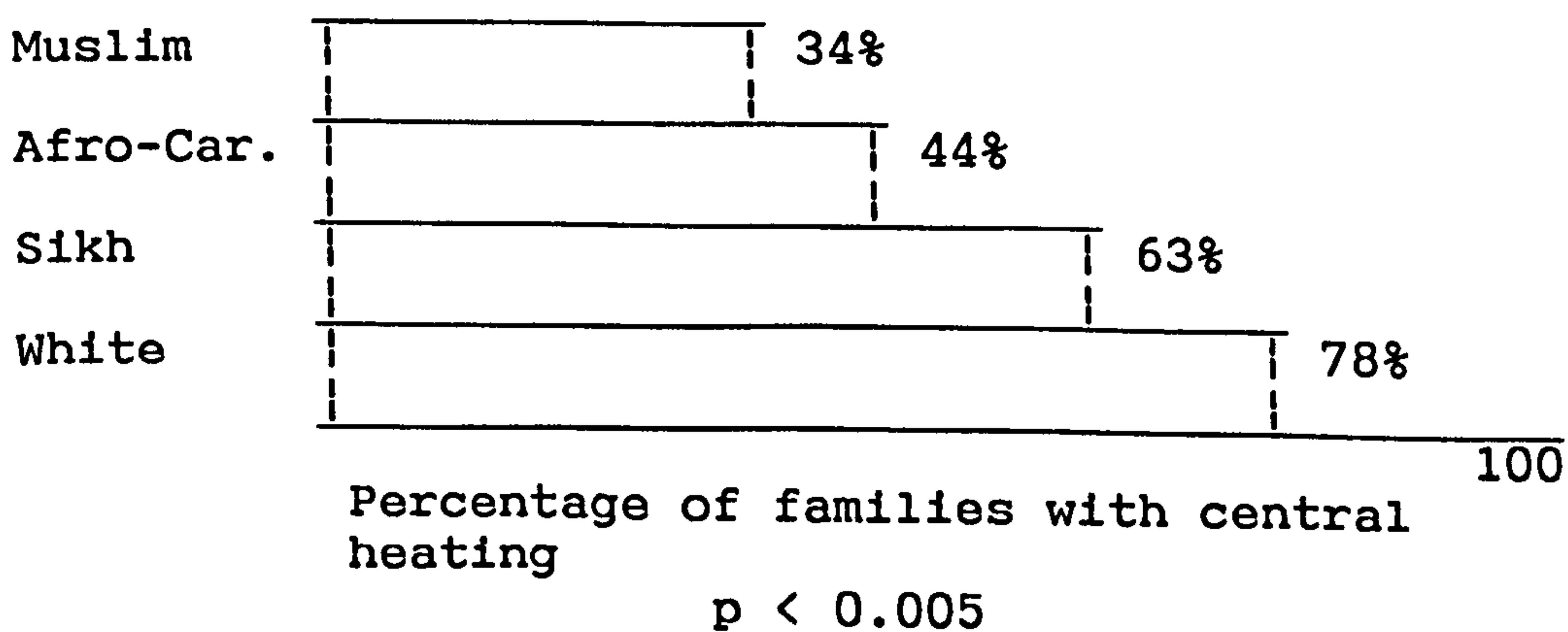
(h) Does father have qualifications from school or elsewhere?



(i) Do the family own their own house?

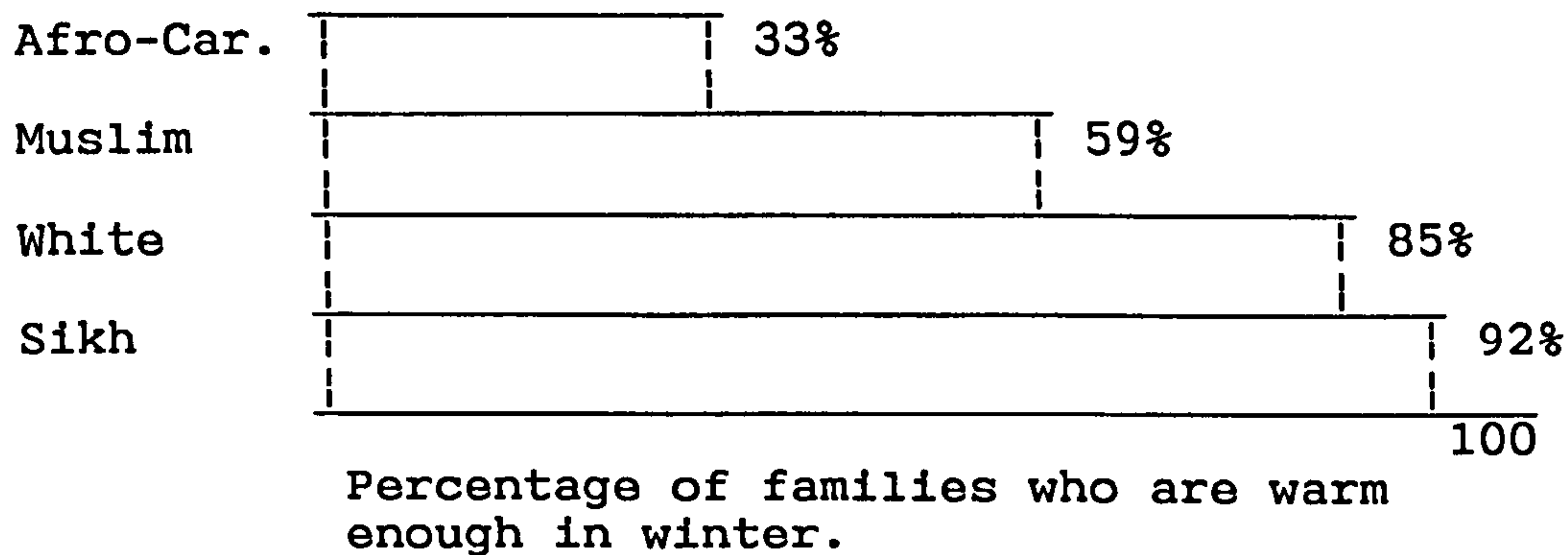


(j) Do the families have central heating?



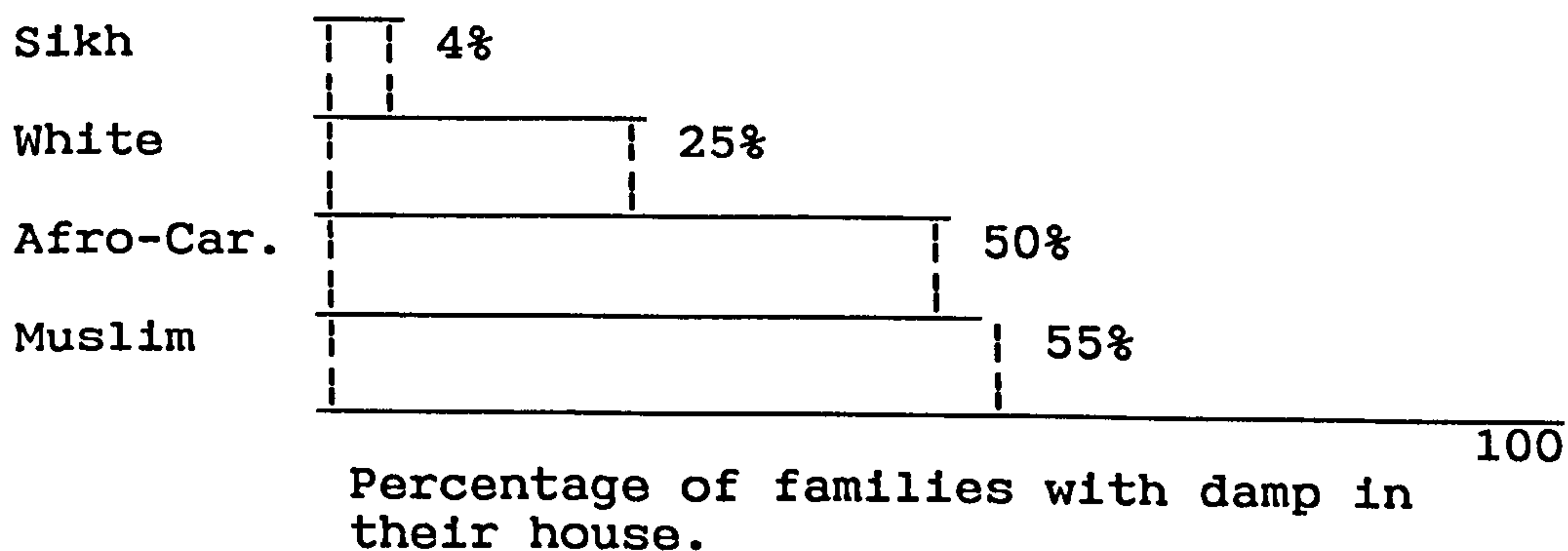


(k) Are the families warm enough in winter?



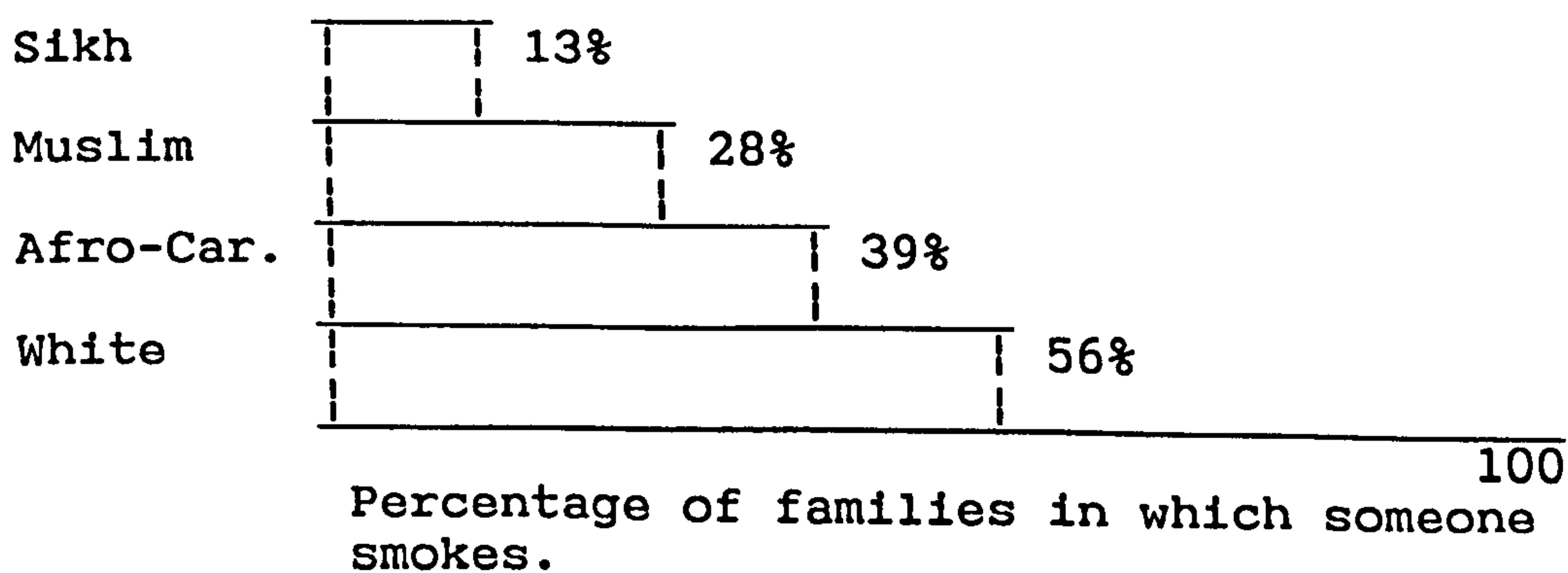
$p < 0.0005$

(l) Do the families have damp in their house?



$p < 0.0005$

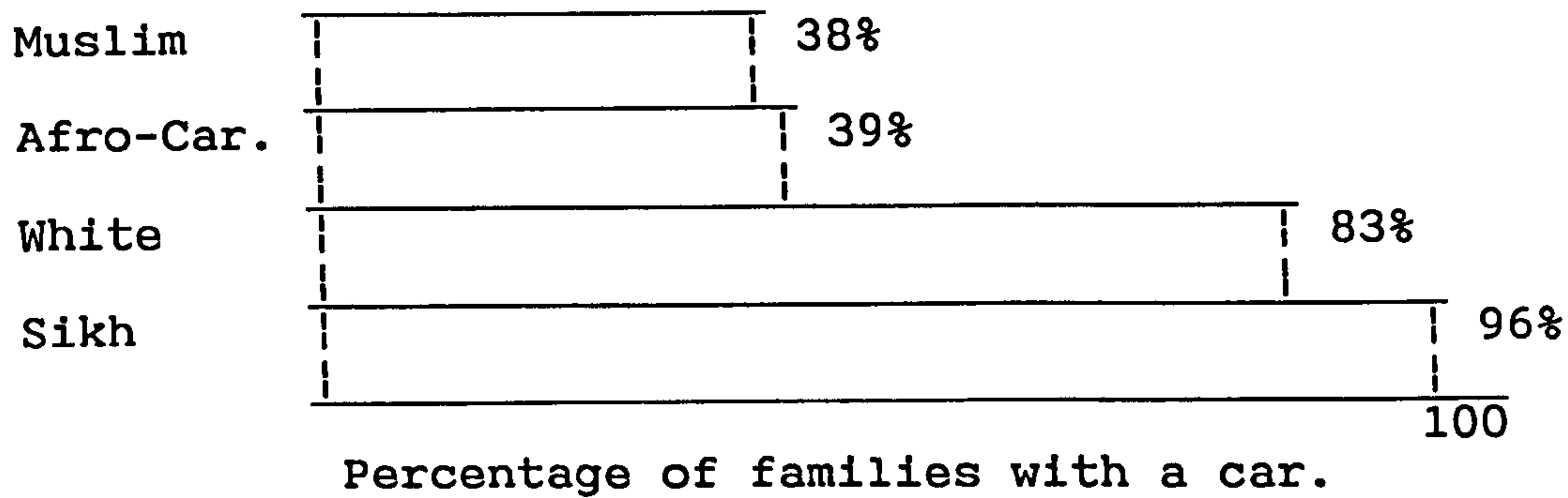
(m) Do any of the families have someone who smokes?



$p < 0.01$



(n) Does the family have a car?



$p < 0.0001$

The comparisons in table 4-2b. make it quite apparent that the four ethnic groups do experience very different social, economic and environmental existencies whilst trying to live in the city of Leeds. Economically, the white, indigenous families and the Sikh families are better off than the Pakistani Muslim and Afro-caribbean families (Table 4-2c.):

Table 4-2c. Weekly earnings by ethnic group.

	<u>Weekly earnings</u>			(T)
	£100 or less	£101-£199	£200 or more	
White	10 (29%)	6 (17%)	19 (54%)	35
Muslim	20 (71%)	7 (25%)	1 (4%)	28
Sikh	2 (10%)	10 (50%)	8 (40%)	20
Afro-Car.	9 (56%)	5 (31%)	2 (13%)	16
(TOTAL)	41 (41%)	28 (28%)	30 (31%)	99

(Chi-square = 35.01;  $p < 0.0001$ )



Sikh families were far more likely to own their own house - all but one of the families interviewed did so. White families were also more likely to own their own house than either Muslims or Afro-Caribbeans.

Socially, the White and Sikh families were more fortunate. The fathers in both of these groups were much more likely to hold qualifications from school or elsewhere; although it should be mentioned that some of the Asian parents in the table held qualifications from their home countries which some spoke of as being of no value here in Britain. This was the case with both Sikhs and Muslims and raises the question concerning the interpretation of the demographic characteristics, which I will address at the end of this section.

Paternal employment followed a similar social trend, although it was not quite so straightforward. The fathers in the Sikh families were most likely to be in employment. These jobs were more likely to be in the manual occupations - mainly skilled manual. The fathers in the white and Afro-Caribbean families were equally likely to hold a job, yet, like the Sikhs, the Afro-Caribbean fathers were mostly distributed throughout the manual occupations, whereas the white group were mostly in the non-manual classes (75% of these in the managerial social class). The Muslim fathers were least likely to have employment and those that did were more likely to be manually employed.



Fifty percent of the Afro-Caribbean families in this sample were parented by the mother only. Not surprising, therefore, that the Afro-Caribbean mothers were more likely to be in employment than any of the other groups (see also Hood et al, 1970). The number of Muslim women in employment was particularly low, possibly a combination of religious beliefs, English language difficulties and discrimination. These are further examples of the difficulties inherent in interpretations of demography across ethnic groups. The reasons for being employed or not employed (or unemployed) are not always the same.

White mothers were significantly more likely than any of the other mothers to have obtained qualifications from school or elsewhere. Previous research has found this variable to be related to higher use of both preventive (Rosenstock, 1966) and curative (Anderson et al, 1981; Campion & Gabriel, 1984) medical services.

Another variable which previous research has discovered to be related to use of medical services is the number of children in the family. Apparently, a parent with fewer children is more likely to consult a doctor for a child's illness (Campion & Gabriel, 1984), and is more likely to use preventive services (Reissman, 1984; Butler & Golding, 1986). We found a significant relationship between the number of children and ethnic group, with white families having least children on average, followed by the Afro-Caribbeans. Any connections with previous research would



have to be made with care, since these previous studies took no account of ethnicity and the inherently different family structures.

Environmental factors contributed to some of the most glaring differences between the ethnic groups. Having been to the different areas of Leeds, and inside the houses of those families in the sample, observing first-hand the horrendous living conditions which some families have to endure, these statistics came as no surprise to me.

Most of the questions regarding the house - possession of central heating, whether it was warm enough in winter and whether they had damp in their house - produced a fairly clear divide between the relatively comfortable white and Sikh families and the cold, damp living conditions of many of the Afro- Caribbean and Muslim families. More than half of the Muslim and Afro-Caribbean families had to contend with damp in their house and two thirds of the Afro-Caribbean families reported that their houses were not adequately heated in winter.

One exception from the housing environment questions concerned those parents who smoked. More than half of the white families reported at least one adult in the household who smoked and thirty-nine percent of Afro-Caribbean parents did. The Asian parents, particularly the Sikhs, had a much lower percentage of smokers.

It should be remembered that these are averages. Not every white, indigenous family was relatively well-off. In



fact it was among this group that the widest socio-economic ranges could be seen. There were indigenous families of single parents, on supplementary benefit and in some of the worst housing estates in Leeds in this sample. They too had damp in their houses and were cold in winter. At the other extreme, there were families who could be described as upper-middle class, living in the salubrious suburbs. The Sikh families were slightly different in this respect. Obviously there was variation in quality of life among these families, though they were probably the most homogenous group of the four. The somewhat haphazard rich-poor geographical arrangement of some parts of Leeds contributed to the large social class variation in the sample.

I mentioned that it is not always straightforward to interpret demography; a social fact can have ambiguous connotations when applied across a variety of ethnic groups. As the social order and social norms change, this ambiguity can creep into the application of demographic information across the social classes as well. Employment and education were two examples of this problem which emerged in our demographic comparisons.

Within a family, the employment of the father is generally regarded as important for staving off poverty. But what about the mother? Among the indigenous families in our study, the mothers were less likely to work if the families were quite wealthy. This was probably because they didn't actually have to for economic reasons. Among the Muslim



families the mothers were infrequently employed, yet obviously for quite different reasons. The Afro-Caribbean mothers, on the other hand, were most likely to be in employment - a slightly higher percentage than those in the indigenous group. These mothers were also more likely to be single parents and so their higher levels of employment will be more likely to reflect economic necessity. Hood et al (1970) found a similar pattern among the mothers in their study of West Indian one-year-olds.

Levels of education among the parents was also an ambiguous, and somewhat contentious, issue in this study. Particularly since most of the minority ethnic group parents had experienced the educational system of another country, and many of them had done so exclusively. Our sample had a large number of parents who had experienced higher education (26% of mothers and 27% of fathers), because of the large proportion of Sikh people who customarily studied after school. Comparisons of qualifications become virtually meaningless. Some of the Asian parents complained to me that the qualifications they gained in their home country are not given any value here in Britain. For this reason I fear that these complications are compounded by some parents who simply told me that they didn't have qualifications because those they did have were deemed worthless. Perhaps the best indicator is the age at which the parents left full-time education, which, incidentally, elicited two of the very few social and demographic variables (for both fathers and



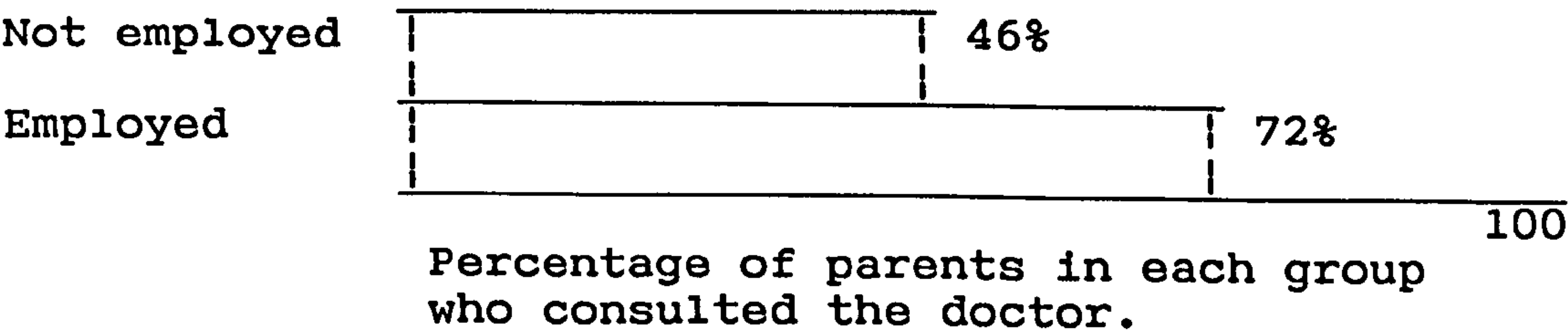
mothers) which did not produce significant differences between the ethnic groups.

Sociodemographic comparisons of the consulters and non-consulters

We made similar sociodemographic comparisons between the consulters and non-consulters, for all of the same thirty-seven variables. Table 4-2d. lists those social and demographic variables which significantly distinguished consulting families from non-consulters.

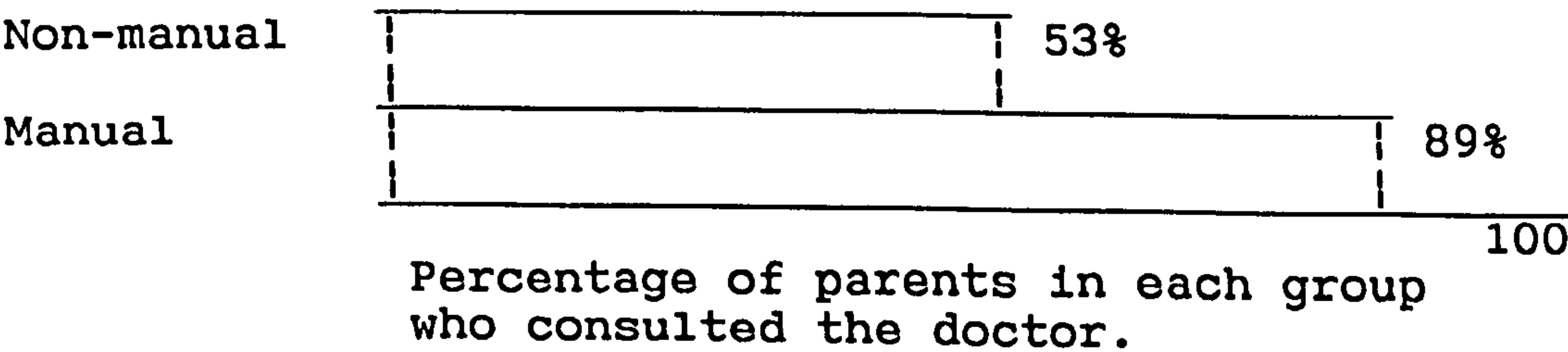
Table 4-2d. Comparisons of the consulters and non-consulters over the sociodemographic variables.

(a) Employment of mother



p < 0.025

(b) Nature of mother's employment



p < 0.05



Interestingly, the only two variables associated with whether or not the parents had consulted the doctor with the child were linked to the employment of the mother. Wyke (1987) found that those mothers not employed were more likely to consult the doctor, whereas we obtained the opposite finding; those mothers in employment were more likely to consult.

The connection between mothers in employment and consulting behaviour is not necessarily a complete contradiction to that of Wyke (1987). It is important to remember the differences in the samples involved. Wyke's sample were indigenous people - covering the spectrum of social classes - living in the North-East of England. In that study a similar connection was found with paternal employment. Our study had an entirely different sample, and as I have recently pointed out, the reasons for the parents (particularly young mothers) being in employment can be very different.

When we described the characteristics of the families we found that more mothers were employed manually than non-manually. We have the additional finding that mothers employed in manual occupations are more likely to consult than their counterparts in non-manual occupations. This link between low occupational social class and higher parental consultations has been given very recent support (Campion & Gabriel, 1984; Mayall, 1986).



Having said that, care has to be taken when interpreting occupational social class based on the registrar general's classification, especially when referring to women, for whom it wasn't designed (Hart, 1985). As I mentioned in the pilot studies, this measure is now recognized as being somewhat antiquated (Scrivens & Holland, 1983).

#### A summary of the sociodemography of the families

This univariate analysis of the demography of the families has been extremely useful, although we do have to be careful with interpretations. Through the employment of the mother we do have a link of sorts between lower socio-economic status and the increased likelihood of consulting a doctor. Yet we would have to be very tentative about such a conclusion for these families, simply because we found no link between consulting and all our other measures of socio-economic status, including paternal employment and family income. This is further complicated by the fact that the recent study by Wyke (1987) did find a strong relationship between lower social class and an increased tendency to consult. Although it should be remembered that Wyke's research included indigenous families only, and the sampling method was different.

A large majority of the variables we related to social class were strongly associated with ethnic group



affiliation. Muslim and Afro-Caribbean families were quite consistently found to live in impoverished conditions, with respect to the average white and Sikh families of our study. We might expect that children living in these conditions would get more illnesses, which, in turn, could influence the decision to consult the doctor. Unfortunately we were unable to observe Afro-Caribbean consultation rates, but these findings could have something to do with the higher consultation rates we observed among the Muslim families - at least in some general practice areas. Our study wasn't designed to answer this question, and so we have to be tentative with any assertions we make; especially since we haven't yet looked at the other components of the questionnaire.

The next section addresses the severity of the illnesses, as described by the parents. We were particularly interested in severity levels which parents choose to take, and not to take, to the GP; and whether these differed across the groups.



#### 4-3. The Severity of the Reported Illnesses

A higher incidence of illness and disease is correlated to a higher rate of consultations (Blaxter, 1984; Wyke, 1987). But is this relationship always as simple as that? Consider the Pakistani Muslim families living in Leeds. Their housing conditions were the most squalid I observed during my interviews. And their consultation rates for children's illnesses do seem to be higher than those not of Asian descent. We have been made aware, from medical sociology, ethnomedical and health psychology research, that there is more to it than the straightforward relationship between number of illnesses and number of consultations. What about the severity of the illnesses? Are their children's coughs and colds also worse illnesses than other children's? Then there is the parents' beliefs and perceptions of children's illnesses. The complex network of different social and cultural communities in Britain means that there also exists a wide variety of beliefs and attitudes towards health. And what about the difficulties involved when using the services? The language barrier: Many of the parents in these families spoke English very little or not at all - particularly the women, who are most often the family's health carers. Or the often complex and frightening general practice and DHSS procedures. Mobility can also be a factor when using services, as some families have one parent working, many children and no car.



We hope to address all of these issues in the following sections, turning now to look at the parents' descriptions of one particular illness that their child had had. For the consulters, this was the illness which they had recently taken to the doctor and for the non-consulters it was the last such illness which the child had had, going back a period of six months. This part of the analysis leaves out the thirteen families who were non-consulters, but who also did not report on any illness - either because the child had not had such an illness in the previous six months, or because they couldn't remember the details of the illness. This left a comparison of fifty-nine consulters with thirty-five non-consulters.

We were primarily interested in the nature of the illnesses taken to the doctor and those which did not lead to a consultation. We would expect the consulters' illnesses to be more severe than those of the non-consulters. Wyke (1987) found a very clear divide between the parents' perceptions of illnesses which they consulted a doctor for and those which they decided not to consult for. As I have mentioned elsewhere, previous research has also demonstrated that the best predictor of a parental consultation was the presence of a doctor-defined illness (Campion & Gabriel, 1985). Yet both of these studies involved a white indigenous population only. We were very interested to know if this distinction between illnesses which should and should not be taken to the doctor, was made similarly by parents from all



four ethnic groups of our study.

We do have evidence that some doctors believe that the Asian population are more likely to consult for what the doctors consider to be trivial illnesses (Wright, 1983). Also, the Asian parents in the practices we were working from did tend to consult more often. So we felt it was possible that the Muslims and the Sikhs did consult the doctor for less severe illnesses; that is, their severity threshold for consulting was possibly lower than that of the other groups.

#### The severity index

Doctor E.N. Hey, a Newcastle paediatrician, devised a scale to measure the severity of 'the cough'. The scale is made up from twenty-seven of the variables in the severity section, and was used by Wyke (1987) in her research in the North of England. Systematic observation of young children presenting with respiratory illness allowed ENH to attribute different numbers of points depending on the nature, severity and persistence of the symptoms (see APPENDIX III for the list of variables with their weightings).

Many of the points attributed are attached simply to the presence or absence of a particular symptom. For example, if the child was reported as sleeping more during the day then the severity score received eight points, and if not, it didn't receive any. But the number of points



received could be more complex than that. For example, if the child's sleep was disturbed, then points would be added to the severity score. The number of points would depend on the main thing keeping the child awake, as well as the number of nights the child had been kept awake. In her thesis, Wyke found that ENH gave high scores to those variables which had been found independently to be the best predictors of when a parent would consult. And she wrote that "this indicates that the parents in the study and a senior paediatrician considered the same things important about a child's cough" (p.155) (see also Campion & Gabriel, 1985, for a similar finding).

The ENH scale was devised to quantify the severity of a respiratory illness which included a cough. Eight of the twenty-seven variables on the scale referred specifically to the cough as part of the illness. In Wyke's study, one of the preconditions of a child being included was that s/he had a cough. Our study did not use this criterion, which meant that a large group of the children (43) were not reported as having a cough as part of their illness.

Although the large proportion of the scale could refer to any respiratory or febrile illness (APPENDIX III) - that is, the symptomatology did not have to include a cough - we were faced with the problem that if we just left the scale as it was, some children, i.e. those with coughs, could receive higher severity scores simply on the basis of having more relevant variables. So we decided to compute two



versions of the same scale, the second one being a shorter version, with the cough questions removed. In this way we would have one version on which every child would be assessed by the same number of variables.

We felt it was important, though, to keep the original version as our main measure, since we felt that the symptoms of the cough were very much a real part of the illness, and also, because the way the scale was devised, having a cough did not simply add points to the severity score as a matter of course. To illustrate this latter point, I can use one of the variables as an example: If the child had coughed anything up, then points were added to the total. This question is not relevant to children who didn't have a cough and so they would not receive a score; but also those children who had had a cough but did not cough anything up, also did not receive a score.

### The severity scores

The distribution of severity scores ranged from 0 to 116, with an overall mean of 39.64, a median of 36.0 and a standard deviation of 28.26. So the variation of ENH scores was high, but the distribution was well within that which is considered normal. The distribution was similar in shape for the shorter scale although measures of central tendency were displaced lower as would be expected with some of the severity removed (mean = 34.69; median = 30.0; S.D. =



23.70). The analysis will hopefully help us to decide whether this was because having a cough meant that the illness was perceived as worse, or whether it was simply the effect of having more questions contributing to the final points score.

Whether the child had a cough or not was not a variable we were specially interested in when planning this study. But as we are including the original ENH scale - with the cough questions - in the analysis, we do need to distinguish between the group of children who have the extra questions pertaining to their score, i.e. the coughers, and those who do not. So the three variables of interest to us from the severity measures were ethnic group, consulting behaviour and whether or not the child had had a cough.

Before we did any analysis on the severity scores themselves, we had to look at the numbers falling into each of the cells when sub-divided by these three variables; in order to be clear that, 1) the groups in our sample were getting similar numbers of coughs, and 1i) that the ratio of coughers to non-coughers was the same across the ethnic and consulter groups. Through the design of the study we had gone some way to controlling the numbers in each of these groups, but our original design took no account of whether or not the child was coughing. This precaution was to make sure that the coughers were not all grouped together in, for example, the consulting group. Table 4-3a. illustrates the numbers falling into each of the groups:



Table 4-3a. Numbers of coughers and non-coughers in each of the ethnic and consulter groups.

	<u>Coughers</u>			<u>Non-coughers</u>		
	Cons.	Noncons.	(T)	Cons.	Noncons.	(T)
White	10	6	16	10	5	15
Muslim	11	5	16	6	3	9
Sikh	6	4	10	6	5	11
Afro-Car.	6	3	9	4	4	8
(TOTAL)	33	18	51	26	17	43

Glancing at table 4-3a. gives an indication that the numbers of coughers and non-coughers are fairly evenly distributed throughout the groups, although to be sure that no patterns did exist in this data, we performed a log-linear analysis on the counts. We used this technique quite extensively in later parts of the analysis, and it is explained in depth towards the end of the severity section. Very briefly, though, the technique avoids the use of multiple chi-square tests - which, when used often, increase the likelihood of making a type I error - by incorporating more than two variables into the analysis of categorical data. There are various ways in which the output can be described, but for our purposes here we can use 'the likelihood ratio chi-square', which is very similar to chi-square itself. A likelihood ratio chi-square value is given for each



interaction, association and main effect in the design.

We were interested in how the numbers of coughers associated with the ethnic group and consulting behaviour of the families. As expected from inspection of the table, there was no significant interaction between the three variables ( $p = 0.53$ ). Neither was there an association between the numbers of coughers and ethnic group ( $p = 0.71$ ) or the number of coughers and consulting behaviour ( $p = 0.73$ ). Probabilities for these associations actually approach the value of one, which would occur if all observed frequencies matched all expected frequencies.

The refutation of any interaction here tells us that the ratio of coughers to non-coughers in the consulting and non-consulting groups is very similar across the four ethnic groups. The analysis also informed us that being a member of one or other of the consulting or ethnic groups didn't make it more or less likely that the child would have a cough.

We could now progress to an analysis of the severity scores themselves. The sub-divisions of the three variables (ethnic group, consulting behaviour and cough/no cough) with their means, counts and sub-totals are illustrated in table 4-3b., which represents scores from the original version of the scale.



Table 4-3b. Mean severity scores as measured by the ENH scale.

MEAN COUNT		White	Muslim	Sikh	Afro-Car.	(T)
Cons (N=59)	Cough	62.60 10	62.45 11	45.50 6	69.33 6	60.67 33
	No cough	32.20 10	57.00 6	41.17 6	26.00 4	39.04 26
	TOTAL (cons)	47.40 20	60.53 17	43.33 12	52.00 10	51.14 59
Non-cons (N = 35)	Cough	19.00 6	10.80 5	40.00 4	37.67 3	24.50 18
	No cough	22.60 5	21.00 3	14.80 5	4.50 4	15.76 17
	TOTAL (non-cons)	20.64 11	14.63 8	26.00 9	18.71 7	20.26 35
TOTAL (cough)		46.25 16	46.31 16	43.30 10	58.78 9	47.90 51
TOTAL (no cough)		29.00 15	45.00 9	29.18 11	15.25 8	29.84 43
GRAND TOTAL		37.90 31	45.84 25	35.90 21	38.29 17	39.64 94

A three-way analysis of variance was performed on the severity scores. Since we had more than one factor and unequal numbers of cases in each cell, it was necessary to



build a specific design into this analysis of the variance.

When the design is non-orthogonal, as in this instance, the main effects of the analysis will be correlated to some extent, and so the sums of squares for all effects considered separately would actually surpass the total sums of squares explained, if added together. Basically, then, the distribution of the variance cannot be unambiguously attributed to the main effects, unless the unbalanced data is taken into account and the calculation of the sums of squares is altered.

SPSSX procedures use one of two such algorithms. The regression method will analyze each effect and adjust for all other effects in the model. The hierarchical, or sequential method analyzes each effect while adjusting only for those effects which precede it in the model. The latter of these methods is most powerful when the factors being used have a natural order (Norusis, 1985).

Our three factors in this case do have a precedential sequence. Ethnicity before the type of illness (cough/no cough) before the reaction to the illness (consult/not consult). It actually makes sense to analyze the variance due to the main effects in this order. Table 4-3c. gives the results of this three-way factorial analysis of variance, which was replicated for the short version of the scale.



Table 4-3c.    A three-way ANOVA of severity by ethnic group, whether or not the child had a cough, and whether or not the parents consulted the Dr.

Source of Variation	DF	F	Sig. of F
MAIN EFFECTS			
Ethnic group	3	0.96 1.12*	0.42 0.35*
Cougher	1	14.48 4.48*	< 0.0001 0.037*
Consulter	1	40.74 44.33*	< 0.0001 < 0.0001*
2-WAY INTERACTIONS			
Eth. gp.    Cougher	3	2.68 3.53*	0.053 0.019*
Eth. gp.    Cons.	3	1.41 1.41*	0.245 0.245*
Cougher    Cons.	1	1.58 0.52*	0.213 0.471*
3-WAY INTERACTION			
Eth. gp. Cough. Cons.	3	1.57 1.75*	0.204 0.163*

\* Refer to results from the shorter version of the scale

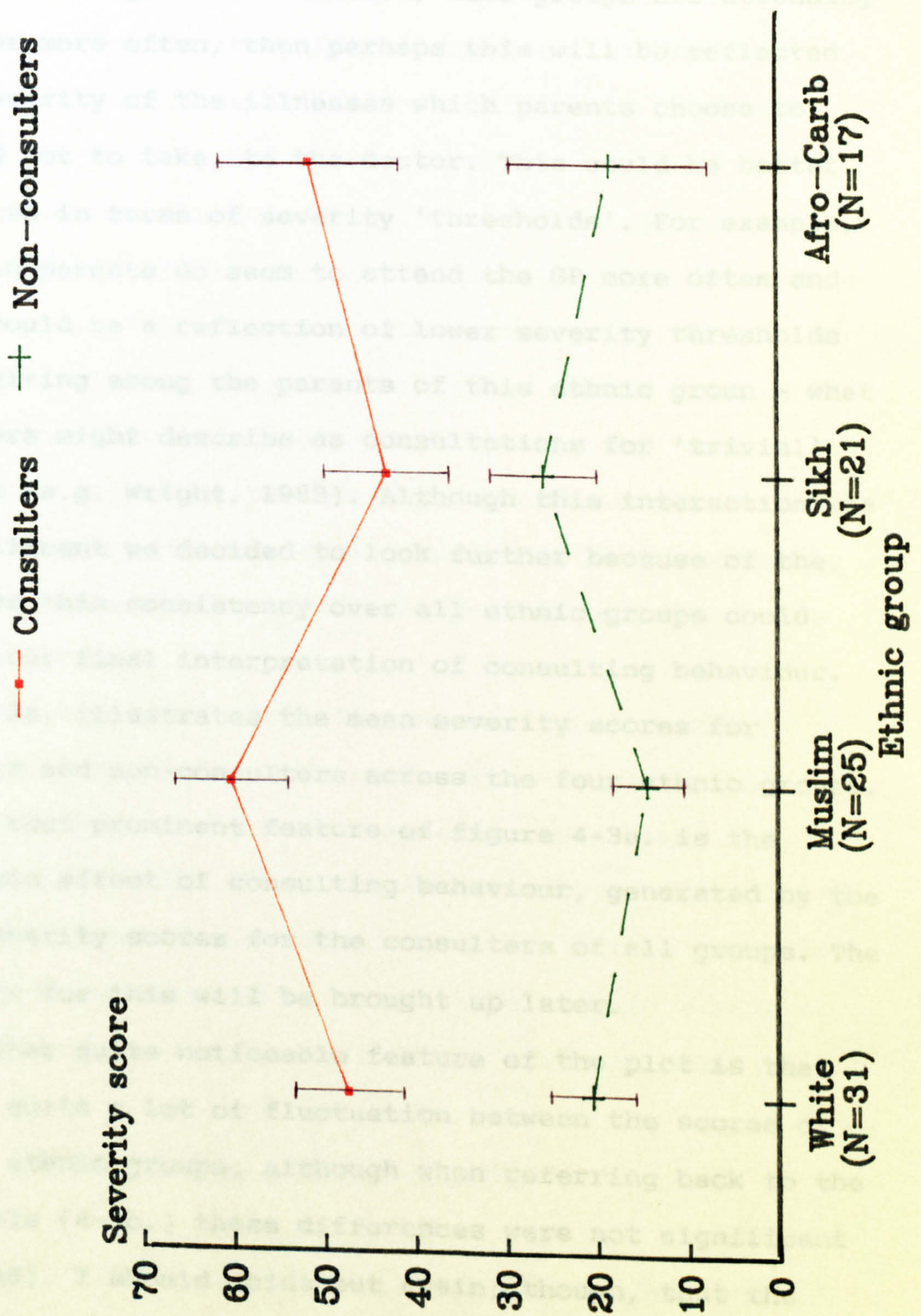
The three-way interaction was not significant (p = 0.204). When we took out the questions specifically relating to the cough and used the shorter version of the scale, the three-way interaction produced a similar result (p = 0.163).

Severity: ethnic group by consulting behaviour

Potentially the most interesting of the two-way interactions



**Figure 4.3a** Consultants' and Non-consulters' mean severity score across the four ethnic groups.





is that between ethnic group and consulting behaviour. If, as the consulting rates indicated, some groups are attending the doctor more often, then perhaps this will be reflected in the severity of the illnesses which parents choose to take, and not to take, to the doctor. This could be better represented in terms of severity 'thresholds'. For example, the Muslim parents do seem to attend the GP more often and so this could be a reflection of lower severity thresholds for consulting among the parents of this ethnic group - what the doctors might describe as consultations for 'trivial' illnesses (e.g. Wright, 1983). Although this interaction was non-significant we decided to look further because of the importance this consistency over all ethnic groups could have for our final interpretation of consulting behaviour. Figure 4-3a. illustrates the mean severity scores for consulters and non-consulters across the four ethnic groups.

The most prominent feature of figure 4-3a. is the strong main effect of consulting behaviour, generated by the higher severity scores for the consulters of all groups. The statistics for this will be brought up later.

Another quite noticeable feature of the plot is that there is quite a lot of fluctuation between the scores of the four ethnic groups, although when referring back to the ANOVA table (4-3c.) these differences were not significant ( $p = 0.245$ ). I should point out again, though, that the standard deviations were very high throughout the severity scores, and so the F statistic produced will have been



affected by this.

Yet what we can see from the figure is a result which, if anything, runs contrary to the severity threshold prediction for the Muslim families. This group of consulters score clearly the highest on the severity measures, as well as their non-consulters scoring lowest of all groups. Having said that, the statistic we used to analyze this interaction suggests that, with respect to the severity of their children's illnesses, the parents in our sample respond in similar ways, independent of which ethnic group they belong to. That is, for those parents who decided that their child needed to see the doctor, their perception of the severity of the illness was not significantly different across the four ethnic groups.

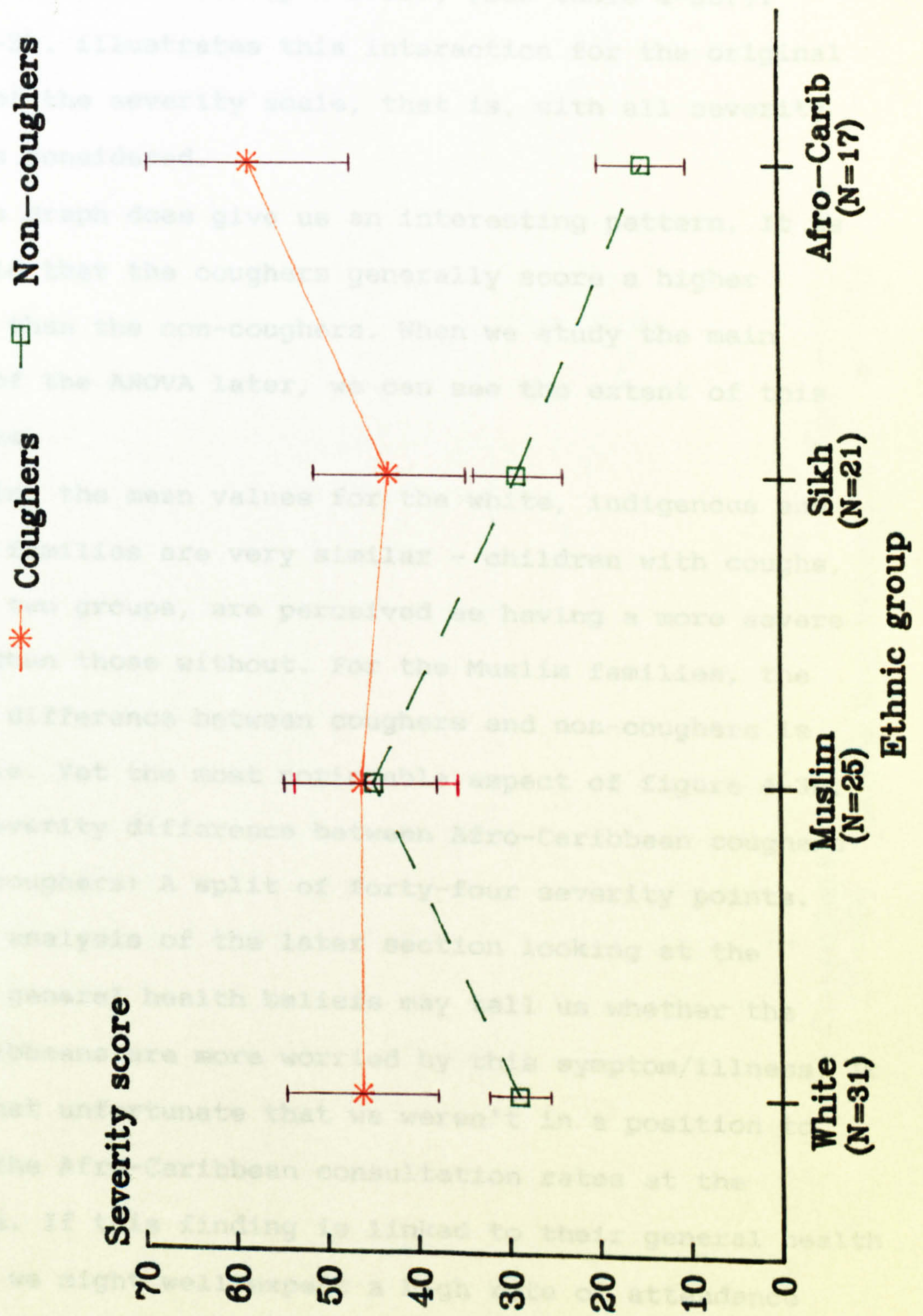
The direction of the differences which did emerge suggest that the higher consultations rates among the Muslim families are not likely to be explained by a lower consulting threshold. The Sikh, Afro-Caribbean and white families had very similar severity scores within both the groups of consulters and non-consulters, and so a similar conclusion can be put forward for the Sikh families.

#### Severity: ethnicity and a coughing child

The second of the three two-way interactions we looked at was the marginally significant one between whether or not the child had a cough and to which ethnic group the child



**Figure 4-3b. Coughers' and Non-coughers' mean severity score across the four ethnic groups.**





belonged ( $p = 0.053$ ). And for the shorter version with the cough questions removed ( $p = 0.019$ ) (see table 4-3c.).

Figure 4-3b. illustrates this interaction for the original version of the severity scale, that is, with all severity variables considered.

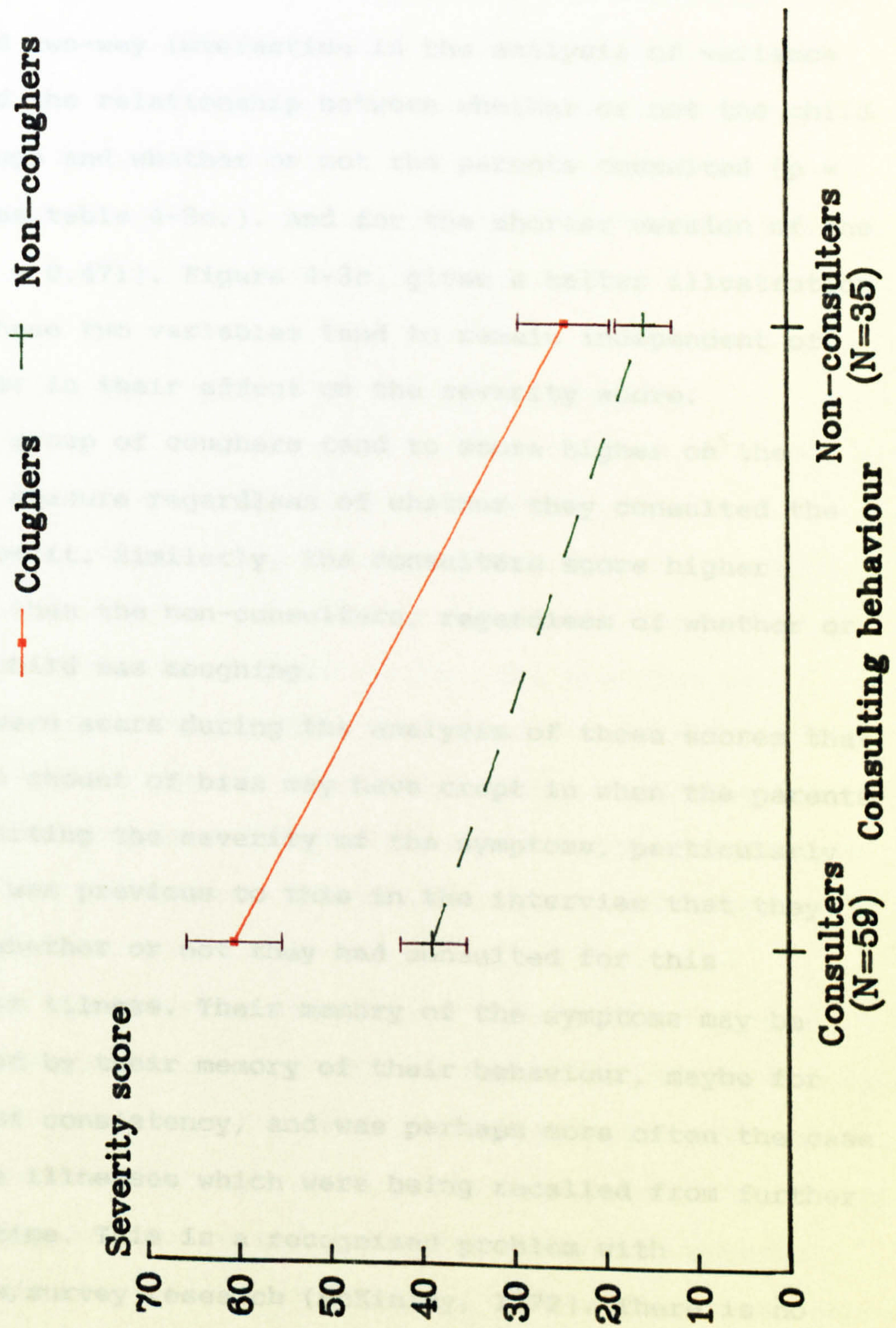
This graph does give us an interesting pattern. It is noticeable that the coughers generally score a higher severity than the non-coughers. When we study the main effects of the ANOVA later, we can see the extent of this difference.

Again, the mean values for the white, indigenous and the Sikh families are very similar - children with coughs, in these two groups, are perceived as having a more severe illness than those without. For the Muslim families, the severity difference between coughers and non-coughers is negligible. Yet the most noticeable aspect of figure 4-3b. is the severity difference between Afro-Caribbean coughers and non-coughers: A split of forty-four severity points.

Our analysis of the later section looking at the parents' general health beliefs may tell us whether the Afro-Caribbeans are more worried by this symptom/illness. It is somewhat unfortunate that we weren't in a position to monitor the Afro-Caribbean consultation rates at the practices. If this finding is linked to their general health beliefs, we might well expect a high rate of attendance among Afro-Caribbean parents for their children's coughs.



**Figure 4.3c** Coughers' and Non-coughers' mean severity score by consulting behaviour.





### Severity: consulting behaviour and a coughing child

The third two-way interaction in the analysis of variance concerned the relationship between whether or not the child had a cough and whether or not the parents consulted ( $p = 0.213$ ; see table 4-3c.). And for the shorter version of the scale ( $p = 0.471$ ). Figure 4-3c. gives a better illustration of how these two variables tend to remain independent of each other in their effect on the severity score.

The group of coughers tend to score higher on the severity measure regardless of whether they consulted the doctor for it. Similarly, the consulters score higher severity than the non-consulters, regardless of whether or not the child was coughing.

We were aware during the analysis of these scores that a certain amount of bias may have crept in when the parents were reporting the severity of the symptoms, particularly since it was previous to this in the interview that they told me whether or not they had consulted for this particular illness. Their memory of the symptoms may be influenced by their memory of their behaviour, maybe for reasons of consistency, and was perhaps more often the case for those illnesses which were being recalled from further back in time. This is a recognized problem with interview/survey research (McKinlay, 1972). There is no indication, though, that any of the four ethnic groups were more influenced by this artifact than any of the others, or



that any had to consistently remember further back. This was a potential problem with the consulters and non-consulters, since the latter were occasionally having to recall an illness which had occurred a few months previous to the interview. The discussion will reintroduce the whole issue of the parents' perceptions and reports, within the context of doing retrospective interview research.

#### Severity: the main effects of the three variables

The final piece of statistical information which the three-way ANOVA gave us was for the main effects of our three factors. The grand means in table 4-3b. are the averages for the four ethnic groups. The analysis of variance compared these four means ( $F = 0.958$ ;  $p = 0.417$ ). And did the same for the smaller scale ( $F = 1.107$ ;  $p = 0.302$ ). This suggests that the severity of the illnesses described by the parents are similar across the four ethnic groups.

There was a highly significant main effect, on the original scale, concerning whether the child had had a cough or not ( $F = 14.482$ ;  $p < 0.0001$ ). Severity scores were higher if the child had a cough. That is to say, when children with respiratory or febrile illnesses were coughing, parents perceived these illnesses to be more severe than those whose children were unwell, but not coughing.

As previously mentioned, this finding could quite



simply be an artifact of having more questions included in the ENH scale for coughing children. So here we could really value the same statistic from the shorter version of the scale, where the comparisons were over the same number of questions. We found a considerably reduced F value (4.48;  $p = .037$ ), suggesting that the large difference might be partially explained by the unequal number of questions. Although this is not necessarily the case, since we have to bear in mind that by removing those variables we are essentially removing some of the main symptoms contributing to the illness severity. Having said that, the shorter version still registers a difference unlikely to have arisen by chance.

Our interpretation of this revolves around two possibilities, which are not exclusive: i) Parents who have an ill child - and that child is coughing - perceive that illness (the associated symptoms and behaviour) to be more severe than a similar illness without a cough; ii) coughs tend to occur in the context of more severe illness episodes. We arrived at these interpretations because the illness is reported as more severe even when the cough symptoms are effectively removed. These two possibilities remain because we do not have any more information which would help us to elucidate the matter further.

Another highly significant main effect involved the scores of the consulters versus those of the non-consulters ( $F = 40.743$ ;  $P < 0.0001$ ). And for the shorter version ( $F =$



44.328;  $p < 0.0001$ ). This reflected the much higher severity scores of the consulting group, which we had already come across in the interaction data. Our interpretation of this is that the parents responded in appropriate ways to what they perceived as the more severe, and the not so severe, illnesses in their children.

#### A summary of the severity index

Perhaps it is worth reflecting over what this analysis of the variance in the severity scores told us about the behaviour of our sample, and look to see if any patterns were emerging. We were aware of a higher consultation rate at the GP for two- to eleven-year-old children in the Asian population. This appeared to be the case for respiratory and febrile illnesses only

We realized that this could have some relationship to what we have called 'consulting thresholds' among the parents; and that the Asian parents might be reaching these thresholds more often than the other groups in the population (dominated by the white, indigenous families).

This led us to explore the parents' descriptions of the severity of one specific illness which had recently inflicted their child, and for which the parents had either consulted, or not consulted, a doctor. It was possible that the trigger to a consultation may well be a less severe illness in the Sikh and Muslim families.



Yet we found that this hypothesis got no support from the data. And if anything, it is the Muslim parents who most clearly distinguish between less severe and more severe illnesses (at least in terms of their consulting behaviour).

So it seems that consultation thresholds don't actually differ between these four ethnic groups. Higher consultation rates among the Asian population can only be explored, then, through the possibility that more illnesses reach the consultation threshold, for these groups. We have already explored the social and demographic information concerning these families and found the Muslim and Afro-Caribbean people to be socially, economically and environmentally disadvantaged, as they are, on the whole, throughout Britain. Given that there is a strong correlation between poor social conditions and higher levels of ill-health (Townsend & Davidson, 1982; McCarthy et al, 1985; Whitehead, 1987), it is reasonable to assume that, for the Muslim families, this is one reason why more illnesses reach the threshold - these children probably get more illnesses.

But what about the Afro-Caribbeans and the Sikhs? On the basis of socio-demography, we might expect the Afro-Caribbean parents to consult equally as often as the Muslim families, and although we don't have any definite evidence to suggest that they don't, anecdotal evidence from the GPs I spoke to indicates that this group are probably the lowest attenders of the four. On the other hand, the Sikhs are more similar, on average, to the indigenous



families when socio-demography is considered. This suggests that if more illnesses do reach threshold levels for the Sikhs, it is probably something other than the fact that the Sikh children get more illnesses (although we cannot actually rule this out). Also, with the knowledge that consultation rates appear to be higher for respiratory and febrile illnesses in particular (especially for the Sikhs), the numbers of consultations may actually be influenced by the parents' overall perceptions of, and beliefs about, these illnesses. This possibility was addressed in another component of the questionnaire - the results of which are discussed later in this chapter.

Before moving away from the ENH severity scale, we ran one further analysis. Recall that the data on consultation rates at the practices was for Asians versus non-Asians, because we only had the names as the distinguishing feature. Although the Sikh and Muslim groups were reasonably well separated geographically, and therefore by practice, there wasn't a clear-cut divide. We felt that to be entirely consistent with the consultation data, we would do an identical three-way analysis of variance, but this time with the ethnic group factor sub-divided into Asians and non-Asians. Nothing emerged from this analysis which we didn't already know. Most importantly, ethnic group did not interact with consulting behaviour, nor was there a main effect of ethnic group.

It would be useful to summarize the main themes which



came out of our analysis of the severity levels of these children's illnesses - as described by the parents:

1. The illnesses of the children taken to the doctor were perceived as far more severe than those not taken to the doctor. This was the case for all four ethnic groups.
2. The decisions which parents make with regard to the severity of their children's illnesses is quite similar for all four ethnic groups. That is, the threshold severity of an illness which leads to a decision to consult a GP seems to be the same across the ethnic group boundaries. Taken together with the consultation rate data, this indicates that some groups are probably reaching the threshold for consultations more often.
3. Parents from all groups reported similar numbers of coughing and non-coughing children.
4. Overall, parents whose children had a cough perceived this illness to be more severe than those without a cough, although this effect varied a great deal across the ethnic groups. It was much more pronounced for the Afro-Caribbean families and absent in the Muslim families.
5. Both consulting and non-consulting families perceived the severity of illnesses with and without coughs in very similar ways.

#### A closer look at the severity of the illnesses

One question which we haven't really addressed with the severity scale measures is, just how severe are these illnesses? We have not really put the severity into perspective. We know that the scores ranged from zero - in which case the child had a minor cold with a runny nose for a couple of days - to 116 where an asthmatic child was having difficulty breathing at night. But what about the majority of cases, around the mean of forty? Or even more



important, the 'average' consulter with a mean of fifty-one, and the 'average' non-consulter with a mean of twenty. Just how typical are these illnesses?

Fortunately, we have the information from the Newcastle study of Standards and Performance in General Practice - and that of Wyke (1987), who used the same scale - as a comparison. Although she doesn't actually document the overall mean severity score for the children's illnesses, there is a distribution of scores (Wyke, 1987, p.156) with a mean approximating to fifty. In that study, all of the children had had a cough and since the mean for the children in our study with a cough is approximately forty-eight, we can be fairly sure that the illnesses which our sample of parents described are not unusual.

We felt that it would be useful to look a little bit more closely at the descriptions of the illnesses for some of the children. First: One who had been taken to the doctor and one who had not. We wanted these two examples to be as typical as possible of the two groups, so we chose two children with scores closest to these two means.

One six-year-old child whose illness had prompted his parents to consult, had a severity score of fifty-two points - one above the mean for the group. This child had a chesty cough for almost two weeks. The cough tended to be worse during the night and kept the child awake quite consistently throughout the duration of the illness. The parents reported that they could hear wheezing on the child's chest and



although he didn't actually need more attention and comforting - "he's not like our youngest who gets really clingy" (WM21) - they reported that he did get quite unwell, which probably prompted the consultation.

The description of the child whose parents chose not to consult is that of one who had a severity score equivalent to the non-consulters' mean of twenty points. Her mother told me that she was kept awake one night with a high temperature and that the following day she was quite tired, vomited a couple of times and needed more attention and comforting. After twenty-four hours and some Calpol, the temperature had returned to normal and, although her regular eating habits were disturbed for a couple of days, she was much better. This mother told me that if she hadn't been able to get the temperature down then she would have gone to the doctor to get her checked over. This child was two years old.

By glancing through the data on other children with severity scores approximating to fifty and to twenty, these illnesses did seem to be fairly typical, which suggests that the 'average' illness reported for the consultants is, as might be expected, quite severe. Of course, not all of those children who scored as high as fifty severity points were taken to the doctor, and likewise, some who scored quite low on our severity measure were taken.

For example, one seven-year-old child had a mean severity score of fifty points exactly - one below the mean.



This child had a quite painful, dry cough for just under a week. The cough kept the child awake for a couple of nights with wheeze and slight difficulty breathing. The mother also reported earache. She said that on this occasion the child was not really bothered by the illness and, as far as she could tell, did not need more attention and comforting. This mother was quite used to dealing with, what appeared to be, the relatively mild asthma attacks her son had, and so was not unduly worried by this situation.

On the other hand, one of the consulting group was a three-year-old boy who scored only eight points on the severity score as reported by his mother. From the mother's point of view it was quite obvious why she consulted:

"On the monday he had complained of a sore throat, but he didn't seem unwell so I just left it to see how it would go. He seemed fine the next day, but then he comes home from nursery and tells me that he's got sore ears. He didn't look bad, but I was at the doctor's straight away to get him checked. I know I shouldn't panic like that, but one of the little girls at nursery almost died recently with meningitis and so I'm terrified when it goes on their ears" (WM48).

So although the severity of the illness is a reasonably good indicator of the decisions the parents will make - as witnessed by the much higher severity scores of the consulters - there are other variables, often not related to the illness per se, which do exert an influence on these decisions.

That gives us a better idea of the kind of illnesses we



are dealing with, and also it gives an insight into the complexities involved in prediction of health behaviour. Symptoms alone often play a secondary role when decisions are being made, which is why various behavioural characteristics are also included in the severity scale.

I would like to now turn away from the overall measure of the 'severity scores' and look at those symptoms or behaviours which are possibly most worrying to the parent - that is, those which would be most likely to lead to a consultation at the GP. Wyke (1987) called them 'predictor variables'.

#### Illness severity and 'predictor variables'

When Wyke put forty-eight 'potential predictors' of a parent making a decision to consult a medical practitioner into a 'step-wise logistic discriminant function', she found that only four of these were significant; that is, significant as predictors of a parental consultation. They were (in order of predictive power):

1. If the child had had difficulty breathing.
2. If the child had needed more attention and comforting.
3. If the child had had pain when coughing.
4. If the child had slept more during the day.

Or put another way, if, during a period of respiratory or



febrile illness, the parents perceive either, or all of these four indicators, then they will be significantly more likely to consult a doctor than if none of these indicators was present. These four variables came out of an analysis which included every symptom or behaviour which GPs and paediatricians had associated with respiratory illness, as well as potential socio-demographic indicators.

I mentioned previously that we included the same severity scale as Wyke had done, and these four variables were part of that scale. So when the information concerning these four predictors was made available to us, we decided that it would be useful to wind up our main analysis of the illness severity by taking a closer look at how the four predictors had featured in this study.

We were interested in what these predictor variables might tell us about the various groups in our study. First of all we had to make sure that our sample had a similar trend to that of Wyke's; that is, that our group of consulters reported the presence of these symptoms and behaviours more often than our group of non-consulters did. Our previous analysis of severity would indicate that they did, but we can verify this for each of the four variables individually.

These predictors were most interesting to us with respect to how often the four ethnic groups had reported their presence. We recognized the possibility that patterns of consulting the doctor may depend more on the presence of



specific symptoms and behaviours, rather than a more global measure of severity. Whilst looking at some individual cases in the previous section, we did encounter that very phenomenon: Specific symptoms, which can be related to previous experiences (and presumably, therefore, to beliefs), can be the most powerful factor in the decision to consult. Since the parents in our sample had probably been brought up with a wide variety of different health beliefs within their own cultures, we felt that it would be fruitful to look at how the presence of these predictors varied across the ethnic groups involved in our research.

The type of data we had for each of these predictor variables was categorical. The parents had either reported the presence of the symptom/behaviour, or they had not. The usual statistical procedure for dealing with this kind of data is the chi-square technique. One basic problem with the chi-square test is that it can only deal with two variables at any one time. Our interest here was in the interaction between three variables: (i) The 'predictor', (ii) consulting behaviour, and (iii) ethnic group. In other words, we wanted to know if the consultants did report the presence of these symptoms and behaviours more often and how this relationship varied across the four ethnic groups. Until quite recently the only way researchers had of dealing with this situation was to use multiple chi-square tests on the relationships of interest. This procedure has the inherent problem of increasing the likelihood of making a



type I error. Fortunately, there is a relatively new exploratory statistical technique which does allow us to analyze categorical data with more than two variables.

### Log-Linear modelling

With this technique we are able to observe how two or more variables interact with each other, as well as looking at the effects of each factor on its own, all in the same procedure. In fact, log-linear analysis can deal with any number of added dimensions to the design, given sufficient numbers.

It is, at a fundamental level, similar to the chi-square technique. It uses models based on data which we would expect to generate under our specified circumstances (with other systematic variation controlled), and then compares them with those actually generated by the data. Yet, because we are working with more than two variables, the procedure for building these models is more complex than it is for the chi-square technique. Because of this, and the fact that the procedure is new, and, to date, not very extensively documented, I will give a detailed description of log-linear analysis and how it was applied to the data from the interviews, following closely the description that Gilbert (1981) sets out in his book 'Modelling Society'. I will then return to how we used this technique to look at how our sample variables relate to Wyke's (1987) 'predictor



variables'.

It is an exploratory and heuristic statistical approach. Gilbert explains:

"... the 'classical' approach assumes that the analyst possesses, a priori, a carefully formulated hypothesis to be tested with the data. Following the confirmation or rejection of this hypothesis, the analyst must cease working with the original set of data. Further, improved hypotheses must be tested with new data. In contrast, the above scheme assumes that, whilst the analyst should have some prior theoretical notions about the form of suitable models, the investigation ceases only when an adequate model to describe the one set of data has been found. The task is essentially to explore in depth the structure of the data. This seems a much more realistic view of the role of the analyst than the classical one, and it is an approach which is increasingly being adopted by statisticians under the name of 'exploratory data analysis' (Tukey, 1977)" (Gilbert, 1981. p.7).

In the log-linear approach, modelling is a preferred description to analysis. Very simply, it involves using all the knowledge that we do have about the data - the built-in design characteristics, the main effects and the relationships believed to exist - and using this knowledge to build a theoretical model; a model of what Gilbert calls the 'imaginary world'. Once we have this model - each cell representing an expected frequency - it is compared to the 'real world' of our data model. In this way we can observe whether or not the effects and relationships we thought existed, and put into the model, do actually exist in the data. We are looking for a good fit - a similarity out of the reach of chance variation. If the match to our observed



data is not good, then the model is changed and different main effects and relationships are put into the model. This procedure is repeated until a good matching model is found.

As with the chi-square procedure, log-linear modelling involves comparing the actual data table to a table that conforms to a particular model of what the data would look like if the relationships we have postulated do exist. A method known as 'iterative proportional scaling' computes model table frequencies in such a way that the model table has the same marginals as the data table. The essential elements of an iterative procedure are (Gilbert, 1981):

- (1) Make a guess at a solution.
- (2) Test the guess to see if it is good enough. If it is, you have the solution.
- (3) Improve the guess.
- (4) Repeat steps (2) and (3) until a satisfactory solution is discovered at step (2).

Since this is such an important aspect of the modelling procedure, it is worthwhile giving an in-depth example. This example looks at the relationship between three variables: Voting behaviour (A), Occupational class (B) and Accommodation tenure (C) (from Gilbert, 1981). Previous research and general knowledge would suggest relationships between these variables. Voting and class (A & B) are known to be associated, as are class and tenure (B & C) and voting and tenure as well (A & C). We have no reason to assume that there will be an interaction between the



variables. By that I mean that voting behaviour and class may well be related, but this relationship we would not necessarily expect to be dependent on accomodation tenure. So the model to be constructed will be one of 'no interaction', which is alternatively called the 'pairwise association' model, the reason for which will soon become apparent.

If the data generated by the model 'mimics' the actual data from the research closely enough, then we will have found that the three associations do exist in the data without interaction. If not, then we would have to start at the beginning with a new model, using the knowledge gained from our model of 'no interaction'.

(N.B. The terms 'association' and 'interaction' have not been used systematically in statistics, but instead seem to vary depending on the particular test being used. Gilbert (1981) uses 'association' to refer to the relationship between two variables and 'interaction' to refer to the relationship between three or more variables. In all the log-linear models of this study I will follow this terminology).

For the model of 'no interaction', the method of iterative proportional scaling would take each of the three marginal tables described by the associations [A,B], [A,C] and [B,C] in turn, and construct the model table required. In effect,



we are treating these three marginal associations like variables held constant. For example, we know there is association between A and B, so by including that association in the model this means that the association between these two variables is identical in the model and data tables. Similarly for the other two pairs.

The model is then built-up through these constants. If we have no interaction between the three variables in the data, then we will find that the model table will be almost identical to the data table. If there is interaction, then we will find that the two tables will differ - simply because in building our model we took no account of the fact that there was interaction.

Table 4-3d. Represents values for the full table and the three marginals (from Gilbert, 1981. p.42)

Voted Conservative			Voted Labour		
Class	Tenure		Class	Tenure	
	Own	Rented		Own	Rented
Non-man.	145	61	Non-man.	32	31
Manual	69	73	Manual	74	210



(a) Marginal table of vote by occupational class [A,B].

Class	Vote	
	Conservative	Labour
Non-manual	206	63
Manual	142	284

(b) Marginal table of class by tenure [B,C].

Class	Tenure	
	Own	Rented
Non-manual	177	92
Manual	143	283

(c) Marginal table of vote by tenure [A,C].

Tenure	Vote	
	Conservative	Labour
Own	213	116
Rented	134	241

Table 4-3d. demonstrates that it is worthwhile to first of all have a look at the marginal tables. The associations which have been found to exist in previous research are also apparent in this example.

So now we can use the method of iterative proportional scaling. First of all we make a guess at a solution. For simplicity of calculation, we can start by making every cell frequency equal to one (step 1). We can then compare the marginal totals of our guess with those of the data table



(step 2). Since there is no comparison between the two, we have to improve our guess by proportionately scaling the frequencies (step 3) that is, multiplying each of them by the ratio of the data to solution marginal-table entries, taking each marginal table in turn. For example, the second guess for those who voted conservative and were non-manual:

$$\frac{[\text{first-guess table's frequency}] \times [\text{data marginal entry}]}{[\text{first guess marginal entry}]}$$

$$= \frac{1 \times 206}{2} = 103$$

The scaling formula ensures that the class by vote [A,B] marginal table from the second guess is exactly equal to the data table, as desired, because the first guess was checked and improved by the class by vote marginal. The second guess will be checked and improved in the same way, but this time using the class by tenure marginal [B,C] as the scale which yields the third guess. Again a comparison is made with the actual marginal table to see how closely it is reflected. In fact, given that we do have three associations in the data then it makes sense to assume that a reasonable model will not emerge until each association (or marginal table model) has been compared with the data at least once. Thus, after four or five cycles the model should be complete. That is, we will have a model table derived from data where there is no interaction between class, vote and tenure, simply because our proportional table took into account the three associations only (see chapters five and six in Gilbert,



1981 for a more extensive review).

If the model table closely reflects the data table (there are goodness-of-fit statistics) then we can conclude that we have the correct model. On the other hand, if we have a discrepancy, that is, if a lot of the variation in the data cell frequencies has been left unexplained by the model, then we have to try out a different model. If residuals are high using all three possible associations from three variables, then we would consider the possibility of there being interaction in the data; that is, the association between two variables being dependent on a third variable.

I should point out that the interactions and associations we build into our models also contain, what are called, the lower-order relatives. For example, the three associations of the last example [A,B], [B,C] and [A,C] also include the three main effects [A], [B] and [C] (table 4-3e).

Table 4-3e. Examples of lower-order relatives.

Marginal	Marginal's lower-order relatives					
[A,B,C]	[A,B]	[A,C]	[B,C]	[A]	[B]	[C]
[A,B]	[A]	[B]				
[A,C]	[A]	[C]				
[B,C]	[B]	[C]				
[A]	none					
[B]	none					
[C]	none					



Models that include lower-order relatives are called hierarchical models. For a table describing relationships between three variables [A], [B] and [C], there are a total of nineteen models that could possibly fit the data; and as the number of variables increases, the number of different models possible increases enormously.

So, how then can we arrive at the best model for our data without taking weeks to find it? The simple answer is that the computer programme does it for us. Before looking at the programme, though, it is worth mentioning how we can narrow all possible number of models down. First of all, we are quite often aware of possible main effects and associations in our data - as in the previous example - and so these can be built into the model. Also, it is unusual to include an association between two variables in a model without including the lower-order relatives as well.

Finally, the design characteristics of the sample have to be considered. If the numbers of subjects in some criteria of the sample have been deliberately controlled, then this bias must be represented in the design. For example, in our sample we tried to obtain equal numbers of consultants and non-consultants, and we selected the practices in areas where we might get more equal numbers of each ethnic group than exist in the population at large. With this design, we have to insure that both of these marginals



are included in the final model, either as lower-order relatives of associated variables, or as marginals in their own right. This makes sure that relationships resulting solely from the sample design are taken care of by the model and can thereafter be ignored.

The SPSS-X statistical procedure HILOGLINEAR is one of the programmes for the computation of hierarchical log-linear models. It has choice procedures which systematically apply different models to the data until the best fit is found. The process of forward elimination starts off with the simplest model possible and then adds successive terms until a model of best fit is arrived at. Backward elimination is, as its name suggests, the reverse procedure. It begins by considering the most complex model possible as a starting point - the so-called 'saturated model' with all interactions - and then successively removes those that do not meet a predetermined criterion for remaining, specified in terms of a significance level (.05). It is accepted that backward elimination is almost always the better procedure (Benedetti & Brown, 1978) and it is this one that we built into our programme.

Although the log-linear method does not have a standard test of significance, there are ways of making sure that the model chosen as the 'best' model to represent the data is actually representative. As I said earlier, there is a goodness-of-fit statistic - similar to chi-square - which measures the degree of concordance between the data and the



model. It is the 'log likelihood ratio', or G-square:

$$G\text{-Square} = 2\sum x_{ij}(\log x_{ij} - \log m_{ij})$$

Where  $x_{ij}$  are data cell frequencies, and  $m_{ij}$  are model cell frequencies, 'log' represents natural logarithm, and the summation is carried out over all the cells in the table. Degrees of freedom are calculated by subtracting the total number of degrees of freedom in each of the fitted marginals from the number of cells in the model table. A perfectly fitting model (the 'saturated model') will produce a G-square value of zero and a significance level of 100 percent; while a model producing a significance level of below five percent is generally regarded as an inappropriate representation of the data.

This is potentially confusing because the significance levels are used in slightly different ways from the norm in statistical procedures. It is easiest to think of these significance levels in this way: One of 100 percent explains every effect, association and interaction in the model and any below five percent explains less than one twentieth of these effects.

The best model to fit the data will usually be somewhere between these two values, and, in practice, the one chosen depends to a certain extent on the number of variables being analyzed as well as what you are particularly interested in. When more than three variables



are used in the model, then it is usually the best policy to adopt the simplest model possible, which fits the significance criteria, since higher order interactions of four and five variables are almost impossible to interpret in language other than that used in mathematics.

The 'choice', though, is partly theoretical since when using HILOGLINEAR we don't have to worry about the significance level of the model since the elimination procedure will not include any models which do not fit the required significance level.

The part of the process which does involve us making a choice about accepting a particular model concerns how much of the variation in the data cell frequencies that model explains. This is a more powerful way to establish how realistic our model is as a definition of the data and it is done by computing the 'coefficient of multiple determination'. This measures the proportion of the total variation in data cell frequencies explained by a model, using the G-square value generated for the model. Since a zero value of G-square indicates that the data has been fitted perfectly - a saturated case - it is reasonable to interpret a non-zero value of G-square as indicating the amount of variation in the data cell frequencies left unexplained by a model. This idea is exploited in defining the coefficient of multiple determination. It is calculated by comparing the relative fit of the selected model with the fit of a 'minimal' model including no effects, that is, with



the grand mean model:

$$\frac{\text{G-square (grand mean)} - \text{G-square (model)}}{\text{G-square (grand mean)}}$$

This equation provides a percentage score representing the percentage of variation in the data table that is explained by the model.

Another output of the SPSS-X programme which is particularly useful for our ends, is 'the likelihood ratio chi-square'. This statistic is once again very much like chi-square except on this occasion a value is computed for each main effect, association and interaction possible. A probability value is given for each. I have previously mentioned that the backward elimination procedure of HILOGLINEAR removes any effect from the model which does not meet the predetermined significance level of five percent. Which means that we don't have to worry about non-significant individual effects or associations entering into the model. With the likelihood ratio chi-square, the relative strength of each effect in the chosen model is given in statistical language which we are more familiar with. This is a most useful feature of the procedure since we are specifically interested in the strength of any associations and interactions and also, by including only those effects which are statistically significant, this tends to ensure that a large proportion of the variance is explained by the model.



Using log-linear models with the 'predictor variables'

Two of the four possible predictors were analyzed by the log-linear modelling technique. The other two did not meet the minimum expected frequency requirement. We will look first at the two variables which we did use this technique with. The counts for the first of these - whether or not the child needed more attention and comforting - are recorded in table 4-3f:

Table 4-3f. Whether or not the child needed more attention and comforting by consulting behaviour by ethnic group.

	<u>Consulters</u>			<u>Non-consulters</u>		
	More attention?			More attention?		
	Yes	No	(T)	Yes	No	(T)
White	18	2	20	5	6	11
Muslim	14	3	17	5	4	9
Sikh	10	2	12	3	5	8
Afro-Car.	8	2	10	4	3	7
(TOTAL)	50	9	59	17	18	35

The illnesses which the parents talked about were not uniform respiratory conditions, but instead a wide range of colds, febrile illnesses and flus, as well as the variety of differently described coughs. In fact, quite often the type



of illness which leave children - particularly the younger ones - feeling "clingy" or "mangy", as some of the Yorkshire mothers described it. This is reflected by the fact that a large majority of the parents reported that the child did need more comforting and attention. We performed a log-linear analysis on this variable to see what patterns existed in the data.

Recall that the purpose of this analysis was really two-fold. Firstly, to determine the strength of the associations without carrying out multiple chi-square tests. More importantly, though, to look at how the associations varied across the levels of a third variable, or, put another way, how the variables interacted. We expected an association between the predictor variable and consulting behaviour (these were particularly strong in Wyke's (1987) study). The question we were then interested in was, would it be consistent across all four ethnic groups? (table 4-3g):



Table 4-3g.    Output of log-linear model describing the relationship between whether the child needed more attention and comforting, consulting behaviour and ethnic group.

Model	G-square	DF	Coeff. of mult. determination (%)
[P,C] (.0002)* [E] (.17)	1.84	9	96

Key:    P = Predictor variable  
          C = Consulting behaviour  
          E = Ethnic group

\* Probabilities for each effect are in curved brackets.

Table 4-3g. needs some explanation. First of all the model we have used does explain a very high proportion of the variation in the data cell frequencies (96%) and the fit of the model to the data is very good, witnessed by the low value of the log likelihood ratio statistic (1.84).

    If we look at the individual effects and associations, then we can see why the model is such a good one. We have a very strong association between the predictor variable and consulting behaviour (likelihood ratio chi-square change = 13.85; p = 0.0002). Our results are in agreement with that of Wyke (1987) for this variable: If the parents perceive the child as needing more attention and comforting then they are far more likely to consult the GP than if they don't perceive this.

    Remember also that this association includes both of the main effects of predictor variable [P] and consulting behaviour [C] as lower-order relatives. Which means that



with the inclusion of the main effect for ethnic group [E] in the model, we have included the two variables (E & C) which we had some control over the numbers of, i.e. the design characteristics. These two main effects have to be included at all times. Notice that the main effect for ethnic group is not particularly strong and given the choice we would not include it in the model as it adds little to the explanation of the variance.

The final important feature of the model is the lack of any interaction (L.R. chi-square change = 1.13;  $p = 0.77$ ). So our finding - that parental consulting behaviour is influenced by this particular behaviour - is demonstrably the case for all four ethnic groups. Or in other words, the parents from all ethnic backgrounds are equally likely to consult a doctor when their young children are unwell and demanding more comforting and attention.

The other predictor variable for which we had sufficient numbers to perform an identical log-linear analysis on, was whether or not the child had slept more during the day while s/he was ill (table 4-3h):



Table 4-3h. Whether or not the child slept more during the day by consulting behaviour by ethnic group.

	<u>Consulters</u>			<u>Non-consulters</u>		
	Sleep more?			Sleep more?		
	Yes	No	(T)	Yes	No	(T)
White	6	13	19	1	10	11
Muslim	8	9	17	2	7	9
Sikh	6	6	12	0	8	8
Afro-Car.	3	7	10	3	4	7
(TOTAL)	23	35	58	6	29	35

Model	G-square	DF	Coeff. of mult. determination (%)
[P,C] (.0196)			
[E] (.218)	8.37	9	78

Key: P = Predictor variable  
C = Consulting behaviour  
E = Ethnic group

Despite some variation between the patterns presented by the different ethnic groups, the interaction was not significant (L.R. chi-square change = 6.37;  $p = 0.095$ ). Yet once again our results did give support to Wyke's (1987) 'predictors' of a consultation; we found an association between the 'predictor' variable and consulting behaviour (L.R. chi-square change = 5.45;  $p = 0.02$ ). So we can say that parents of children who sleep more during the day when they are unwell with a respiratory or febrile condition are more likely to visit the GP than those whose children do not



sleep more during the day; and this is the case for all four ethnic groups involved in our study.

Another noticeable feature of table 4-3h. is that the model used is not as good a fit as that used for the previous variable - the goodness-of-fit statistic (G-square) is quite high and the total amount of the variation in the data cells explained by the model is considerably lower (although the greater proportion is still explained). The reason for this is most likely because some of the variation will also be explained in the interaction which, as I have pointed out above, does produce a probability beyond the ten percent level. An interaction between the three variables which was included in the model would explain all of the variance (100%) and be a perfect fit to the data (G-square = 0). Therefore, it would only ever make sense to include this 'saturated case' if the interaction was actually significant, since it would mask all other effects.

The other two 'predictor' variables, despite having inadequate numbers for a three-way analysis, can still give us information concerning their relationship with consulting behaviour and ethnic group. I'll introduce each one in turn:



Table 4-3i. Whether or not the child had difficulty breathing by consulting behaviour by ethnic group.

	<u>Consulters</u>			<u>Non-consulters</u>		
	Diff. breathing?			Diff. breathing?		
	Yes	No	(T)	Yes	No	(T)
White	5	15	20	0	11	11
Muslim	9	8	17	1	8	9
Sikh	0	12	12	1	7	8
Afro-Car.	3	7	10	1	6	7
(TOTAL)	17	42	59	3	32	35

What is immediately apparent from table 4-3i. is that relatively few children overall did have difficulty breathing (21%), with particularly small numbers in the non-consulting group, thus excluding the possibility of an interaction between the three variables. Despite the small numbers in this category, there was a significant association between the 'predictor' variable and consulting behaviour (chi-square = 4.24;  $p < 0.05$ ). So, once again in support of Wyke's (1987) findings, if the child had difficulty breathing the parents were more likely to consult their GP.

Interestingly, there was also an association between the 'predictor' variable and ethnic group (chi-square = 8.3;  $p < 0.05$ ). The Muslim families were most likely to report difficulty breathing in their children (53%) and the Sikh families least likely (5%). Afro-Caribbeans (24%) and whites (16%) fell in between. Although we were not in a position to



analyze this any further, it is worth bearing in mind the potential implications of this finding for relative consulting behaviour.

The fourth 'predictor' variable was whether or not the child had experienced pain when coughing, and since not every child had had a cough some of the cell numbers were particularly small (table 4-3j.):

Table 4-3j. Whether or not the child had pain when coughing by consulting behaviour by ethnic group.

	<u>Consulters</u>			<u>Non-consulters</u>		
	Pain coughing?			Pain coughing?		
	Yes	No	(T)	Yes	No	(T)
White	2	8	10	0	6	6
Muslim	5	6	11	0	6	6
Sikh	2	4	6	1	2	3
Afro-Car.	2	4	6	1	2	3
(TOTAL)	11	22	33	2	16	18

The marginal values of table 4-3j. indicate that if a child has pain when coughing then the parents are more likely to consult a doctor than for those with a cough without pain. A chi-square analysis of this association between consulting behaviour and the 'predictor' variable yielded a result close to significance at the five percent level (chi-square = 3.38;  $p < 0.075$ ), bearing in mind that numbers are quite small. In fact so small that I was unable to perform any



other chi-square analyses on this data.

A summary of the 'predictor variables'

We can summarize what happened in our study to Wyke's (1987) predictor variables. Primarily, as we speculated, our group of consulters were more likely to perceive these symptoms or behaviours in their children than were the group of non-consulters, and thus these symptoms and behaviours were probably very much involved in the decision to consult. This was certainly the case for three of the variables and was indicated for the fourth (pain when coughing). This trend was apparent for all four ethnic groups for all four of these important variables, lending more support to our evidence so far that parents from all ethnic groups do respond in similar ways to what are perceived by them to be the more serious side of their children's respiratory and febrile illnesses.

The data also produced an association between the numbers of parents reporting their child having difficulty breathing and the ethnic group to which the families belonged. The Muslim families mentioned the presence of this symptom most often and the Sikh families least often. Unfortunately our data doesn't allow us to do any more than speculate as to why this might be. One possibility is that the lower standards of living conditions experienced by the Muslims, means that their children get these more severe



symptoms more often.

We do have to be careful, though, when observing the severity of the illnesses across the ethnic groups, simply because we do have a disproportionate number of consulters than would occur in the population normally, and, presumably therefore, an elevated severity overall. Also, we haven't yet considered the parents' overall beliefs and perceptions about respiratory illness, and so it could be that the Muslim families have beliefs about this type of illness which focuses more on the ease of breathing.

The section on beliefs and perceptions of illness is addressed after the next one concerning the parents' responses to the vignettes.



#### 4-4. The Vignettes

The severity scores gave us a means of comparing children's illnesses and parental decisions about these illnesses across the different groups in our study. One thing we did lack with the severity scores was complete similarity - that is, no two illnesses were exactly the same. So, two children may have obtained the same severity score, but one may have had coughing and vomiting as main symptoms, whereas the other might have had a high temperature and drowsiness.

We felt that what we needed to help counteract these potential sources of bias was a standardized stimulus; situations which were the same for all parents. These took the form of vignettes - hypothetical situations to which the parents responded with what they believed they would do in the event. We were aware that it would not be possible to describe any situations which were exactly the same for different families. Cultural and social background, previous experience with the child's health history and day to day events - for example, local general practitioners canvassing their clients about the dangers of meningitis or rubella - all play a role in the decisions which parents make about their children's health and health care. And these experiences vary from family to family. But what we could do with these vignettes was to make the symptoms and the behaviour of the child the same, for each case, and so if responses did vary we could look to factors other than the



illness itself for the origin of the variation.

There were eight vignettes used in the interviews:

- A. The child's cough has lasted for seven days and s/he has also been sick, usually when s/he coughed.
- B. The child is normally well, but for the past month has been getting a tight chest and wheezy when running.
- C. The child's cough has lasted for three weeks and has not got any worse but neither has it got any better. S/he has no other symptoms.
- D. The child has been hot and miserable for 24 hours, drinking plenty of fluids, but refusing food.
- E. The child has had a runny nose and a fine rash for the last 24 hours. There are no other symptoms.
- F. The child has been wheezing for 24 hours, so s/he couldn't go to school or playgroup and s/he couldn't play with other children.
- G. The child is off his/her food and has a slight temperature, but no other symptoms.
- H. The child quite suddenly had difficulty breathing and his/her lips changed colour to blue in a period of about four hours.

Wyke (1987) used very nearly the same scenarios in her Ph.D. research - situations which were devised by General Practitioners involved in the Newcastle project.

All of the 107 interviewees responded to the eight vignettes. There were a variety of different responses, but primarily we were interested in whether or not the parent felt that the situation merited an immediate visit to a medical practitioner. The responses other than making an immediate consultation were quite varied - from waiting a



day or two more to see what developed, to doing nothing at all; although the latter response was very infrequent. Other responses did tend to cluster around the general theme of waiting to see what the illness developed into and usually applying their own medication or consulting the chemist in the meantime.

We decided to approach the analysis from two different directions. Firstly we put all of the responses to the eight vignettes together into one score for each individual. We did this by recoding to a value of one any response which indicated that the parent would contact a medical practitioner straight away, and to zero all other responses. So the parents' 'vignette scores' could range from zero to eight. In fact we obtained an approximately normal distribution of scores, ranging from one to eight, with the average family suggesting that they would consult on five of the eight occasions.

Higher vignette scorers were those who more often responded that they would consult the doctor immediately. So a score of seven meant that the parent(s) said that they would go immediately to a medical practitioner on seven out of the eight scenarios. For the forthcoming analysis the terminology was potentially confusing since we were looking at the parents' decision to consult or not to consult, which was quite independent of our groups of consulters and non-consulters. To minimize this confusion I will put into upper-case any reference to those who said they would



CONSULT and those who said they would NOT CONSULT when referring specifically to the vignettes.

As before, we were particularly interested in how the various groups in our study responded to these scenarios. For example, if there was something intrinsically different between our groups of consulters and non-consulters - other than the fact that the consulters reported more severe illnesses - then we might expect a difference in their responses to the vignettes. We could, to a certain extent, regard the vignettes in the same 'consulting threshold' scenario as we did with the severity measures, as they were designed to confront a wide spectrum of severity.

Similarly with the four ethnic groups. The 'vignette score' would be another type of measure of the threshold for consulting a doctor. We already know that for our sample the severity thresholds are actually quite similar across the ethnic groups; which, in turn, led us to speculate that if consultation rates are different, then more illnesses may actually reach threshold for some ethnic groups. This could be linked to the numbers of illnesses children get, or it could be linked to the parents' perceptions of the illnesses.

Our second approach to the analysis of the vignettes will be most useful in tackling this latter possibility. This will be to take each vignette separately and look at the group responses. Each scenario has symptoms and patterns of behaviour specific to it and so if it is particular



situations which most worry the parents, then perhaps this will be reflected in their responses. First, though, to the 'vignette scores'.

#### 'Vignette score' analysis

We performed a two-way analysis of variance on the scores; ethnic group by consulting behaviour (table 4-4a.).

Table 4-4a. Mean 'vignette scores' and the F statistics for the two-way ANOVA of ethnic group by consulting behaviour.

Source of Variation	Means
Consulters (N = 59)	5.17
Non-consulters (N = 48)	4.90
Main effect: (F = 1.706; p = 0.195)	
White, indigenous (N = 36)	5.11
Muslim (N = 29)	5.17
Sikh (N = 24)	5.08
Afro-Caribbean (N = 18)	4.67
Main effect: (F = 0.934; p = 0.427)	
Interaction: (F = 1.193; p = 0.316)	

As can be seen from table 4-4a., mean values for all of the



groups are quite similar and, as a result, the analysis of variance has an outcome supporting the null hypothesis of no differences between groups and no interaction.

So, when the vignettes are taken as a whole, there is no real difference in the symptom threshold for consulting a medical practitioner between consulters and non-consulters and between the four ethnic groups.

We know already that our consulting group could be distinguished from our non-consulters because their illnesses were more severe. Yet this in itself didn't really tell us anything about the thresholds for consulting among these two groups. We now know that over a wide range of severity, the parents from both these groups report that they would visit the doctor a similar number of times. So overall thresholds are quite similar. It is important to emphasize that this vignette score was derived from an average severity, and that we are not making any statements about the parents' reactions to the individual situations. Or put another way, the mean vignette score could easily have been formed by high numbers of 'CONSULTATIONS' on some vignettes and low numbers on others. The patterns for each of the groups may actually bear no resemblance to each other despite similar means. The next stage of the analysis was to look at each of the vignettes separately.



Analysis of the vignettes taking each scenario separately

We bisected the responses to the vignettes in the same way as we had done for the 'vignette score'; into those who would CONSULT a doctor immediately and those who wouldn't. Taking each vignette separately, we looked first at the numbers of consulting and non-consulting families who said that they would immediately seek the advice of a GP on this occasion (table 4-4b.). The paediatricians who devised these scenarios did not give us an order of severity for the vignettes, so we took this order from the overall responses of the parents. That is, the vignette with most 'immediate consultation' responses would be placed as most severe.

Table 4-4b. The percentage of consulters and non-consulters who would CONSULT a medical practitioner for each of the eight vignettes.

		<u>Percentage</u>	
		Consulters	Non-consulters
Most severe	Vignette H	100	100
	Vignette A	95	96
	Vignette B	90	100
	Vignette F	69	77
	Vignette C	75	56 (p < .08)*
	Vignette E	39	46
	Vignette D	44	13 (p < .001)
Least severe	Vignette G	7	2

\* Probabilities derived from a chi-square analysis.



There was an indication on vignette C ('the child's cough has lasted for three weeks and has not got any worse, but neither has it got any better') that consultants would be more likely to make an appointment ( $p < 0.08$ ). This was certainly the case for Vignette D ('The child has been hot and miserable for the last 24 hours, drinking plenty of fluids, but refusing food'). All six other vignettes elicited similar responses for these two groups.

This would suggest that in one or two specific illness situations the consultants are more likely to take action towards initiating contact with the doctor. We can be even more precise and say that the more worrying situations for this group is either when the child contracts a high temperature and/or goes off his/her food, and is also a possibility with lingering coughs.

What strengthens the finding for vignette D even further is that it is one of the outliers in terms of severity. It could have been predicted that any vignette demonstrating disparity between the groups would fill the middle ground with respect to severity. Or put another way, we would predict that those vignettes considered most severe and least severe would be less likely to produce disagreement between the groups concerning the course of action to take. Vignette C is one of the middle two, but vignette D is actually the one considered second least severe by the group of parents as a whole.

So what about the four ethnic groups? This time we were



ignoring consulting behaviour as a variable. The vignettes are ordered similarly with the most severe at the top.

Table 4-4c. The percentage of parents from the four ethnic groups who would CONSULT a medical practitioner for each of the eight vignettes.

	<u>Percentage</u>			
	White	Muslim	Sikh	Afro-Car.
Vignette H	100	100	100	100
Vignette A	100	97	88	94
Vignette B	97	97	96	83
Vignette F	78	72	71	67
Vignette C	69	72	71	44 (p < .09)*
Vignette E	33	52	46	39
Vignette D	28	24	38	33
Vignette G	6	3	0	11

\* Probability derived from a chi-square analysis.

The responses of the parents from all four ethnic groups were very similar on all of the vignettes (table 4-4c.). In fact none of the vignettes produced any significant differences at the five percent level. The most noticeable variation is the Afro-Caribbean percentage on Vignette C, which indicates that the Afro-Caribbean parents may be less likely to consult a doctor for a lingering cough.

As I have mentioned previously, the chi-square technique only allows us to use two variables at any one time. We discovered that the consulting group were much more likely to consult a doctor under the conditions of vignette



D than the non-consulting group, but it was possible that this finding interacted with the ethnic group to which the families belonged, that is, the pattern may only apply to some of the ethnic groups. Log-linear models would allow us to explore this possibility further. Also, given that we had two almost significant associations on vignette C, we felt that the application of log-linear models would give us a very useful second look at the responses to the vignettes.

#### Log-linear modelling the vignettes

On the HILOGLINEAR package of SPSSX, we performed the backward elimination procedure for each of the vignettes. For four of them (A, B, G & H) there were either too many or too few parents who said that they would CONSULT, for any analysis of this nature to be meaningful. This left us with log-linear models of the four vignettes C through to F (table 4-4d.):



Table 4-4d. Log-linear models of the vignettes C to F, by consulting behaviour by ethnic group.

Model	G-square	DF	Coeff. of Mult. Determination (%)
Vignette C [V,C,E] (.052)	0	0	100
Vignette D [V,C,E] (.0136)	0	0	100
Vignette E [V] (.10) [C] (.29) [E] (.086)	4.37	10	70
Vignette F [V] (< .0001) [C] (.29) [E] (.086)	3.89	10	89

Key: V = Vignette  
C = Consulting behaviour  
E = Ethnic group

Table 4-4d. will need some explanation. The two vignettes for which we had associations before (C & D) demonstrated interaction in the data. The interaction of the three variables on vignette C is actually fractionally outside the five percent level, but close enough to be of interest to us. The interaction on vignette D was stronger statistically.

When there is a three-way interaction in the data of three variables then this will also include all possible lower-order relatives - both associations and main effects - and so will, by definition, explain all of the variation in



the data cells (100%), and be a perfectly fitting model ( $G\text{-square} = 0$ ). The model is a reproduction of the data model, where all marginals, including the grand mean, are identical to that in the data. The only time that such a model is of any value in log-linear analysis is when all of the variables in the analysis interact significantly with all of the other variables.

The degrees of freedom are an inverse measure of the number of constraints under which the model table frequencies are calculated. The more constraints the model has to satisfy, the lower are the number of degrees of freedom (Gilbert, 1981). Since the constraints are those marginals which are required to be identical in the model and the data, and we have matched them all with the analysis of vignettes C and D, then it follows that the number of degrees of freedom will be as small as possible, i.e. zero.

For vignettes E and F we have a different pattern. There is no interaction and we already know that there are no significant associations; and in fact the associations are so insignificant that they are not worthwhile including in the models. The main effects can explain enough of the variance on their own.

Table 4-4e. gives the numbers in vignettes C and D and how they distribute themselves across the three variables.



Table 4-4e. Vignettes C and D by consulting behaviour by ethnic group.

(a) Vignette C

	<u>Consulters</u>			<u>Non-consulters</u>		
	CONS.	NOT CONS.	(T)	CONS.	NOT CONS.	(T)
White	18	2	20	7	9	16
Muslim	12	5	17	9	3	12
Sikh	8	4	12	9	3	12
Afro-Car.	6	4	10	2	6	8
(TOTAL)	44	15	59	27	21	48

(b) Vignette D

	<u>Consulters</u>			<u>Non-consulters</u>		
	CONS.	NOT CONS.	(T)	CONS.	NOT CONS.	(T)
White	10	10	20	0	16	16
Muslim	4	13	17	3	9	12
Sikh	8	4	12	1	11	12
Afro-Car.	4	6	10	2	6	8
(TOTAL)	26	33	59	6	42	48

We will look at the responses to vignette C first. Recall that vignette C is: 'The child's cough has lasted for three weeks and has not got any worse, but neither has it got any better. There are no other symptoms.' The original association revealed by the chi-square analysis is evident from the bottom row of totals. Seventy-five percent of the consulting group would go to a doctor immediately under these circumstances, whereas only fifty-six percent of the non-consulting group would. Yet this pattern is not the same



for all four ethnic groups. Table 4-4f. represents the percentage in both the consulting and non-consulting groups who would choose to CONSULT immediately:

Table 4-4f. The percentage in each of the ethnic groups who would choose to CONSULT immediately for vignette C, in both the consulting and non-consulting groups.

	Percentage who would CONSULT	
	Consulters	Non-consulters
White	90	44
Muslim	71	75
Sikh	67	75
Afro-Car.	60	25

Two patterns are evident from table 4-4f. Firstly, the Afro-Caribbean families are the least likely, in both consulting and non-consulting groups, to suggest that they would CONSULT for vignette C. Secondly (and this is something that we hadn't detected before) the overall finding that consulters are more likely to CONSULT for vignette C is actually only the case for the White and Afro-Caribbean families; the effect completely disappears for both of the Asian groups.

Before discussing this finding further, it might be worthwhile looking at the similar interaction in vignette D. Vignette D is: 'The child has been hot and miserable for twenty-four hours, drinking plenty of fluids, but refusing



food.' Again, the overall difference between the consulters and non-consulters is evident from table 4-4e. totals. But, as can be seen from the percentages in table 4-4g., the variation among the ethnic groups is considerable:

Table 4-4g. The percentage in each of the ethnic groups who would choose to CONSULT immediately for vignette D in both the consulting and non-consulting groups.

	<u>Percentage who would CONSULT</u>	
	<u>Consulters</u>	<u>Non-consulters</u>
White	50	0
Muslim	24	25
Sikh	67	8
Afro-Car.	40	25

On this occasion it is the White, indigenous and the Sikh families who are very similar in their responses, and it is these two groups who almost entirely account for the overall difference between the consulters and non-consulters. For the Afro-Caribbean families this difference is drastically reduced, and is completely eliminated for that of the Muslims.

#### Discussion of the responses to the vignettes

What we have learned from the vignettes is very important to our understanding of parental health beliefs and behaviour.



In reality, no two illnesses are exactly alike and those which appear so can be further influenced by social and cultural beliefs, previous experiences and by situational variables which occur at the time of the illness; and which are either overlooked by us asking the questions, or by the parent responding.

Therefore, comparisons of specific illness severity and subsequent reactions to that severity, can never be entirely meaningful. The vignette presents a situation which is, in every respect, the same for all the parents. It is a standardized measure of parental consulting behaviour.

We uncovered a normal distribution of responses to these scenarios, as well as a high level of agreement between all of the groups as to those symptoms which constitute severe (the response would be to CONSULT a doctor) and not so severe symptoms - those which could be safely treated at home (or at least left a bit longer).

There was not complete agreement, though; we established that the group of consulters were more likely to CONSULT in one situation involving a lingering cough, and this was further complicated by an interaction between the three variables. This interaction revealed that the difference between the consulters and non-consulters could be explained by the responses of the white and Afro-Caribbean parents; that is, the white and Afro-Caribbean consulters are more likely than any other group to CONSULT a doctor in these circumstances.



One scenario which involved the child being hot and miserable for twenty-four hours and not eating during this time (vignette D), created a much wider split between the families. Again the group of consulters said they would CONSULT more often, and this time the difference was highly significant. The somewhat wide difference in opinion here would appear to implicate different beliefs between these two groups for the management of - what the GPs and paediatricians consider - a minor illness condition.

Once again the responses on vignette D were further complicated by an interaction with ethnic group. The difference between the consulters and non-consulters could be explained by the responses of the whites and the Sikhs.

It appears that if we are detecting a real phenomenon here - and it seems that we are - then it is quite complex. Beyond the fact that the parents agreed as to what action they should take in most situations, there are one or two specific situations, or symptoms, which appear to worry some parents more than others (the consulting group) - but only if they are members of certain ethnic groups.

Because of the quite strong interaction in Vignette D, I returned to the parents' initial responses to this vignette to see what all the NON-CONSULTERS said that they would do, other than consult a Doctor. Over eighty percent of them said that they would leave it a bit longer and if it hadn't improved then check it out with the GP. So the gulf between the two isn't quite so far as the consult/not



consult divide might suggest. It is in fact more accurate to look at it as a difference between those parents who would consult immediately and those who would 'wait and see'.

Apart from the least severe vignette (G), very few parents from any of the groups said that they would leave the child and do nothing.

One question which the vignettes did not provide an answer for was the greater number of Asian consultations, particularly for respiratory and febrile illnesses. Most of the vignettes did relate specifically to the type of symptoms constituting these illnesses and so we might have expected a higher number of Asian parents saying that they would consult a doctor in these situations. Yet this did not become apparent in any of these eight scenarios. In one scenario where the ethnic groups did differ quite a lot it was the indigenous and Sikh consulters who were more likely than any other group to say they would CONSULT a doctor. Having said that, these situations do not cover the whole spectrum of respiratory and febrile illness nor do they delve into the more general beliefs and perceptions that the parents have about their children's illnesses.

The next section we will turn to concerns this very aspect of the families' lives: The parents' general beliefs about their children's illnesses. For example, what causes children to get ill? How long do the illnesses last? When would the parents self-medicate? What would they normally use? The severity and the vignettes were very important



measures in their own right, but they are somewhat susceptible to the different criteria people use when making definitions about illnesses. For example, what exactly is sleep disturbed? All night? Or perhaps only ten minutes? And are we talking about deviations from what is normal for the child or just the presence or absence of symptoms? One mother told me that her two-year-old daughter had had a cold ever since she was born!

Naturally the parents' general beliefs are going to influence their responses to the vignettes, and so the variation in responses to these scenarios could make more sense after we tackle the next section.



#### 4-5. The Parents' More General Health Beliefs

So far in the analysis of the questionnaires we have attempted to do things systematically. We started with a univariate analysis of the whole questionnaire in order to build up a description of the families in the sample and to look at how each of the ethnic groups and the consultants and non-consultants responded to the questionnaire. We then progressed to a multivariate analysis of the severity questions by building up a severity score for each child and then exploring the relationships and interactions of the main factors.

The two main variables of interest to us were i) what ethnic group the family belonged to, and ii) whether they are a consulting family or not. We were particularly interested in any relationships occurring between these variables.

The severity measures produced a variety of important discoveries. For example, we found that those illnesses which had been taken to the doctor were perceived as far more serious than those that had not. We also found that this was the case for all four ethnic groups. Although the variability within the groups was quite high, we found no evidence - from the parents' perceptions of the severity of the illness - that any of our defined groups were responding to their children's illnesses in an inappropriate manner, or were consulting for trivial illnesses.



By looking at some individual cases, we did discover some evidence of the kinds of things which cause the parents some concern and can trigger a consultation, but which might be construed as trivial by the GP. Certain symptoms may worry some parents more than others, and we have to remember that at any given level of severity of the children's illnesses, the parents will still have to make a decision regarding the best action to take.

Although there was little variation in the responses to the vignettes, we were given a further indication that in order to gain a complete understanding of parental health behaviour, we couldn't rely solely on information from a single episode.

One aspect of this research which we felt it was important to address was the issue of differing consultation rates among the families. The fact that the parents' perceptions of the severity of these illnesses were very similar would appear to rule out the possibility that there are different severity thresholds for consulting the GP among these groups of families. Our analysis of the 'predictor variables' - important in Wyke's (1987) research - supported this, as all the groups responded in similar ways to what appear to be the important indicators of childhood illness.

So we were then led to the possibility that the Asian families actually reached the severity threshold, which would elicit a consultation, more often. This could be



because their children suffer from more illnesses, or their beliefs about specific illness conditions differ to the extent that they are reflected in their consulting behaviour. This latter possibility seems even more likely when we consider that it is almost certainly the more specific respiratory and febrile illnesses for which there are more Asian consultations.

When we did the pilot work for this study we became aware that an exploration of parental health beliefs would only really be complete with the inclusion of some general questions regarding the illnesses which they were taking to the doctor. So as well as asking the parents, 'what did you do....?' type questions, we reverted in this section to questions like, 'what do you usually do if...?' and 'what normally happens if...?' These questions were designed to cover the parents' beliefs about etiology, duration, treatment and prognosis, to try to build up a better picture of the parents' management of these common childhood ailments and their reasons for taking particular courses of action.

As we had done with the severity measures, we wanted to look more closely at these families in a multivariate analysis. Essentially, we wanted to look at the parental health beliefs about their children's illnesses with respect to both their ethnic group affiliation and whether they were in our consulting or non-consulting groups.

Like the data for the predictor variables, our



measures for the health beliefs were usually at a categorical level. For example, we asked all of the parents how long they thought a cold usually lasted and our precodes would then place each individual family into a particular category. It follows that the log-linear modelling technique, described in detail in the last section, will usually be the best method of analysis here - once again given that we have sufficient numbers of respondents.

People born and brought up in the Indian sub-continent, in East Africa and in the West Indies will, undoubtedly, have different experiences with health and illness. None of the non-white parents I interviewed in this study were actually born in this country, so does this mean that their perceptions and expectations of illness will be different from those of the indigenous population of Britain? And if so, will this be apparent from their beliefs about childhood respiratory and febrile illness? There is certainly some evidence to suggest that the 'common' cold is seen as a lot more serious in some countries and cultures, than it is in here in Britain (Harwood, 1971).

And what about the consulters and non-consulters of this study? These families are members of these groups because we selected them that way, but we wondered whether or not there was something more intrinsically different about the beliefs of the parents in these groups. Finding enough families with young children who had not consulted the doctor for some time was quite a difficult task, so it



was possible that this minority group of non-consulters reacted differently to specific illness situations. Our analysis of the vignettes implied that this might well be the case. We decided to work through the data we had gathered from the families on their beliefs about febrile and respiratory illnesses, beginning with causes and ending with cures.

### What causes respiratory and febrile illness?

Health professionals are in general agreement about biological causes of disease. For example, what we know of as 'the common cold' is actually a whole series of viral infections, which are carried on the air particles from person to person. What they aren't quite so clear about is why some people contract specific illnesses, and why some people get more illnesses than others, the roots of which are probably predominantly psychological.

When we asked the parents in the pilot studies what they thought caused their children's coughs and colds, we got quite a wide range of responses, many of which were beliefs based on the things which happen to people in their everyday lives, and, therefore, closer, in some respects, to these elusive psychological factors. We asked the parents:

How do you think children get colds?



From the pilot work we had built up a wide range of potential causes mentioned by the parents and once again the responses were quite varied. Some parents mentioned one specific cause, others told me that there were two or three or any number of ways in which children could catch a cold. We felt that the best way to analyse the responses on this question was to take each of the main causes mentioned and see how the different groups varied across this belief. Table 4-5a. illustrates how the four ethnic groups varied in the beliefs they held about the causes of colds:

Table 4-5a. The causes of children's colds mentioned by the parents in the four ethnic groups.

Cause of cold	Percentage who mentioned it				
	White	Muslim	Sikh	Afro-Car.	
Cold weather	17	69	88	50	(p < .0001)
Germs/bugs/viruses	81	38	17	28	(p < .0001)
Improper clothing	14	24	29	17	
Food/drink	3	0	33	6	(p = .0001)
Weather changes	6	24	0	11	(p = .02)
Damp housing	6	0	4	22	(p = .02)*

\* Probabilities are all derived from chi-square analyses.

Five of the six most frequently mentioned causes of colds produced significantly different responses between the ethnic groups. What is most apparent from table 4-5a. is that the white, indigenous parents favour the belief that germs or bugs or viruses are the cause of their children's



colds, whereas the other three groups favour explanations concerning the weather; either cold weather or changes in the weather.

The other particularly noticeable difference between the parental beliefs was that one third of the Sikhs mentioned that certain foods and drinks can cause colds, whereas very few from any of the other families mentioned the diet as a factor. Finally, Afro-Caribbeans mentioned damp housing significantly more often than the others.

When I looked at a similar comparison between the consulters and non-consulters, only one cause produced a statistically significant difference between the groups. Non-consulters (58%) believe that germs, bugs and viruses are more likely to cause their children's colds than are consulters (34%) (chi-square = 5.44;  $p = 0.02$ ). This is interesting because if the parents recognize the illness as being viral in nature, then perhaps they are also more likely to know that the doctor will not have any medicine which can do anything about it.

We also looked at the parental beliefs about the causes of coughs:

What about coughs? How do you think children get them?

In the pilot studies I asked this question immediately after the equivalent question for colds, and many parents told me that the causes were the same. So 'the same as



colds' was coded as one of the categories, with the three others most often mentioned listed in table 4-5b:

Table 4-5b. The causes of children's coughs mentioned by the parents in the four ethnic groups.

Causes of coughs	Percentage who mentioned it			
	White	Muslim	Sikh	Afro-Car.
Same as colds	78	55	50	61
Food/drink	0	21	88	11 (p < .0001)*
Develop from colds	25	17	4	17
From sore throats	3	3	21	11

\* Probability derived from a chi-square test.

Most of the parents believed that coughs develop through the same channels as colds do. The Sikh families provided the most unifying response when talking about cough etiology. Apart from anything else they may have said, they were almost unanimous that particular foods and drinks cause their children's coughs. I already mentioned this belief in the first pilot study. On their own, or combinations of, greasy food, cold and fizzy drinks and ice-cream will, according to the Sikh parents, irritate the throat and cause coughing to begin; and so these foodstuffs should be avoided.

We found no differences between the consultants and non-consultants regarding their beliefs about the causes of coughs.



We felt that the beliefs parents have about illness causality are important when looking at subsequent behaviour in response to the children's illnesses. Beliefs about causes will be likely to influence the types of treatments sought (if any) and therefore the consulting behaviour. The control that the parents can exert over the types of causes they believe to be important, will almost certainly play a role in health behaviour decisions. For example, the Sikh families' beliefs about food and drink as causes are obviously more within their control than the bugs and viruses which the white, indigenous (and the non-consulters) are more likely to believe to be the main causes.

Another 'uncontrollable' cause which was often mentioned by the non-indigenous families was the cold and changeable weather. A question we asked the non-indigenous families only was:

Do you think that children get more coughs and colds in this country than in your country of birth?

Seventy-two percent of the parents said 'yes' they felt that their children did get more coughs and colds here, and when I asked them why they thought this might be, all but one of the parents mentioned the cold and damp climate of this country.



How often do children get coughs and colds?

We moved on to parental beliefs about aspects of the illnesses themselves and how they progress in young children. This section concerned how often the parent believed that children (in this age group) get colds and coughs annually. This was one of our more direct links to how often the children in the families contracted a cough or a cold. In the questionnaire they followed each other and read like this:

In your opinion, how many colds does a child get in a year (on average)?

What about coughs? How many of these would a child get in a year, in your opinion?

The responses to these were coded in different ways, because of the preferred response style of the parents in the pilot studies. For the colds we simply coded the number given into one of six categories and then for the purposes of the analysis we collapsed this down into three categories (see table 4-5c.). The purpose of collapsing the variable was to meet the minimum expected frequency in each of the cells of our three variable analysis.

When we asked about the number of coughs immediately after the colds, the parents tended to respond with respect to the colds, for example, 'a lot less' or 'about the same number'. So we developed five codes to cover 'much more', 'slightly more', the same, 'slightly less' and 'much less'.



These we then collapsed to three levels for the analysis: 'more', 'the same' and 'less'. Table 4-5c. gives the three marginal tables produced for the number of colds.

Table 4-5c. Marginal tables for number of colds by consulting behaviour by ethnic group.

(a) Consulting behaviour by ethnic group.

Cons. behav.	White	Muslim	Sikh	Afro-Car.	(T)
Consulters	20	17	12	10	59
Non-consulters	16	12	12	8	48
(TOTAL)	36	29	24	18	107

(b) Number of colds by consulting behaviour.

No. colds	Consulter	Non-consulter	(T)
1 to 3	17	24	41
4 or 5	21	10	31
> 5	21	14	35
(TOTAL)	59	48	107

(c) Number of colds by ethnic group

No. colds	White	Muslim	Sikh	Afro-Car.	(T)
1 to 3	16	7	14	4	41
4 or 5	8	11	6	6	31
> 5	12	11	4	8	35
(TOTAL)	36	29	24	18	107

The first marginal, ethnic group by consulting behaviour, is



part of the design and will remain relatively unchanged. Tables (b) and (c) are the ones of interest to us. Recall that we would select the best model to represent the data by putting into the model those effects which were either known to us or were apparent from the raw data (which is done for us by the computer programme). So looking at marginal table (b) we might put in an association between consulting and the number of colds, since there is an indication of different beliefs between the consulters and non-consulters. Similarly with ethnic group, since the whites and Sikhs tend to suggest less frequent numbers of colds per year.

As before, we ran a backward elimination procedure from the HILOGLINEAR command of the statistical package SPSSX:

Table 4-5d. Log-linear model describing relationships between the number of colds parents expect their children to get annually, consulting behaviour and ethnic group.

Model	G-square	DF	Coeff. of mult. determination (%)
No. of colds			
[N,C] (.065)*	10.75	15	70
[N,E] (.11)			

Key:     N = Number of colds  
              C = consulting behaviour  
              E = Ethnic group

\* Probabilities are in curved brackets.



As I mentioned previously, the programme removes those interactions, associations and main effects which do not meet the specified criterion for remaining in the model - the default on the HILOGLINEAR procedure is .05, which is suitable for our purposes. It turns out in this case that none of the effects meet the specified criterion for inclusion in the model. The backward elimination procedure decided that there was no really suitable model for describing the data. The 'best' model was one which had an effect closest to the .05 level. This was the association between consulting behaviour and the number of colds, which came quite close to bearing out statistically that non-consulters believe that children get less colds (.065).

An ethnic group main effect must be included as a design characteristic and much more of the variance in the data was explained if this was included in the association with numbers of colds. This association, though, did not approach statistical significance. The fact that this is not a particularly good model is borne out by a relatively poor fit (high G-square) and thirty percent of the variance in the data left unexplained (table 4-5d.).

We also modelled how the variables relate to the number of coughs parents believe their children to get annually (table 4-5e.):



Table 4-5e. Log-linear model describing relationships between the number of coughs parents expect their children to get annually, ethnic group and consulting behaviour.

Model	G-square	DF	Coeff. of mult. determination (%)
No. of coughs			
[N] (.0002)			
[E] (.086)	9.35	11	73
[C] (.29)			

Key: N = Number of coughs  
 E = Ethnic group  
 C = Consulting behaviour

A similar situation emerged when looking for the best model to explain how the believed number of coughs related to the other variables (table 4-5e). The output rested with a strong main effect of number of coughs: The parents believed that their children tended to get coughs less often than colds, regardless of which group they were in. Very few reported that they got more coughs than colds ( $p = .0002$ ). This main effect explained most of the variation in the model. We included the other two main effects through necessity as characteristics of the design, but they didn't add very much to the explanation of the variance.

#### How long do children's colds and coughs last?

As the sub-heading indicates we asked the parents these two



questions concerning the length, or duration, of the cold and the cough:

In your experience, how long do children's colds usually last on average?  
And what about coughs? How long do they usually go on for?

We could expect a longer illness to be regarded as more inconvenient, and so the parents might be impelled to expend more energy towards its prevention and cessation. Table 4-5f. illustrates the model of best fit, the variability explained by this model and the significance of the effects included in the model - for both of these variables.

Table 4-5f.    Log-linear models describing the relationships between the length of coughs and colds by consulting behaviour by ethnic group.

Model	G-square	DF	Coeff. of Mult. Determination (%)
Length of cold [L,E] (.051) [C] (.29)	8.50	11	81
Length of cough [L,E] (.06) [C] (.24)	9.93	11	73
<u>Key:</u> L = Length of cold/cough E = Ethnic group C = Consulting behaviour			

There was an indication from both variables, that the



parents from the different ethnic groups do not have the same beliefs about how long they are liable to last. With regard to colds, the Afro-Caribbean parents believed that they would usually last longer than one week, whereas the other three groups believed that they averaged out at between four and seven days. Coughs were more complicated. White parents favoured the belief that coughs tended to last longer, The Asian parents (Sikhs and Muslims) tended to agree that coughs lasted about the same length as colds, but the Afro- Caribbeans were once again distinct from the other groups in their belief that coughs did not last as long as colds.

We have to be careful when interpreting these findings regarding the length of illnesses. First of all, these ethnic group 'differences' only approached the five percent significance level, and also these type of questions were slightly more open to biases in response-style. A difference in response of 'two or three days' or 'four or five days' may be more a reflection of response style as opposed to a difference in beliefs.

The next stage was to look at how the parents thought their children's illnesses developed.

#### What is the prognosis for the 'common' cold?

In the introduction to this chapter I mentioned that Harwood (1971) had discovered particular beliefs about colds among



the Puerto Rican people of his research. These beliefs seemed to revolve around a fear of what they might develop into. We were also interested in the parental beliefs about prognosis as it may be a link to the different rates and patterns of consultations. We asked:

In your opinion, what would happen if you just left your child's cold alone? If you did nothing for it?

As we hadn't included this question in any of the pilot work and so didn't really know what to expect as replies, we decided to leave the responses completely open-ended and record them verbatim. But to ensure some consistency in the responses we included the prompt: "Do you think they would get worse, or do you think that they would tend to get better on their own?" Every interviewee got this prompt.

The prompt gave us a useful dichotomy for the responses, into those parents who felt that colds tended to go away on their own and those who believed that they needed treatment or else they would get worse.

Most parents when prompted did give a response one way or the other, although there were a minority (twenty-one) who responded that it was conditional. Two conditions were mentioned most frequently, and these were whether or not the child had also contracted an infection with the cold and that it depended on which child we were talking about. Some parents mentioned that for some of their children the colds go away on their own and for others they invariably become



infected on their chests and so require treatment. We decided to analyse the responses of the remaining eighty-six parents who said 'they get worse' or 'they get better' in a similar log-linear analysis to that which we were familiar. Table 4-5g. illustrates the marginal tables for this variable and its associations with ethnic group and consulting behaviour.

Table 4-5g. Marginal tables for parental prognosis of cold by consulting behaviour by ethnic group.

(a) Prognosis by consulting behaviour.

Prognosis	Consulter	Non-consulter	(T)
Worse	26	14	40
Better	18	28	46
(TOTAL)	44	42	86

(b) Prognosis by ethnic group.

Prognosis	White	Muslim	Sikh	Afro-Car.	(T)
Worse	5	16	13	6	40
Better	25	7	8	6	46
(TOTAL)	30	23	21	12	86

The marginal tables in 4-5g. indicate that both the variables of our design may be strongly associated with the



parents' perceptions of the prognosis of the cold, and that these associations may go some way to explaining the variance in the data cell frequencies. The backward elimination procedure of SPSSX would also tell us if there was interaction among the three variables (table 4-5h.):

Table 4-5h. A log-linear model describing relationships between parental prognoses for colds, consulting behaviour and ethnic group affiliation.

Model	G-square	DF	Coeff. of Mult. Determination (%)
[P,C] (.014)			
[P,E] (.001)	7.57	9	87

key: P = parental prognosis of the cold  
C = consulting behaviour  
E = Ethnic group

The analysis demonstrated that these two associations are very strong individually, but there is no three-way interaction - that is, neither of the associations depend on the other. Consulting families were more likely to think that the illness would get worse if left alone, whereas non-consulting families thought that they would get better (Likelihood ratio chi-square change = 8.57;  $p = 0.014$ ). Indigenous families believe that they would get better, whereas Sikh and Muslim families tend to think that they would get worse; Afro-Caribbean families being equally split



in their opinions (chi-square = 22.43;  $p = 0.001$ ).

So it seems that those families of Asian origin are more likely to believe that a cold left untreated will get worse; and families who do believe the cold will get worse are more likely to consult the doctor for it. These associations were really quite strong, which suggests that this particular belief could be implicated in an explanation of the different rates of consultation between the Asian and non-Asian groups. It is certainly a finding which we will have to give more consideration to when discussing the results.

#### How do the parents manage and treat these illnesses?

I introduced a similar sub-heading to this one when reviewing the literature and pointed out then that various authors have demonstrated that parents do tend to go through quite rational and systematic procedures when caring for their young children (see for example Campion & Gabrielle, 1985; Cunningham-Burley, 1986; Mayall, 1987 or Wyke, 1987). We predicted that this would also be true for a multi-ethnic community, but that parental behaviours may not always be quite so predictable, as health beliefs and personal experiences can obviously vary a great deal more in such a population.

In this section I will turn first of all to the types of remedies the parents are inclined to use, outwith any



prescribed by the GP. 'Home remedies' or medicines from the chemist do play a major role in the management of children's illnesses (see for example Cunningham-Burley & MacLean, 1987, and so it will be particularly interesting to see how important they are for families from the West Indies and Asia.

Then I will turn to our analysis of what we called 'trigger symptoms'. One of the questions in the 'beliefs' section asked all the parents to indicate what symptoms would prompt them to consult a doctor immediately. I will look at these 'trigger symptoms' in more detail later in this section.

Finally in this section on parental management and treatment I will look at the parents' beliefs about temperatures and fevers. We introduced specific questions about these symptoms because during the early part of the research the subject of temperatures and fevers came up quite often. One of the reasons for this was that with young children's illnesses the temperature does tend to rise quite often and some of the GPs we were in communication with were not convinced that parents respond appropriately, by keeping them warm when they should be kept cool, and vice versa.

#### Parents' use of home remedies for coughs and colds

We asked all of the parents:



Do you try any of your own treatments for X when s/he has a cold?

What about coughs? Do you try any of your own treatments for them?

We categorized the responses as either 'yes' or 'no', and performed log-linear analyses on the responses to each of these variables (table 4-5i.):

Table 4-5i. Log-linear models describing the relationship between the parents' self-medication, consulting behaviour and ethnic group.

Model	G-square	DF	Coeff. of mult. determination (%)
Treat a cold			
[T] (< .00001)			
[E] (.086)	5.97	9	89
[C] (.29)			
Treat a cough			
[T] (< .00001)			
[E] (.086)	6.50	9	82
[C] (.29)			

Key: T = Whether the parents treat the cough/cold themselves  
 E = Ethnic group  
 C = Consulting behaviour

Remember that the backward elimination procedure starts with the interaction model (saturated case) and works backwards, introducing the associations and main effects into the model and removing them again if they don't meet the specified criterion for remaining (.05). Table 4-5i. gives the models



which we considered most appropriate to explain this data - balanced between the design characteristics, goodness-of-fit to the data cell frequencies, and how much of the variation in the data cells it explains.

In both cases the best models to describe the data contained neither interaction or association, but instead the main effect of treatment. This meant that most parents from all groups used their own medications for coughs and colds. Eighty-eight percent of parents treat their children's colds themselves and seventy-two percent do so for coughs.

So what are these remedies which the parents are using? First of all we will look at those used for colds. Table 4-5j. lists those most often mentioned.

Table 4-5j. Home remedies for children's colds most often mentioned by the parents.

Remedy	Percentage who mentioned it
Calpol	56
Herbal	22
Honey & lemon	17
Junior disprin	16
Vick	15
Hot drinks	14
Paracetamol	12

Notice first of all that the total percentage does not add up to one hundred, simply because most parents mentioned



that they used more than one cold remedy. We can see from table 4-5j. that many of these remedies are from the chemist and not literally concoctions which are devised at 'home'; so it's probably best to regard them as remedies for which a prescription is not needed.

It may not be immediately obvious what they all are, so to serve as a reminder Calpol is a 'GP-preferred' remedy for colds which has a small amount of paracetamol serving to bring the temperature down and simultaneously 'sooth the child'. Vick is an ointment which has a 'hot' element and can be rubbed on the chest. The 'herbal' remedy was not a product from the chemist, but actually a wide variety of different mixtures (often teas) made up by the parents from different herbs and spices. Garlic was mentioned once or twice and included in the herbal category. There was a lot of variation among the ethnic groups with respect to who used what, as is demonstrated in table 4-5k:

Table 4-5k. The percentage of parents in each ethnic group who used the main home remedies for colds.

	White	Muslim	Sikh	Afro-Car.
Calpol	77	57	52	24 (p < .005)*
Herbal	16	13	30	35
Honey & Lemon	10	9	22	35
Junior disprin	3	30	22	12 (p < .05)
Vick	0	17	30	18 (p < .025)
Hot drinks	19	9	9	18
Paracetamol	16	9	13	6

\* Probabilities were derived from the use of chi-square.



Three of the remedies used produced statistically significant differences between the ethnic groups. The largest of these concerned the use of Calpol. Not surprisingly, it was the indigenous families who most often used Calpol; something which their own parents may have used as well. Junior disprin tended to be used more often by the Asian parents and also the Sikhs had some favouritism towards Vick and herbal treatments. The Afro-Caribbeans favoured Herbal remedies and honey and lemon over and above anything else. One Sikh mother said to me:

"I make tea with different herbs and spices."  
 (prompt: "What herbs and spices do you use in particular?") "Well... cardomons, cloves, mint, aniseed... I would make up a similar tea if they were sick as well. We use many herbs for their illnesses. Also, dry ginger tea with aniseed is good for bad colds. It's easy to do because we have it all at home." (SM86).

These ethnic group preferences are quite interesting, but it is important to remember that they don't really tell us anything about patterns of consultation.

When we compared the consulters with the non-consulters, we did not encounter the same variation between these groups. Eighty-five percent of consulters and ninety-two percent of non-consulters reported that they used their own remedies, and generally they tended to use the same ones. The only significant difference between these two groups for the home remedies they used for colds was



that the consultants more often reported the use of honey and lemon ( $\chi^2 = 4.82$ ;  $p < 0.05$ ). Again this is interesting, but I certainly wouldn't suggest that this is at all implicated in the decision to consult the doctor. In fact ninety-five percent of all parents who used these 'home remedies' for colds reported that the remedies worked in at least some way, and honey and lemon was no exception. The large majority told me that their intervention tended to ease the symptoms (83%) rather than curing them (4%).

We discovered some similar patterns for the treatment of coughs among the ethnic groups. I mentioned that seventy-two percent of parents will try their own cough remedies, somewhat less than for colds as we might expect for a more serious ailment, although still fairly high numbers. Table 4-51. illustrates the remedies preferred by the four ethnic groups.

Table 4-51. The percentage of parents in each ethnic group who used the main 'home remedies' for coughs.

	White	Muslim	Sikh	Afro-Car.	
Cough mixture	79	80	44	67	( $p < 0.05$ )*
Honey & Lemon	17	5	11	40	( $p < 0.075$ )
Herbal	8	10	44	27	( $p < 0.025$ )
Vick	8	10	0	0	

\* Probabilities were derived from the use of  $\chi^2$ .

Cough mixture was favoured by all families, although



significantly more so by whites and Muslims and least by the Sikhs. In fact the Sikhs equally preferred to use herbal remedies, which, once again, were often teas prepared by the families.

Although the chemist's cough mixture was by far the most commonly used treatment for coughs, some of the parents who used it were obviously not entirely convinced by it. Fourteen percent of those parents who did try to treat the cough themselves believed that the remedy they used did not actually help the symptoms of the illness. The explanations given for this were varied. Some parents felt that the cough mixture wasn't of any use for the cough, but it was harmless and they were seen by the children to be doing something, which seemed to give the parent some relief from the worry. I asked this parent if the Benylin cough mixture she used helped at all:

"I don't think so. Medicine seems to go to the stomach and we don't cough from the stomach. I don't think cough medicine works. It's really for our own peace of mind. You're giving them something. Doctors also give you medicine for your peace of mind. Most are useless, especially those advertized on the telly." (IM89)

And another implied the usefulness was that of a placebo:

"I use Buttercup Syrup for tickly coughs. It makes them feel easier. But I'm not sure that these cough mixtures actually do any good. They think I'm doing something for them, so I suppose in that way it helps." (IM29)

And others, in particular the Sikh families, just simply had



a basic mistrust of cough medicine:

"I'm not so sure about trying cough medicine, so if I can't get hold of my sister who is a nurse, I don't try anything. I'm scared something goes wrong." (SM88)

"I like to try my own remedies for the coughs and colds my children have. Medicines from the chemist are full of sugar and additives and chemicals, which is not the best treatment for children. I go to the health food store for treatments with no additives. Crystalized ginger is good for coughs and stomach problems." (SM18).

An important belief the parents did have about these cough remedies was that they were not cures. Despite the wide range of different treatments mentioned, only five percent of parents mentioned that they felt the treatment would actually cure the illness. As with the cold remedies, the parents mostly felt that they eased the symptoms and helped the child sleep at night, thus giving the child a better base for a speedy recovery - or, as one parent said to me, "a stronger position from which to fight the illness." (IF61).

To summarize what we have established regarding the parents' use of 'home remedies' it is important first of all to reiterate the fact that, among our sample, their use was not related to consulting behaviour; that is, these medicinal compounds are not being used as an alternative to going to see the doctor. This finding is in agreement with other research in this area (Jefferys et al, 1960; Cunningham-Burley & MacLean, 1987).



The four ethnic groups of our sample are equally likely to use their own preferred medications for their children, yet they do vary quite a lot in these preferences. The white families tend to prefer the traditional calpol for colds, and cough mixtures for coughs. The Muslim families have a similar pattern to the whites, although don't use calpol quite so often. The Sikhs and Afro-Caribbeans use these chemists concoctions less frequently and are equally likely to use herbal remedies, or a mixture of honey and lemon in the case of the Afro-Caribbeans. The consultants and non-consultants tend to use similar treatments for coughs and colds, and to the same extent.

Presumably the illnesses which the parents choose to manage themselves, and treat with the medications mentioned, are not too anxiety-provoking. In the next stage of the analysis of the parents' beliefs about illness management we decided to look at particular symptoms which are often attributed to respiratory and febrile illnesses, and which were particularly worrying to the parents.

#### What symptoms particularly worry the parents?

We asked all of the parents we interviewed if, when their children got a cough or a cold, did they consult a doctor immediately or did they decide to wait and see what the illness developed into. Seven families said that they would consult immediately. Of these seven, we observed that five



families had at least one child with a history of chest illness. We will return to look at the possible effects on the families of chronic respiratory conditions in childhood (chapter 4-6). At the moment we will follow the other one hundred families who would 'wait and see'.

Conditional on the response to the last question was:

What would the illness be like if you decided that he, she did need to see the doctor straight away?

From the pilot studies we had compiled a list of fourteen symptoms which were most likely to be mentioned in response to this question. The question was asked in such a way that the parents were encouraged to mention all of the symptoms which would prompt them to consult at once.

We sent a list of these fourteen symptoms to the GPs in the Newcastle study looking for a 'severity weighting' for each one. The weightings we received back ranged from one (regarded by the GPs to be not too serious) to three (serious). Table 4-5m. illustrates the symptoms and the weightings:



Table 4-5m. Symptoms which might prompt an immediate consultation and their severity weightings.

Symptom	Severity weighting
Difficulty breathing	3
Wheezy chest	3
Pains in the chest	2
Loose, productive cough	2
Earache	2
Persistent vomiting	2
Chesty cough	1
Dry cough	1
Fever	1
High temperature	1
Headache	1
Sore throat	1
Sleepy/tired	1
Off food	1

We recoded each of these symptoms to the severity attributed to them and so each of the one hundred families would have a score - what we called a 'trigger severity score' - dependent on (1) The number of symptoms mentioned, and (2) the severity of the symptoms mentioned. We called it a 'trigger' score because the parents told us that these symptoms would usually prompt, or trigger, a visit to the doctor for their child.

Because of the first factor - the number of symptoms mentioned - it was predicted that the mean trigger score for the white, indigenous group would be slightly higher than that for the other three. We made this prediction because we were already aware that the indigenous families were generally more verbal and their interviews lasted longer;



although, as I mentioned above, we did try to minimize this effect by encouraging the parents to mention all the relevant symptoms and using various prompts. The alternative procedure to the one we carried out was to read out the check-list of symptoms to each family, but we decided that this would be far more problematic since it was likely to put ideas into the interviewees heads.

The second factor - the severity of the symptoms mentioned - was the one that we were interested in. Having checked the distribution of scores for the sample, we ran a two-way analysis of variance on the distribution, with consulting behaviour and ethnic group affiliation as the independent variables (table 4-5n.):

Table 4-5n. Mean 'trigger severity scores' and the results of a two-way ANOVA.

	White	Muslim	Sikh	Afro-Car.	(T)
Consulter	2.89	2.27	2.75	2.33	2.59
Non-consulter	4.88	3.58	3.09	3.71	3.93
(TOTAL)	3.82	2.85	2.91	2.94	3.21

ANOVA

Main effects:	Consulting behaviour	F = 14.42; p < 0.0001
	Ethnic group	F = 2.038; p = 0.11
Interaction:	Cons. by ethnic group	F = 1.02; p = 0.39



As predicted, the average score for the indigenous group was higher than the other three, but not significantly so. Interestingly, there was a highly significant association between consulting behaviour and 'trigger severity score'. The indication is that the consulting families would be 'triggered' into a consultation by symptoms, perceived by the paediatricians, as not so severe - and this difference was present for all ethnic groups. But this might have been an artifact of the number of symptoms mentioned. So we decided that we really needed information about the numbers of symptoms each of the identified groups mentioned, so we could be absolutely sure that what appeared to be the severity of the symptoms wasn't simply the number mentioned (table 4-5o.):

Table 4-5o. Mean number of 'trigger symptoms' mentioned by each of the groups.

	White	Muslim	Sikh	Afro-Car.	(T)
Consulters	3.20	2.53	2.50	2.40	2.73
Non-consulters	3.31	2.25	2.67	2.38	2.73
(TOTALS)	3.25	2.41	2.58	2.39	2.73

It turns out that both the consulters and non-consulters mentioned exactly the same number of symptoms, and also that the slightly higher score for the white families could be explained by more symptoms mentioned.



So the non-consulters were more likely to mention more severe trigger symptoms - such as difficulty breathing and wheezy chest - than were the consultants. They were less likely to be worried by such symptoms as high temperatures, sore throats and dry coughs. When we selected the non-consulters for this study, we did so on the basis that they had not consulted a doctor, for the particular target child, for some time. This didn't tell us anything about the beliefs of the parents in this group, yet since we found no indication that the children actually got less illnesses, coupled with the fact that the non-consulters (by our criterion) were a minority group, this did point to the possibility that their beliefs about their children's illnesses deviated quite distinctly from the norm. We do know that these parents generally feel that the 'minor' symptoms of coughs and colds will not get worse, which does seem to link up with the fact that they are less likely to initiate a consultation for these very symptoms. There are still parts of the questionnaire which we haven't analyzed and which might elucidate this further. One of these concerns the management of temperatures and fevers.

#### Parents' beliefs about high temperatures and fevers

We felt that it was quite important to include some questions specifically about temperatures and fevers, especially because in very young children they are a



component of a variety of illnesses, and also they are often the first sign of a respiratory illness.

But also the issue of temperatures and fevers had come up on various occasions throughout this research, mainly through comments made by the GPs. The General Practitioner AH who was working on the main Newcastle project suggested in a personal communication that I include some questions relating to fevers. He felt, as did all of the GPs I spoke to, that high temperatures and fevers were very common in young children and were usually not serious. He also felt that the parents can often make matters worse, by swaddling the child and keeping them in bed, when the best policy is actually to cool the child down by stripping and tepid sponging. His experience with Asian parents was that they might be the worst offenders on this occasion as, in his experience, he hardly ever saw the children in Asian families unclad when the temperature was high.

One of the GPs I worked with in Leeds during this study made some very similar comments about his observations. He communicated to me that he found it extremely difficult to get his Asian patients to comply with the 'cooling down' protocol for a high temperature. His belief was that the Asian parents were more worried by illnesses involving fevers because of their experiences with malaria and other more dangerous illnesses in their home countries.

On the basis of these GP observations we decided to approach the subject with two distinct questions to the



parents. First of all we asked:

Sometimes when young children get coughs or colds they develop a high temperature or a fever. In your experience, does this happen quite often, just occasionally, or is it very rare?

Responses were coded in five categories: 'Often', 'occasionally', 'rarely', 'never' and 'other'. All 107 families responded to this question. For the purposes of analysis, I regrouped them into three categories: 'often', 'occasionally' and 'rarely/never' (only two families said that their child(ren) never got high temperatures or fevers). I then performed a log-linear analysis looking at the interaction with consulting behaviour and ethnic group. Table 4-5p. illustrates the best fitting model, the variation in the data explained by it and the significance of the effects included in it.

Table 4-5p. A log-linear model describing the relationship between how often the parents perceive their children to get fevers, consulting behaviour and ethnic group.

Model	G-square	DF	Coeff. of mult. determination (%)
[F,E] (0.024)			
[C] (0.29)	6.64	11	82

Key: F = How often the children get fevers  
 E = Ethnic group  
 C = Consulting behaviour



It turns out that most of the variance in this analysis is explained by an association between the number of reported fevers and the ethnic group to which the family belongs. Table 4-5q. illustrates the marginal table for this association, to help see where the differences actually lie.

Table 4-5q.    The marginal table of the association between the number of reported fevers the children get, and ethnic group.

	White	Muslim	Sikh	Afro-Car.	(T)
Often	13	14	9	9	45
Occasionally	9	13	11	3	36
Rarely/never	14	2	4	6	26
(TOTAL)	36	29	24	18	107

The pattern in table 4-5q. is quite complex. The most noticeable difference between the groups is the numbers who report that their children rarely get a high temperature or a fever. Whites (39%) and Afro-Caribbeans (33%) are more likely to report these symptoms as being rare occurrences than are the Sikhs (17%) and Muslims (7%). This is not to say that the Afro-Caribbean and white families do not have children who contract these illnesses. Fifty percent and thirty-six percent respectively report them as often occurrences. Because of this it is possible that some of the



variation in table 4-5q. is a reflection of preferred response patterns rather than real differences between the numbers of fevers the children tend to get.

Another question we asked was concerned more with what parents do for these symptoms:

If your child did develop a high temperature or a fever, what do you think is the best thing to do?

We were specifically interested in whether the parents tried to cool the child down or whether they felt that it was best to keep the child warm. So if the response did not make this clear, I used the prompt, "Do you think it is best to keep the child warm or to keep the child cool?" The responses were quite varied - anything from loosening the child's clothes to phoning the doctor - and despite the probe there were still a number of parents (28) whose response could not be classified under 'keeping warm' or 'keeping cool'.

This left seventy-eight families who could be classified in this way, but unfortunately this wasn't a large enough number to perform a multivariate analysis. Table 4-5r. illustrates how the families were distributed on this question, with respect to whether they felt it was best to cool the child down or to keep the child warm.



Table 4-5r. 'What is the best thing to do if the child has a fever?' by consulting behaviour by ethnic group.

	<u>Consulters</u>			<u>Non-consulters</u>		
	Warm	Cool	(T)	Warm	Cool	(T)
White	3	13	16	2	12	14
Muslim	3	7	10	0	7	7
Sikh	3	5	8	2	9	11
Afro-Car.	1	5	6	0	6	6
(TOTAL)	10	30	40	4	34	38

Expected frequencies were near zero in some of the cells simply because there were relatively few parents, in any of the groups, who felt that it was best to keep the child warm if they had a high temperature ( $p < 0.0001$ ). We used chi-square analyses to see if this variable was associated with either ethnic group or consulting behaviour. Both yielded non-significant results, as we might expect from eye-balling the frequencies.

So the responses of the parents to our question concerning the management of high temperatures and fevers has told us that the large majority are very much aware of, what is considered by the doctors to be, the best action to take. Most parents did not simply say that they would keep the child cool, but instead gave me a fairly elaborate description of the procedures they went through under these circumstances. Taking off heavy items of clothing, sponging with cool water, cold drinks and a quiet and rested child



were all considered very important by most of the respondents.

So far in this chapter we have looked at the parents general beliefs about and perceptions of their children's respiratory and febrile illnesses and their management of these conditions. We have encountered certain situations here - and with the vignettes - when the parents suggested that they would consult the general practitioner. What we haven't addressed yet is the issue of what the parents want from the GP; why they would decide to take their child to the practice, or, perhaps, to call out the doctor. The last part of the analysis in this section will address this specific issue.

#### What do the parents expect to get from the doctor?

We asked the parents:

In your opinion, what is the most important thing to receive from the doctor when you take your child with a cough/cold?

We classified the responses under these three headings:

'antibiotics', 'other medicine' and 'reassurance'. Some of the parents did say that they went to get the child 'checked', or the child's 'chest checked over'. We felt that these responses could be suitably classified under 'reassurance'. Once again we performed a log-linear analysis



of this variable and how it interacted with ethnic group and consulting behaviour (table 4-5s.)

Table 4-5s. Log-linear model describing the relationship between 'the most important thing to get from the Dr.', consulting behaviour and ethnic group.

Model	G-square	DF	Coeff. of Mult. determination (%)
[I,E] (p = .03)			
[I,C] (p = .0012)	4.02	9	93

Key:     I = Important thing to get from the Dr.  
          C = Consulting behaviour.  
          E = Ethnic group affiliation.

There was no interaction among the three variables (p = 0.79) and the greater part of the variation in the data cells is explained by the two associations. It would be worthwhile looking at the two marginal tables which produced these significant associations (table 4-5t.)



Table 4-5t. Marginal tables of 'the most important thing to recieve from the doctor' by consulting behaviour and by ethnic group.

(a) 'The most important thing to recieve from the Dr. by ethnic group.

	White	Muslim	Sikh	Afro-Car.	(T)
Antibiotics	8	8	2	1	19
Reassurance	21	7	13	11	52
Other medicine	7	12	9	6	34
(TOTAL)	36	27	24	18	105

(b) 'The most important thing to receive from the Dr.' by consulting behaviour.

	Consulters	Non-consulters	(T)
Antibiotics	10	9	19
Reassurance	21	31	52
Other medicine	27	7	34
(TOTAL)	58	47	105

It was encouraging to see the numbers of parents seeking antibiotics at the doctor to be fairly low for all groups (18%). These figures were particularly low for Sikhs (8%) and Afro-Caribbeans (6%). The Afro-Caribbean group were most likely to mention reassurance (61%), followed closely by both the whites (58%) and the Sikhs (54%). Different responses came from the Muslim parents, who were more likely to mention some other medicine (44%). Sikhs were also quite likely to mention some other medicine (38%).

The responses which constituted the 'other medicine'



were quite varied. Calpol and cough mixture were mentioned by many of the parents, possibly because it is cheaper to get it for a child with a doctor's prescription, rather than going straight to the chemist. Some more responses which fell into the 'other' category were often repeat prescriptions for things like ear drops and nasal decongesters, which the parents know a particular child needs, and it is this that many of their consultations at the GP are for. In fact, the majority of responses falling into this category were for medicines which the families would not 'need' a prescription for, and so the cost element was obviously an important one.

'A good medicine' was also mentioned, and this was almost an exclusive response of the Asian parents. What exactly they meant by this was not easy to discern. Usually it was those parents who did not speak English very fluently and who, presumably, had not been in this country long enough to have a real understanding of the medical services. One Pakistani mother said in response to this question: "Just a good medicine really. They seem to know what to do. They're good doctors." (MM24). I believe that the language barrier could be extremely important with respect to this issue. Reassuring is getting to the essence of the general practitioners job, but when we consider the situation where communication is poor, then it becomes more difficult for the doctor to reassure. For the non-English speaking patient the consultation could become quite meaningless. If the



patient comes away with a medicine then something has been gained. In cases like this the medicine can serve as reassurance.

What was most interesting concerning the replies to this question was that the large majority of those who mentioned 'other' medicine were Consulters (79%) ( $p = 0.001$ ). Remember that there was no interaction in the data, which means that this association does not depend on the other association between ethnic group and what was considered the best thing to receive from the doctor. What seems to be happening is that the Muslim and, to a lesser extent, the Sikh parents are more likely to want some 'other' medicine from the doctor; and those parents who do want some 'other' medicine from the doctor are more likely to consult. We encountered a similar pattern with the responses to the question concerning what happens to the cold/cough if it is left untreated, and this finding does give us a further pointer to the reasons why the Asian groups consult the GP more often for their children.

#### A summary of the parents' beliefs and perceptions

This section on the beliefs parents have about their children's health and health-care has been particularly interesting and informative. We are now aware of the great deal of variation in the parents' cultural beliefs regarding the causes of children's illnesses, how the illness



develops, and the types of treatments preferred for these illnesses. Possibly the two most interesting ethnic differences in beliefs concerned what the parents felt would happen to a cold or febrile illness if it was just left alone, and what they preferred to get from the doctor. The Asian groups were quite unanimous that the illness would get worse which may be a link to their higher attendance at the GP for these illnesses. Asian groups were also more likely to prefer 'other' medicine from the doctor, and although this finding doesn't tell us anything about consultation patterns in itself (the 'other' medicine was a variety of things), those parents who gave this response were more likely to consult the doctor.

We have also learned about some very important features which distinguish the non-consulters from the consulters. The minority group of families, who had not consulted a doctor for their child recently, favoured the germ/viral theory of disease etiology, believed their children got less colds, and believed that their children's colds will get better by themselves. Also, the 'trigger severity level' for the non-consulters is higher than the consulters, indicating that they are generally less anxious about many of the symptoms associated with respiratory and febrile illnesses.

Yet what is also very apparent in the midst of these different patterns is the very important finding that when it comes to recognizing and managing illnesses in their children all parents do seem to be very well equipped and



show high levels of skill.

When I was conducting the parental interviews it became apparent that some families had an asthmatic child, or a child with a long history of another respiratory illness. The illness had become an integral part of the whole family's life, and they had established skilled ways of coping with potentially threatening situations. The next section of the analysis deals specifically with this issue, which we included because of the potential impact this kind of chronic condition could have on the responses to many of the questions we had set.



#### 4-6: Parental Experiences of their Children's Previous Chest Illnesses

While doing this research we were always aware that the previous experiences of the parents and families with the management of their children's illnesses would play a major role in the parents' subsequent health behaviour. These experiences could be part of a more general community or cultural belief - which we have already attempted to address - or they could be more directly related to events which have occurred within the family, for example, the severe illness of a child. Some of the parents I interviewed mentioned such a situation. For example:

"If my oldest daughter catches a cold then I have to take her (to the Dr.) straight away, because she has asthma and it gets on her chest. With the others we'll wait two or three days and see what happens. X has to go to the hospital every two or three months and we are at the doctor with her every two or three weeks!" (MF73)

This Pakistani father was responding to the question I asked concerning whether he would go to the doctor immediately if the child got a cold.

In fact this example is the essence of what we would like to address in this section: The occurrence of more severe respiratory illnesses and how this influences the behaviour of the parents. When we looked at the parents' overall health beliefs and perceptions we were aware that the kind of situation which the Muslim father (above) outlined would inevitably be part of the whole picture and,



therefore, would be a vital factor in understanding the overall behaviour patterns of the families. Recall that more than ten percent of children in Britain suffer from asthma (Morrison-Smith et al, 1971; Gregg, 1977; Lee et al, 1983), and, along with other atopic diseases, it seems to be on the increase.

In the above example, the parents had recognized the special considerations needed for one of their children. But would this situation change the way the parents behaved towards the rest of their children? It would be understandable if they became over-cautious in such a situation. Respiratory illness, and, in particular, asthma attacks, can be a frightening experience, particularly in very young children.

One of the questions we asked all of the parents about the target child's chest illness history was:

Has X ever suffered from asthma, or bronchitis, or a lot of wheezing?

Those who answered yes to this we called 'wheezers' and the others 'non-wheezers'. It was felt that any history of this kind could influence parental behaviour under certain circumstances (see for example Wyke, 1987), especially if the child was prone to severe or persistent attacks. The reassurance which many parents mentioned as the thing they most often wanted from the doctor, was often clarified as reassurance that the child's chest was clear.



We decided to use the vignettes once again for the purposes of comparing families, as these were useful standardized measures of a wide spectrum of respiratory illness morbidity. We felt that the types of experiences which some parents have with their children could quite easily alter what may be considered a 'normal' response to any of the vignettes. We compared wheezers and non-wheezers over all eight vignettes and predicted that, on those vignettes where parents were already split over whether to CONSULT or not, the parents of wheezing children would be more likely to say that they would CONSULT their GP. This seemed a reasonable prediction given that some parents were very aware of the weaknesses in their children's chests and the rapid onset of serious illness.

There were seventeen children in all who had had some previous chest illness. Fifteen of these were consulters and only two were non-consulters. This difference wouldn't usually occur merely by chance alone ( $\chi^2 = 4.508$ ;  $p < 0.05$ ). In fact this finding is very important since it could well be one of the main distinguishing features of the consulting and non-consulting. It is probable that the way we selected our non-consulters would have meant few 'wheezers' entering into this group, because of the nature of this type of illness, and the necessity to see the doctor on a fairly regular basis. Also, because only four percent of children in this group had any history of respiratory illness, it would suggest that we had selected a group with



particularly low morbidity levels.

We decided to look only at the responses of the consultants to the vignettes, as they were more of a mixed group. Table 4-6a. gives the percentages of 'wheezers' and 'non-wheezers' in the consulting group who said they would CONSULT on each of the eight vignettes (once again the order of the vignettes starts with the most severe at the top).

Table 4-6a. A comparison of 'wheezers' and 'non-wheezers' with respect to who would choose to CONSULT on each of the eight vignettes.

	<u>Percentage who would consult</u>	
	Wheezers	Non-wheezers
Vignette H	100	100
Vignette A	100	89
Vignette B	67	98
Vignette C	60	80
Vignette F	67	72
Vignette D	33	48
Vignette E	33	41
Vignette G	7	7
MEAN	58	67

(p < 0.005)\*

\* Probability is derived from a chi-square test.

The numbers of CONSULTERS produced by vignettes A,G and H were either very low or very high percentages (refer to chapter 4-4. for a reminder of what all eight vignettes were). For the other five situations we have the reverse of what we predicted. In vignettes B to F the non-wheezing



group were consistently more likely to say that they would CONSULT immediately, and in vignette B this difference was highly significant. Vignette B is: 'The child is normally well, but for the past month has been getting a tight chest and wheezy when running.' All but one of the non-wheezers felt that this wheezy condition should be taken immediately to the doctor, whereas two-thirds of the wheezers felt that way.

Perhaps what this finding reflects is a group of parents of 'wheezing children' who are actually quite used to dealing with the type of situation outlined in vignette B and who, therefore, will not be as worried by it as those with no such experience. The parents in the former group will have the experience of dealing with this illness without bringing in the doctor. One mother said to me in response to vignette B: "I would make sure that he has his inhaler with him. He often goes like that especially if he's running around a lot." (WM28). When put like that we can discern why a consultation for this parent would not really be appropriate in this situation.

This part of the analysis also made us more aware of the important distinction between a child having many illnesses and the severity of the illness. Those children with recurrent wheezy chest do suffer from more respiratory and febrile illnesses and so are more likely to visit the GP - even if it is only for a repeat prescription. This was reflected in the finding that nearly all of the 'wheezers'



were also consultants.

The severity of the illness and the parents' perception of severity is obviously not such a straightforward issue, when we consider the families' previous experiences. As families become accustomed to a particular child's illness, their behaviour towards the illness will also change, which may well be what we picked up in the responses to vignette B. In a sense, the whole family become skilled in the management of situations like that of vignette B. One mother talking about her asthmatic two-year-old son said: "I take my cues about what to do from his behaviour. He knows when it is bad." (AM10). The asthmatic and wheezy children will be used to the symptoms of tight chest and breathlessness and their reactions will reflect this experience.

It seems, then, that the quotation I gave near the start of this section may have been a slight red-herring with respect to the normal parental response to 'wheezy children's' illnesses. Undoubtedly this Muslim child had a particularly bad case of asthma, and at that level of severity the parents were taking no chances.

To round off this chapter we decided that to be entirely consistent with our previous analysis we should check the ethnic group composition of those children with a history of chest illness (table 4-6b.):



Table 4-6b. The ethnic group composition of 'wheezers' and 'non-wheezers' among the consultants.

	White	Muslim	Sikh	Afro-Car.	(T)
Wheezers	4(20%)	5(29%)	2(17%)	4(40%)	15
Non-wheezers	16	12	10	6	44
(TOTAL)	20	17	12	10	59

A chi-square analysis of the data cell frequencies in table 4-6b. indicated that this variation was likely to have arisen by chance ( $p > .1$ ), so there was no indication that any of the ethnic groups reported more children with wheezy chests.

Looking at the experiences and beliefs of parents who manage children with chronic chest illnesses has been illuminating, not the least for highlighting the complexities involved in the decisions that parents make. For the parents, though, it is not always as complex as it may appear to an outsider. Once the child starts to climb out of infancy and 'normal' patterns of behaving develop for that child, then it can be very obvious to the parent when the child needs to see a doctor; and sometimes it is actually easier for the parent to make a decision for those children who have had a history of illness, because the whole family has become quite tuned in to that child's needs.

Looking specifically at those children with a history



of chest illness or chronic wheeze, we found that the scenarios which are actually considered more severe by the GPs, and which are normally associated with asthma or bronchitis, are not so anxiety-provoking for the parents who are used to dealing with these situations. So it is not surprising - although perhaps counter-intuitive initially - that it is the parent whose child has not experienced this symptomatology who is more likely to initiate contact with the doctor.

The penultimate section of the results looks at another variable which may be exerting systematic influences on the parents' beliefs and perceptions: The general practice attended.



#### 4-7. The General Practices and the General Practitioners

Until now in the analysis of the questionnaires, we have taken the information which the parents have given us about their children's illnesses - and their subsequent behaviour regarding those illnesses - to try and build up a better understanding of the processes which parents go through with this type of illness management. By doing so we have witnessed a considerable consistency among all of the parents we questioned concerning what they consider serious, and not so serious, symptoms and illness, and in the decisions they make about those illnesses.

Yet we have also encountered certain trends which, in varying degrees of potency, point to factors which do mitigate against this consistency. For example, we have evidence to suggest that the various ethnic groups of this study have somewhat different beliefs about specific illness situations which can lead to different behaviour patterns. For example, the Sikh and Muslim families appear to be more worried about what the illness will develop into.

We have left a full discussion of the origin of these different patterns of belief and behaviour until the various findings can be collated towards the end. It is evident, though, that cultural and socioeconomical structures - those relatively stable parts of people's lives - do have a major role to play in health beliefs. Another relatively stable



component in the lives of parents with young children is the general practice and the practitioners whom they rely on for the primary health-care of their family. It is quite often the case that the parents will see out all of the primary health-care of their children in one general practice and with one GP. We felt that to be quite thorough in this investigation of health beliefs and behaviour we would have to consider the general practice as a potential sphere of influence.

It is reasonable to conjecture that the health behaviour of a population is correlated in some respects to their experiences at the doctor. Very young parents, with their first child, may be particularly susceptible to what the doctor believes to be 'good' health behaviour. Which begs the question, do the different doctors and practices in our study agree on what they consider 'good' health behaviour? And if not, how do they differ? And how much of their beliefs are unloaded on their young parents? We felt that these questions really needed to be answered, particularly since not all of the four ethnic groups were distributed evenly throughout the three practices. Therefore, what we may have viewed as a distinctive cultural belief among the Sikh population, could be a reflection of 'teaching' at practice CR.

We approached this issue from two distinct directions: (1) Parental responses to our questions. We could have approached this by looking for all the occasions when a parent



said something like "...because the doctor told me to", but explanations of this nature were rare. Instead we analyzed the responses systematically, with respect to the practice attended. (2) The final part of the data collection was a semi-structured interview with each of the GPs. This featured two main themes: (i) The structure of the practices and the beliefs and policies of the GPs regarding good parental health care, and (ii) their experiences and thoughts about their work in a multi-ethnic community. It is the former of these themes which is of particular interest at this stage.

But first of all we turned to the parental responses and looked at the three components of the questionnaire which we have already analyzed in some depth: (i) Severity, (ii) the vignettes, and (iii) the parents' beliefs and perceptions of the illnesses. We were trying to answer this fundamental question: Does the general practice attended influence the responses of the parents on any of these parts of the questionnaire? We were aware that attempts to answer this question could be particularly tricky since the practices were already, to some extent, differentiated by the ethnic groups attending them. Table 4-7a. serves to illustrate this:



Table 4-7a. Counts of ethnic group by practice attended.

	<u>Practice</u>			
	CR	HR	WR	(T)
White	19	5	12	36
Muslim	6	4	19	29
Sikh	20	3	1	24
Afro-Car.	7	8	3	18
(TOTAL)	52	20	35	107

(Chi-square = 35.72; p < 0.0001)

The chi-square value indicates that there is a strong association between ethnic group and the practice attended and so any comparisons we make between the practices will have to deal with this.

It is important for me to mention that this part of the analysis was very much exploratory in nature. We were limited by the distribution of ethnic groups in the practices and the small numbers which emerged in some of the cells (table 4-7a.). Also, to analyze every component of the questionnaire with respect to the practice attended would have been inappropriate in terms of time and space. So this was not a definitive study of 'doctor differences', but essentially it was a search for clues or hints which might give us a better guide to the interpretation of the existing trends in the data. We first of all turned to the severity of the illnesses presented to the GPs at the three practices.



The measures of severity across the practices

Previously we ascertained that the levels of severity of illnesses taken to the doctor were not significantly different for the four ethnic groups (chapter 4-3.); although, as expected, these scores were quite different from illnesses for which the parents did not consult (table 4-3b.). In order to establish some knowledge concerning the policies of the practice, through the behaviour of the parents, we really had to know whether or not this consulting 'threshold' was consistent across the three practices. So we decided to look at all of those families who had consulted and compare their severity scores across the practices (table 4-7b.):

Table 4-7b. Mean severity scores of consulters by practice and ethnic group.

	<u>Practice</u>			
	CR	HR	WR	(T)
White	49.22 (N=9)	54.5 (2)	44.0 (9)	47.4 (20)
Muslim	60.0 (3)	37.5 (2)	64.5 (12)	60.53 (17)
Sikh	48.56 (9)	23.0 (2)	37.0 (1)	43.33 (12)
Afro-Car.	87.33 (3)	45.5 (4)	25.33 (3)	52.0 (10)
(TOTAL)	55.08 (24)	41.20 (10)	51.32 (25)	51.14 (59)



As I mentioned, the numbers of some ethnic groups in some of the practices were small. When we took out the consultants only, then the counts naturally became even smaller, as illustrated by the bracketed figures in table 4-7b. This gave us some problems with the analysis of the table. If all of the groups were reasonably sized, then we could have performed a two-way analysis of variance of the severity scores. The next best thing we could do to analyze the data was to make comparisons between groups which were of a reasonable size. Analysis of variance and t-test techniques don't actually specify a 'reasonably sized group', so we decided that we would not include groups with less than three families.

First of all we compared the totals for the three practices in a one-way ANOVA, ignoring the ethnic group variable. The result of this supported the null hypothesis that overall the parents consult with similar severity of children's illnesses at the practices ( $F = 1.03$ ;  $p = 0.37$ ). It is worth bearing in mind that there was a huge range to these severity scores (116) and a lot of variation between the families ( $S.D. = 28.3$ ).

We compared two groups using the two-tailed t-test procedure on SPSSX. The white and Muslim groups were compared across the practices CR and WR. There was no evidence for differences in illness severity for either of these ethnic groups ( $t = 0.38$ ,  $p > 0.1$  and  $t = 0.51$ ,  $p > 0.1$ ).



respectively).

A one-way ANOVA of the Afro-Caribbean scores was performed across the three practices and, despite the small numbers in the cells, the result was significant ( $F = 7.51$ ;  $p = 0.018$ ). A Scheffe post-hoc comparison of the means revealed that, in fact, only two of the means were significantly different from each other - that of practices CR and WR; a huge difference of more than sixty severity points. So, put in other words, the Afro-Caribbean parents in practice CR appear to have a higher threshold for consulting the doctor than those in practice WR.

The reason for this could remain a mystery to us, since we have just established no such difference for two of the other three ethnic groups, comparing these two practices. It is possible, of course, that within the group of Afro-Caribbeans there are families with different backgrounds and experiences. For example, the practice of WR was in a University area and thus was attended by some postgraduate students with very young families, who had only recently arrived in Britain. On the other hand, the practice of CR was much closer to the areas where the Afro-Caribbean communities have been established for many years. We did check the practices of the two Africans which I included in the Afro-Caribbean group to see if they were both in the same practice. They weren't; one was registered at practice WR and one at practice HR.



The responses to the vignettes across the practices

The eight vignettes offered us another very useful option for the comparison of the three practices, particularly since all 107 families responded to them. If the differences in the behaviour of the families were influenced by different practice policies, then we might well expect to detect something by observing the parents' responses to these hypothetical situations; although, at the same time, we were aware from the previous analysis of the vignette score distribution that there was a very strong agreement among all of the parents regarding the vignette questions, no matter which way we cared to divide them. Table 4-7c. represents the vignette scores which, as previously explained, reflected whether or not the parents would CONSULT a medical practitioner for a set of eight scenarios:

Table 4-7c. Vignette scores and counts by ethnic group and practice attended for all 107 families.

	<u>Practice</u>			
	CR	HR	WR	(T)
White	5.11 (19)	4.60 (5)	5.33 (12)	5.11 (36)
Muslim	5.00 (6)	5.75 (4)	5.11 (19)	5.17 (29)
Sikh	5.10 (20)	4.67 (3)	6.00 (1)	5.08 (24)
Afro-Car.	4.43 (7)	4.75 (8)	5.00 (3)	4.67 (18)
(TOTAL)	5.00 (52)	4.90 (20)	5.20 (35)	5.05 (107)



The one Sikh family in Practice WR meant that, with the criteria we previously set, we couldn't perform a two-way analysis of variance on the table. A one-way analysis of variance of the overall means for the practices gave support to the null hypothesis ( $F = 0.57$ ;  $p = 0.57$ ). One-way ANOVA's for the whites, Muslims and Afro-Caribbeans by practice attended revealed that scores were very consistent ( $p = 0.33$ ,  $0.49$  and  $0.84$  respectively). Similarly, a two-tailed t-test comparing practices CR and HR for the Sikh families produced no significant differences ( $p = 0.35$ ).

Interestingly, the group who scored the lowest of all on the vignettes (recall that a low vignette score means that the parents were less likely to say that they would CONSULT in this situation) were the Afro-Caribbeans from practice CR, incorporating the consulting families whose severity scores were particularly high (table 4-7b.). This adds some more weight to the argument that these Afro-Caribbean families do have a higher consulting threshold. However, overall the pattern was very similar for the parents' responses to the vignettes across the three study practices.

We were aware, as with many of the outcomes of this study, that we had to be careful with our interpretation of these results. The primary concern of distinguishing between the three practices was to look at any possibility which may exist for believing that the practices were somehow



different - either in policy or practice or both.

Differences between the practices could play a part in the explanation of the way the parents responded to the questionnaire, since, after all, a great deal of health education comes from the General Practitioner. The similarities in the parental responses across the practices indicate that the GPs may actually be quite uniform in their beliefs and practices.

We also made a comparison of the consulters and non-consulters across the three practices. Remember that on one of the vignettes the consulting group did report that they would go to the doctor more often. Our 'tentative' interpretation of this was that for some illnesses and symptoms the consulting families did have a lower threshold of consultation. We now know that this is probably linked to some quite inherent differences between the consulters and non-consulters. Chi-square analyses of the percentage who said that they would consult at the three practices, revealed no differences between the consulters and non-consulters, for any of the vignettes (Table 4-7d).



Table 4-7d. The percentage of parents who would CONSULT a doctor for the vignettes by consulting behaviour and practice attended.

		<u>Consulters</u>			<u>Non-consulters</u>		
		CR	HR	WR	CR	BR	WR
N =		(24)	(10)	(25)	(28)	(10)	(10)
Vignette	A	96	90	96	93	100	100
Vignette	B	88	90	92	100	100	100
Vignette	C	67	70	84	54	50	70
Vignette	D	54	40	36	11	20	10
Vignette	E	46	30	36	50	30	50
Vignette	F	71	60	72	75	90	70
Vignette	G	0	0	16	0	10	0
Vignette	H	100	100	100	100	100	100

The parents' beliefs and perceptions across the practices

It could be argued that the most appropriate place to look for practice differences would be in the section which we labelled general beliefs and perceptions of illness. If parents from different practices hold different beliefs about children's illnesses when other factors, such as ethnic group, have been considered, then we might begin to suspect different messages or educational approaches from within the practices.

The simplest way to observe this would be to re-examine all of the variables which had previously been associated with either ethnic group or consulting behaviour and put them into a log-linear model analysis, to determine whether or not the relationships which we had previously established were in any way dependent on the practice which the families



attended. Unfortunately, some of the expected frequencies were too low to enable us to do this. Our remaining option was to collapse across the dimensions of ethnic group and consulting behaviour, and analyse the resulting association between 'health belief' and practice attended.

We performed a chi-square analysis on the parents' belief about the prognosis of the cold (if it is left alone, will it get better/worse?) by the practice attended. No significant association was found (chi-square = 3.29;  $p > 0.1$ ). There were no obvious trends in the data which would suggest the presence of an interaction with either ethnic group or consulting behaviour.

The only other variable in the beliefs section which was related to both consulting behaviour and ethnic group, was what the parents considered most important to get from the doctor when consulting with this type of illness. Consulting parents mentioned the 'other' category more often for this question, whereas the non-consulters preferred reassurance. Also, among the ethnic groups, the Muslim parents were most likely to mention something which fell into the 'other' category. These were usually medicines, like Calpol, which could be bought over the counter in chemists. Antibiotics was an infrequent choice of all of the groups (see chapter 4-5).

Again, because of insufficient numbers, we couldn't effectively look at any three-way interactions with practice attended, but we could determine whether the practice had



any overall effect on the type of treatment parents go to the doctor for. The chi-square analysis supported the null-hypothesis of no difference between the practices for this variable ( $p > 0.25$ ).

Before summarizing this section on general practice differences (through the parental responses), I would just like to mention the problem, dealt with in this analysis, of small cell counts. We have encountered this problem because we do have a variety of interesting variables, and it is important to the overall interpretation of this study to determine how they vary and interact with each other. It would be simple, when cell sizes are small, to say so and do nothing. Yet this doesn't add anything at all to our knowledge of the patterns of parental health behaviour. We felt that it was better to address the problem and perform any suitable analysis which we could, rather than to ignore it. If it is not possible to perform a log-linear analysis or an ANOVA on a multi-dimensional table, this doesn't mean the table is of no value. By studying such tables, trends can still be apparent and ideas are more likely to develop than if they are disregarded.

#### Summary of our exploration of practice differences through the responses of the parents

Because of the very low numbers of some of the ethnic groups in some of the practices, looking at how the variables interacted with practice attended and ethnic group



simultaneously, was not possible. We had to take each ethnic group separately. For the severity scores of the illnesses taken to the doctor, we found that the Whites, Muslims and Sikhs didn't vary across the practices, but the Afro-Caribbean families did report more severe illnesses if they attended practice CR compared to those attending practice WR. This could be interpreted as a higher threshold for consulting among the Afro-Caribbeans at practice CR, or a lower threshold at practice WR. Which ever way round though, because this difference is non-existent among the other ethnic groups, it is less likely to be a practice difference and more likely a reflection of the different Afro-Caribbean communities in Leeds and their previous experiences.

We found that the practice attended did not make any difference to the way the parents responded to the vignettes. Scores were similar for all groups, for all practices; it is worth bearing in mind that parental agreement was very high in all respects regarding these illness scenarios.

The final section in which the practices were observed was the parents' beliefs and perceptions of health and health behaviour. It was here our analysis suffered more from lack of numbers, and yet for those variables which had shown associations with both ethnic group and consulting behaviour, there was no indications of an association with the practices attended, when looked at overall.



So as far as we can tell from the parental responses to the questionnaires, there is no indication that any of the practices manage their clients very differently from the others, as reported beliefs and behaviour are quite consistent for all three practices. The interviews with the six doctors will hopefully give us a different insight into the beliefs they hold as individuals, and the emphasis which they place on parental management of these childhood illnesses.

#### Interviewing the General Practitioners

We had two main reasons for developing a questionnaire aimed at the general practitioners at the practices. One of these was the valuable source of information that they were to us as practitioners working in multi-ethnic primary health care. We were aware that some of the patterns of parental health behaviour would be difficult to explain by us, through our relative inexperience of this area. The experiences and thoughts of the GPs we felt might be a valuable source for filling in some of those gaps in our knowledge.

The principal aspect of the GP questionnaire was to look at the beliefs the doctors have concerning child health and health-care, and the practices they manage, at the front line of primary health care. The British GP is in a position very highly respected by a large majority of the population



and as a direct result will have a great deal of influence on the behaviour of his/her clientele. It was for this reason that we felt parental behaviour patterns may reflect what happens at the doctors. Different beliefs and practices among the doctors could account for some of the variation in the way the parents behave.

Few studies of this nature have actually looked at both the patients' perspective and that of the doctor. For the reasons I have just outlined, we felt that getting 'both sides of the story' would be more valuable to our research. Having said that we did only have six doctors involved in the study and so we did not perform any statistical analysis on the GP interviews. Instead we were using this part of the study as another exploratory tool which may yield some hints and ideas for the interpretation of the consultation rates and the responses of the parents to the questionnaire.

So for these purposes - between myself and my supervisor - we compiled a fairly short, semi-structured questionnaire (APPENDIX II), which I administered to the the six GPs from the practices involved with this research.

### The GPs questionnaire

All six GPs responded very favourably to the questionnaire. These interviews were all conducted between January and April, 1988, took thirty-five minutes on average, were tape-recorded and transcribed word for word. The three main



topics covered by the questionnaire were:

1. What the GPs would recommend the parents to do for each of the eight vignettes.
2. The GPs recommendations for parental management of more general respiratory and febrile symptoms, including the efficacy of chemist's and parental remedies.
3. The language barrier and the more general implications of practising in a multi-ethnic area.

#### The responses of the GPs to the vignettes

One of the questions we hoped to address with this part of the research was, how closely do the parental beliefs reflect those of the GPs? Previous research had demonstrated that what parents perceive as indicators of serious illness in their children, is very highly correlated to that of doctors (Campion & Gabriel, 1985; Wyke, 1987). The simplest way to make this comparison, as Campion & Gabriel (1985) had done, was to compare the responses of the parents and doctors to the vignettes. Instead of asking the doctors, 'what would you do if...?', I asked them, 'what would you recommend to the parent that s/he do if...?' Although these GPs were not familiar with the specific vignettes of the questionnaire, they were, not surprisingly, very acquainted with the real life events which they were drawn from.

If I was told by the GP that the best action to take actually depends on the age of the child (as some parents also said), then I said to assume the child to be four or five - thus covering the average age for the children in the



study. (N.B. When I asked the parents the vignettes, I asked them to refer to the target child when making the decision).

For the purposes of the analysis, our previous inspection of the parental responses to the vignettes concerned whether or not the parent felt that they would go to the doctor at once. Table 4-7e. makes this comparison with the responses of the doctors.

Table 4-7e. The percentage of doctors and parents who said the best action would be to consult a doctor, for each of the vignettes.

		<u>Percentage who would consult</u>	
		<u>Doctors</u>	<u>Parents</u>
Least severe	Vignette G	0	5
	Vignette D	17	30
	Vignette E	50	42
	Vignette C	67	66
	Vignette F	100	73
	Vignette B	100	94
	Vignette A	100	95
Most severe	Vignette H	100	100

(Spearman rank correlation coefficient = 0.94;  $p < .01$ )

The most noticeable aspect of table 4-7e. is the high level of agreement between the doctors and the parents over when a particular illness situation should merit a speedy consultation. The doctors are more often unanimous than the parents, but mainly because there are far fewer doctors to disagree. It is interesting that more parents than doctors



would consult for the two least severe vignettes, but on none of the others.

When responding to the vignettes, the doctors did occasionally say that it depends on the anxiety levels of the parents. Three of the doctors mentioned this on vignette A: 'The child's cough has lasted for seven days and s/he has also been sick, usually when s/he coughed'. I was told that this was quite common, particularly in very young children. That it wasn't particularly worrying to them and so if the parent felt confident in managing it and not over anxious, then they wouldn't recommend that they see a doctor. Yet they were all very aware that this combination of symptoms was often very worrying to the parents and if this was the case, they should certainly consult.

One doctor mentioned that if the parents were very anxious then their skill in managing these situations would be diminished anyway. The role of the GP was often one of reassurer, removing the parents' worse fears, rather than handing out a panacea. Interestingly, the five parents who said that they would do something other than consult a doctor for vignette A, were all talking about their second, or later, child, suggesting that experience has a role to play in this situation.

We could use the doctor responses on the vignettes to determine whether there was any specific patterns for the individual practices. The two vignettes C and E were most useful in this respect, since they were the only ones where



more than one doctor disagreed with the others. Vignette C is: 'The child's cough has lasted for three weeks and has not got any worse, but neither has it got any better. S/he has no other symptoms'.

Two GPs did not recommend a consultation here, and they were both from the same practice CR. One said: "I would wait and see. If it is not getting worse, then they are probably not unwell. But if they were unwell with it then I would recommend that they come in." The other said: "If it is just a normal, dry cough then I would say wait another week." The theme of being 'unwell on top of the symptoms' - in a sense, the child's reaction to the illness - was mentioned often with the vignettes, particularly by the parents. This was obviously a strong indicator of the course of action the parents should take.

It was also interesting that these two GPs were the youngest of the six I interviewed, as well as being at the same practice. This factor was also apparent with the responses to vignette E: 'The child has had a runny nose and a fine rash for the last twenty-four hours. There are no other symptoms'. The same two GPs suggested that this was not a cause for concern, as did the next youngest GP of the group. One said:

"I know that this is liable to be a viral infection. So in medical terms I wouldn't recommend a consultation. But I know that when kids have got a rash, parents want to know what it is. So it is reasonable to present the child for a diagnosis - but I wouldn't be concerned about it."



With respect to the vignettes, there doesn't appear to be any practice differences per se, regarding the beliefs the doctors have. I do think, though, that the age of the doctor and how recently they have left medical school, does make a difference to the doctor's overall strategies. The younger doctors were occasionally more in favour of the parents managing the illness when possible, and consulting if they were particularly concerned. Whereas the older doctors liked the parents to come into the surgery where they could make a diagnosis and give reassurance. Given that the two youngest GPs operated in the same practice, this could have influenced overall consulting rates, although we didn't observe any trend in this direction when we compared the three practices for the numbers of consultations. It is possible that more specific GP beliefs and practises will provide us with more of an insight into how parents will choose to react to these childhood illnesses.

#### The GPs' recommendations for parental management of their children's respiratory and febrile illnesses

I specifically asked all of the GPs about the management of respiratory illness and temperatures and fevers. I asked if they had any pamphlets or specific written instructions to help the parent deal with these illnesses. Although some of the doctors mentioned that this kind of information, in all relevant languages, would be extremely useful, none of them



actually had it. One of the practices issued a Health Education Council pamphlet on "Minor illness: How to treat it at home", but this was only available in English. All three practices said that they made a specific effort to explain to parents the best procedures to go through when their child either has flu or a temperature or a bad cold. These instructions had similar emphases at all practices.

The age difference was again apparent with respect to the doctors' beliefs about 'the chemist's cough and cold remedies'. Two of the older GPs recommended that the parents use these concoctions, whereas another thought that they were useful. These attitudes were quite different from those of the younger doctors. One of the younger doctors recommended to the parents that they try their own remedies at home instead of those from the chemist - thus leaving out the sugar and other additives. Another felt the same way about home remedies, but also added that if it makes the parents feel happier, she has no real objection to the chemist's remedies. But the third of the younger doctors thought that chemist's remedies were "a complete waste of time". All six doctors did advocate using Calpol, particularly in cases of febrile illness when the paracetamol helps bring the temperature down.

These 'doctor beliefs' tie in very closely with our findings from the interviews with the parents. Most noticeable was the fact that the parents did try alternatives to visiting the doctor, which was certainly



encouraged by all GPs. Both home remedies and chemists remedies were used, especially Calpol, which was quite consistent with the recommendations of the GPs.

Once again, though, the doctors' beliefs about the management of these illnesses, and their practices towards their patients, do not throw any more light on the findings from either the consultation rates or the interviews; that is, the beliefs which the GPs held were generally very similar, and when they did differ this was equally likely to emerge from within practices as across them. Also, there was no indication that the 'health-related' practices of the doctors varied with respect to any of the groups in their practice populations. This gives more credibility to the notion that the differences which we did find between the parents' beliefs regarding the management of their children's illnesses are actually based on cultural and social factors.

#### The language barrier

Something which obviously separated the practices was the language barrier, and this was evident from the GP interviews. At practice HR, the Asian GP told me that this was rarely a problem, and this was verified by the families I spoke to. HR was the practice with the single Asian GP who spoke the more common Asian languages, which could have implications for consultation rates. Recall that I mentioned



this possibility before during the consultation rate chapter (4-1). When we separated the practices out, we found that Asian consultations were only higher at two of the practices (HR and CR). The fact that the Pakistani Muslims consulted more at practice HR and not at practice WR could well be related to this aspect of the practices. It is important to remember that it will not only be a language barrier, but a cultural barrier as well.

Having said that, they did have access to a professional interpreter at practice WR, who worked in the clinic on three days a week. Also, one of the receptionists spoke Punjabi. The two GPs indicated that this did a great deal to alleviate the language barrier, although didn't remove the problems entirely. One of the doctors at practice WR said:

"Since X (the professional interpreter) was given a position here, things have really got noticeably better. I would say that the quality of the consultation is almost as good as for those who speak English. Although they do take a lot longer."

The situation at practice CR was different still and all three GPs there mentioned that the language barrier did create very obvious problems. This was despite the fact that they had all made an effort to learn the Punjabi for basic greetings and body parts and dysfunction. Some of the Sikh parents mentioned this effort by the GPs and they greatly appreciated it, although it probably only scratched the surface of the inherent cultural and linguistic problems. One of the GPs at practice CR told me:



"We have one Sikh lady who is labelled as being schizophrenic - she has injections. She does obviously have psychiatric problems, but she brings her twelve-year-old in to translate. It is hard to use a twelve-year-old to translate psychiatric problems. But this is a difficulty we have simply because we do not have an interpreter on hand."

This problem with using children as interpreters is one which I addressed in the introduction and which I experienced first-hand myself when contacting the parents. Often, though, there is simply no alternative open to the GP, especially if several different languages are represented within the practice population.

We do have to bear in mind though, that the Sikh population attending practice CR were more likely to speak English than the Pakistani Muslim population attending practice WR. This adds to the difficulties involved with trying to interpret how the situations at each of the practices may influence the ways in which parents make decisions about consultations.

#### A summary of what we gained from the GP interviews

From the information gained interviewing the GPs, I would suggest that these doctors do have very similar beliefs concerning the health and health-care of young children. Certainly nothing came out of these interviews which made me think that parental health behaviour would be affected



differentially between groups of the practice populations.

Some individual differences did emerge between the GPs concerning their own beliefs and preferences, and we conjectured that this might be partly linked to the age of the GP - which in turn, of course, will be linked to the number of years in practice. Three of the doctors had been practicing for six years or less and there were indications that their preferences were slightly different in some areas of practice. For example, the encouragement of patients to treat their illnesses at home. The younger GPs I spoke to view many of the minor childhood illnesses as particular targets here, since, on clinical grounds, they don't need to be presented to a doctor. Their strategy is to actively encourage the parents' home management of these illnesses, being supportive and never undermining what the parents try themselves. With patient lists growing and consultation times falling, this could well be one of the new emphases in the training of general practitioners.

When I described the three practices in chapter two, it was apparent that their overall structure varied a great deal. HR is a single-practitioner practice, with an Asian GP; CR is the more conventional group practice, and WR is a practice operating within a large health clinic. In the next section where patient satisfaction is reviewed, a closer look is taken at how these different structures affected the patients, for example, with waiting times and the length of consultations.



#### 4-8. Measures of Satisfaction

Ultimately this research was an attempt to describe the health behaviour of the families and to offer some explanations for the patterns of behaviour we found. Our focal point was decisions to consult, or not to consult the doctor and our discovery of different rates of consultations became implicated in this focal point.

So far in the analysis we have taken each of the various components we used in the questionnaire separately and looked at the information the parents gave to us. Each component has given us some very useful pointers as to why the parents do react in the way that they do.

The final section of the questionnaire concerned the families' contact with the general practice and how the parents felt about the people who worked there and the way it was organized. As with the other sections of the questionnaire, we reckoned that such things as the difficulty in getting to the practice, waiting times, the care given to their children and the priorities of the doctors, would all contribute to the overall decision to consult.

If we look back to the beginnings of this research we decided then that the best way to approach it was with the consent of general practitioners. Thus, we obtained a small group of doctors who were interested and sympathetic to the work that we were doing - almost certainly a biased



cross-section of general practitioners in general. At the end of my interviews with the parents I was well aware of the consistently positive comments which I had received regarding the doctors and their practices. We can now have a look at the outcome of this statistically.

### Parental satisfaction with access

We used almost identical satisfaction questions to the larger Newcastle study of standards and performance in general practice. These were originally devised by Zastowny et al (1983) who used them in a scale to measure satisfaction with medical care. What these original authors did was to sub-divide the measures into meaningful sub-sections and then work out satisfaction scales from these. The first of these sub-sections involved two questions regarding the difficulty experienced by the parents in getting access to the doctor:

Except in cases of emergencies, how difficult is it to get an appointment with your child's doctor?

After getting there, do you feel that the time you usually have to wait is too long, or is it usually okay?

The former had three possible replies which were used as prompts: Very difficult (1), difficult (2) or not difficult (3). The numbers in brackets are the coded replies and, for the purposes of analysis, they become the number of points scored. With the second of these questions there were just



two possible replies on our questionnaire: Too long (1) or not too long (2). So with these two questions combined, the scores could range from two through to five, with the lower scores being an indictment of difficult access to the doctor.

Once again we were interested in how our consultants and non-consultants and four ethnic groups responded on these measures. Table 4-8a. represents the mean values for all of the groups:

Table 4-8a. Mean values for our measure of ease of access to the doctor by consulting behaviour by ethnic group.

	Consulters	Non-consulters	(T)
White	4.25	4.56	4.39
Muslim	4.18	3.92	4.07
Sikh	4.75	4.75	4.75
Afro-Car.	4.20	4.63	4.39
(TOTAL)	4.32	4.46	4.38

With a maximum possible satisfaction score of five, the overall mean of 4.38 does give my subjective experiences of a general high satisfaction overall, some credibility.

To analyze the variance of these satisfaction scores a two-way ANOVA - ethnic group by consulting behaviour - would have been ideal. But, as was apparent from the means, we had a ceiling effect in the data, rendering the



distribution of scores negatively skewed. Observation of the distribution of scores suggested that we would either have to weight the values to restore some sort of 'normality', or use a nonparametric procedure which did not depend on the data being normally distributed.

We decided to use the nonparametric procedure available for two main reasons: (1) The SPSS-X programme manages such a procedure, and (2) Siegel (1956) informs us that "the Kruskal-Wallis one-way analysis of variance by ranks is an extremely useful test for deciding whether  $k$  independent samples are from different populations." (p.184). Unfortunately there is no two-way equivalent, and so this test would not be able to inform us about the degree of association between our two independent variables - although by glancing at the table (4-8a.) we can see that an association is very unlikely since the scores for consultants and non-consultants don't differ very much for any of the four ethnic groups.

The Kruskal-Wallis one-way analysis of variance determines whether the sums of the ranked scores are disparate enough to have come from different populations. We utilized this test in order to find out if our four ethnic groups' satisfaction with access to the doctor were similar. We calculated a statistic called  $H$ :  $H = 9.53$ ;  $p = 0.023$ . The ' $H$ ' statistic calculated has a very similar distribution to that of chi-square, and so these tables are used for the probability. This value of  $H$  has also been



corrected for tied ranks, as these can have quite a strong effect.

So the probability observed indicates that, despite a high overall satisfaction with access to the doctor at the practices, some ethnic groups are significantly more satisfied than others. The Sikh parents indicated the most satisfaction; both the white and Afro-Caribbean families fall very close to the overall mean; and the Muslim parents were least satisfied. This finding will be discussed at the end of the satisfaction section, after we look at the other components of satisfaction.

As we suspected from the mean values in the table, the consulters and non-consulters were not statistically different on this measure of satisfaction with access ( $H = 0.92$ ;  $p = 0.34$ ).

#### Parental satisfaction with the doctor-patient interaction

There were five variables which made up this satisfaction scale. The questions were:

1. In your opinion, how concerned is the Dr. with your child as a person? (Very (1), Concerned (2) or not very (3)).
2. How careful do you think Dr. \_\_\_\_\_ is when s/he examines your child? (coded as 1.).
3. How willing is the Dr. to listen when you tell her/him about your child's health? (coded as 1.).



4. Do you feel that the Dr. gives you enough information about your child's health, or would you like more? (Enough (1), not enough (2)).
5. When you see the Dr. with your child, do you think s/he usually spends enough time with him/her, or not enough? (coded as 4.).

Thus, the scale for the satisfaction with the doctor had a range of scores from five up to thirteen; this time the lower score represents the most satisfaction. Table 4-8b. represents the means in the same way as before.

Table 4-8b. Mean values for our measure of satisfaction with the doctor-patient interaction, by consulting behaviour by ethnic group.

	Consulters	Non-consulters	(T)
White	6.70	7.00	6.83
Muslim	7.82	7.92	7.86
Sikh	7.42	6.75	7.08
Afro-Car.	8.00	8.75	8.33
(TOTAL)	7.39	7.46	7.42

Again, the overall satisfaction levels are high (lower scores), with another significant effect of ethnic group ( $H = 11.20$ ;  $p = 0.012$ ). The pattern is slightly different, though, with the white, indigenous group being most satisfied and the Afro-Caribbean parents least satisfied with their GP's. The Sikhs are still more satisfied than the average parent and the Muslims less satisfied. The means for consultants and non-consulters were once again very similar ( $H = 0.11$ ;  $p = 0.75$ ).



### Satisfaction with the practice overall

Overall satisfaction with the practice was measured on a scale which incorporated these four questions (note that the weightings are different once again):

1. Have you ever felt that when you have been there with your child that the doctor has just tried to get rid of you? (Yes (1), no (3)).
2. Or that the doctor was too busy to spend enough time with you? (coded as 1.).
3. Have you ever felt that the doctor, or other people at the practice, didn't care about you? (coded as 1.).
4. Have you ever had any bad experiences at the practice when you have been there with your child? (coded as 1.).

The scores could range from four to twelve, this time the higher score representing most satisfaction. Table 4-8c. is illustrated as before:

Table 4-8c. Mean values for our measure of overall satisfaction with the practice, by consulting behaviour by ethnic group.

	Consulters	Non-Consulters	(T)
White	10.60	11.50	11.00
Muslim	10.94	11.17	11.03
Sikh	11.33	11.83	11.58
Afro-Car.	10.80	9.25	10.11
(TOTAL)	10.88	11.13	10.99



Table 4-8c. produces a relatively familiar pattern with respect to high satisfaction levels. The Afro-Caribbean parents reported levels slightly below those of the other three groups, but on this occasion the variation between the scores could be considered normal ( $H = 5.53$ ;  $p = 0.14$ ). As it was for the difference in scores between the consulters and non-consulters ( $H = 1.48$ ;  $p = 0.22$ ).

#### A summary of the satisfaction measures

A summary of the levels of satisfaction would have to mention, first and foremost, the high levels reported by all groups on all measures. Despite this, there were differences between the satisfaction scores of the ethnic groups on two of the three measures. In getting access to the doctor, the Muslim families reported that they had more difficulties. This is most likely a reflection of the way the practices were structured. The three practices were very different from each other in this respect. Recall that one of the practices was part of a large health clinic and one was a single practitioner practice. These two accounted for almost all of the Muslim families in this study. The third was a family practice with three GPs, and it was in this practice where most of the Sikhs were located. All three practices worked an appointment system, but it certainly appeared as though the single practitioner had a larger case-load.



A second and stronger difference revolved around the questions specifically related to the parents' satisfaction with the doctor-patient encounter. Muslim and, to an even greater extent, Afro-Caribbean families reported lower levels of satisfaction. This scale was measured by the parents' beliefs about the care and concern given by the doctors for their children, his/her willingness to listen to them, and the amount of information the doctor usually imparts to them. This finding does suggest some serious implications for the health-care of immigrant groups in Britain, particularly since in the last section we discovered that all of these doctors came across as being aware of the different health needs and beliefs of their multi-ethnic populations.

It would be difficult to dispute that overall satisfaction levels were high, but, having said that, we haven't actually used the scores obtained on these scales against any kind of standard measure. In fact, no such standard exists. But, as I mentioned previously, these scales were used by the project workers in the large study based in Newcastle, as well as by Wyke (1987) in her Ph.D. research. One of the studies they completed involved more than 850 interviews with parents from all over the Northern regions of England (Barton, et al, 1988). We felt that this would make a very useful comparison with ours because the children involved were of a similar age. I should mention that this study was also linked to general practitioners



who were cooperating with the researchers and so will be subject to the same kind of biases as this one.

The data from the satisfaction with access wasn't available in compatible form and so we couldn't actually make this comparison.

We obtained data from the five questions which made up the satisfaction with the doctor-patient encounter - what the original authors (Zastowny et al, 1983) called the "outcome" subscale - and their overall mean figure worked out as 6.94 (Remember that the top satisfaction score is 5 and the bottom 13). This figure actually represents a higher overall satisfaction than we obtained (7.42) and almost matches the mean for the white, indigenous families of our study (6.83) (see table 4-8b.) - which was the majority population of the Newcastle study. So it seems that our satisfaction scores for the doctors are by no means exceptionally high - at least in terms of the ways in which parents report them to interviewers.

We obtained data from three of the four questions concerning overall satisfaction with the practice, or the "positive halo" subscale as the original authors referred to it. Table 4-8d. represents a comparison of the percentages who gave the 'satisfied' response on both the Newcastle study and this one:



Table 4-8d. A comparison with parents in the Northern Regional study who gave the 'satisfied' response to questions concerning overall satisfaction with the practice.

	<u>Percentage</u>	
	<u>N. region</u>	<u>Leeds</u>
1.	95	97
2.	87	81
3.	88	90

This is really a further indication that the satisfaction scores in our study were very comparable to this particular study in the North of England and is extremely encouraging with respect to the care of children in general practices in the North of England overall.

This concludes the last of eight sections in which I have displayed the results of our study. I will turn now to the final chapter and to a discussion of these results.



## CHAPTER FIVE. A Discussion of the Results

The main aim of this chapter is to bring together the various aspects of the parental health beliefs and behaviour, which have been presented at length in the preceding chapters. I intend to do this in the context of what we consider to be the most relevant research in this area; that is, those studies which have a bearing on the discussion of our results.

The final section of this chapter will take a look at what I perceive to be the wider implications of the research we have carried out here in Leeds in the last few years, including implications for further areas of study.

Before turning to the results I will first of all look at the limitations in the design of our research, as we perceived and experienced them. Hopefully this will give the discussion of the results a more meaningful context. There were two main areas in which the main limitations of this study were apparent to us: The sampling method and the interview method of data collection.

### The sampling method

This section will include two aspects of the sampling method: Firstly, how the sample was chosen; and secondly, the sample itself.

The first point I would like to make here is one which



I made in the second chapter when describing the pilot studies, and concerns the practices from which we chose our sample. It is worth saying again that the sample was chosen from three general practices where all six GPs were very interested in the research we proposed to do, and helped us to collect the data. We were aware that these GPs may not be particularly representative of the population of GPs in Britain. Of course we can't be precise with regards to how this may affect the data collected, but we were aware that it could present some systematic bias to the responses made by our sample as a whole. We felt that the measures of satisfaction may be most likely affected here. The interviews with the GPs were useful in this respect, because it gave us a far more in depth account of the general practitioners' and practice policies.

Part of the sample - the consulters - were chosen in a quite straightforward manner. Some of the main areas of interest to us in this research were the reasons why parents take their children to the doctor. One way of doing this was to wait until the parents consulted a doctor (for the target illness(es)) and then to interview them within a period of two or three weeks subsequent to the consultation. This was the way we formed the group of 'consulters'.

Being aware that some parents do consult the doctor less often than others, and that some parents will not consult the doctor under apparently similar conditions to those that do, we decided to try and include a group of



'non-consulters'. This group were more difficult to obtain (see the methodology chapter 3), and were more diverse with respect to the criterion which we were using. Some of the parents in this group reported their child to never have had even a cough or a cold, and others talked about an illness which the child had had only a week or so previously.

The description 'non-consulter' is not literal, but was useful for our purposes. The families were labelled as such because they had not been to see the doctor with the target child for four months or more. They could have been with another child, or they could have been with the target child six months previous to the interview and still been eligible for the group of non-consulters. It turned out that we still had difficulty in getting a sizeable number of non-consulters from the three practices, despite the fact that we reduced the original period of non-consulting time from six to four months. The ideal design here would have been similar to that used by Wyke (1987) where information was already available about children who had had a specific illness episode and whether or not the parents had consulted the doctor for it. Unfortunately we didn't have that information available to us.

When we set out to do this study we recognized that one of the major difficulties would be making contact with a multi-ethnic population, some of whom speak English only slightly or not at all. We toyed with the idea of interviewing only those parents who spoke English reasonably



fluently, which would have provided us with more internal consistency within the interview situation. For example, the amount of information gathered from each family would not have been so dependent on ethnic group affiliation. It would also have allowed us time to do more interviews.

The reason that we decided against this, and instead included any family to emerge in our selection procedure, was so that we would not exclude those families which we had already identified as having most problems when using the health services, or any of the predominantly English-speaking bureaucracies. We felt that the information we could gain from these families was far more important to this research, than that which we might lose in the interpretation, or through lack of English fluency.

### The interview method

When I described the interview methodology in chapter three, I alluded to some of the problems which I personally had encountered in the pilot studies. I intend to expand on these more specific problems in this section, many of which are related to the retrospective nature of parts of the interview schedule.

The part of the questionnaire which asked parents about the most recent illness is, of course, concerned with recall. Obviously some parents are going to have better memories for their children's previous illnesses than others



are, and this may depend on things like the number of children in the family and the number of recent illnesses. Above all it is going to depend on the length of time since the illness occurred. This is where one of the basic distinctions between the consulters and non-consulters comes in. The non-consulters do have to remember consistently further back in time, and this could result in a systematic difference between the responses of the two groups.

Having said that, throughout the interviews I was continuously encouraged by the parents' (especially the mothers') ability to recall very specific details about their children's illnesses - both symptoms and behaviour - from three, four, and even six months previous to the interviews. If there were any difficulties, both myself and the parents utilized an abundance of cues, such as what happened at school, or whether it was the holidays, which resulted in a tiny proportion of parents concluding that they couldn't remember at all on specific questions.

This did not exclude the possibility that the answers I received from the parents were inaccurate. Once or twice a parent said in response to a question regarding the presence of symptoms: "Oh, he always goes like that". Which introduced to me the possibility that some parents were talking generally about what usually happens. This was a point picked up by Wyke (1987) as well, and she went on to suggest that this was more likely to be the case with children who have had a history of respiratory illness.



There are many more recognized problems with using survey and interview methods as research tools, which could have influenced the parental responses to our questionnaires. The 'socially desirable answer' is one of those more often associated with survey methods (Moser & Kalton, 1971).

This phenomenon has also been described in detail by Cornwell (1984), who called it the 'public account'. The parents may have felt that the interview was a test of their knowledge about child health care and so modelled their answers to fit those which they felt was the right answer, or perhaps the answer they felt I wanted to hear.

Cornwell suggests that the interview situation is unusual for most people and they can quite easily be made to feel unequal by someone they may regard as 'the expert'. This is more often the case when there are cultural differences between interviewer and interviewee - usually the interviewer is from a higher social class and from the indigenous population. This phenomenon has obvious links with the research I reviewed in the introduction concerning cultural differences and the doctor-patient interaction (see Pendleton (1983) for a review). In fact, two of the researchers I have previously mentioned in this section have observed the problem of class differences between interviewer and interviewee (Cornwell, 1984; Mayall, 1986).

In our study this is a potential problem, because with a wide range of families from different social classes and



cultural groups, there were bound to be interviews where the divide between myself and the interviewee was far greater than in others.

My own strategy was to try and limit this as much as possible by stating very carefully to all parents that I was not a doctor, but a research student who was interested in their beliefs and viewpoints regarding the health of their children. I discovered that this was something that almost all of the parents were very keen to talk about, and I had more problems keeping the interview on the right tracks, and getting my questions in, than I did with parents who seemed to be deliberating over what could be the 'right answer'.

One of the points which Cornwell (1984) made concerning 'public accounts' was that they tended to be somewhat limited in terms of the intimacy and detail of the interviewees responses. Her argument was that it takes repeated visits and the development of relationships and trust before the 'private accounts' emerge. With the time and resources available to us, we didn't feel it was possible to design a study with several visits to the same families, which would undoubtedly have enhanced the quality of the information gathered. Having said that, Cornwell's experiences were with people talking about their own personal histories as opposed to those of the children; parents, on the whole, do seem to want to talk about their children.

'Socially desirable answers' are linked to another



inherent component of the retrospective method which could influence the way the parents responded to the severity questions. Our group of consultants had previously confirmed that they had been to see the doctor for the illness I had identified, and the non-consulters were aware that they were describing an illness for which they told me they hadn't consulted. The 'socially desirable answers' in these cases could be those which are in line with the decisions previously made.

This rationalizing of actions was also portrayed by Wyke in her research as a possible source of bias, and an inherent problem of the retrospective interview method. In fact, we all tend to rationalize our behaviour after the event, and research in this area suggests that parents are no exception, since they will not want to be seen as inadequate or irresponsible (Cunningham-Burley & MacLean, 1986; Mayall, 1986). Baruch (1981) described how parents in his study tended to describe their encounters with the medical profession in terms of their own adequacy as parents. This was particularly the case when something had gone wrong and they felt they were being questioned.

But having said all that, we do have evidence from our own study, and from that of Wyke (1987), that the reasons parents give for making a particular decision are not always those which would be regarded as 'socially desirable'. For example, if the parent had consulted a doctor we might expect a justification with respect to the clinical



characteristics of the cough; that is, what the doctor wants to hear. Yet often the emphasis was on the behaviour of the child, for example, being upset or off his/her food.

Another problem linked to the retrospective nature of the study relates to the measures which we took of the severity of the children's illnesses. Even if the parents could remember every specific detail, we would still obtain a measure of perceived severity, as opposed to actual severity. It could be argued that the only way in which to obtain an actual measure of severity would be at a medical examination.

In this study it was the parents' perception of severity that we were most interested in, and I would maintain that this is probably the best measure of actual severity that we are likely to get, since it will include the behavioural changes in the child, as well as the clinical characteristics of the illness (which the doctor is more likely to emphasize). Also, GPs get most of their information about severity from the parents anyway, and so their construction of severity is partially based on the parents' accounts. The severity scale (of ENH) was designed with this explicitly in mind.

Wyke (1987) mentions that the ideal design by which to eliminate the problems of the retrospective study would be a prospective method. But, as she goes on to suggest, this would really only be ideal in theory. Research of this nature would be fraught with difficulties if we attempted to



use a prospective study, most stemming from the Heisenberg principle, which says that you cannot measure something and leave it unchanged. Also, the resources needed for an exercise of that nature would be far in excess of those which were available to us.

Closely linked to these problems are the more specific aspects of the research which we carried out in Leeds, and in particular the whole issue of an indigenous, white, male researcher interviewing parents (most often mothers) in a multi-ethnic area. Before starting the study in 1985 I spoke with various workers in the inner-city areas of Leeds, some of whom suggested that my demographic characteristics coupled with my inexperience of interviewing, may not be a very good recipe for this type of research.

Looking back now in 1988, the feeling of my supervisor and myself is that the interviews were successful. The numbers of families interviewed were greater than we had hoped, as well as the fact that we did make contact with a variety of ethnic groups in Leeds, including families where there was a language barrier. Another of the reasons we felt confident about the interviews was the very low rate of refusals (less than 5%) among the families. Although this doesn't say anything about the content of the interviews themselves, it does suggest that all the communities we approached were receptive to the work we were doing.

As I said at the beginning of this section, the purpose of



this critical look at the methodology was not to make criticisms of the research as such, but instead to demonstrate that we were aware of some of the inherent limitations of doing this kind of exploratory interview study in a multi-ethnic area. It is useful to have this section positioned here because it should be relatively fresh in the mind of the reader moving into the next section, which is a discussion of our main findings, what these findings actually mean, and their relationship to previous relevant research.

### The Results and their Relevance to Previous Research

#### The consultation rate study

Before bringing in the findings from the interview study, it is probably useful to reflect on the findings from the consultation rate study again. Recall that we were interested in parental management of their children's respiratory/febrile illnesses and consultations at the general practitioner. By monitoring all consultations for two- to eleven-year-olds over a period of three months at three general practices, we found that the Asian children were taken more often than non-Asian children. A closer look at the practices individually revealed that this was really only the case for two of the practices (HR produced very



significant differences, whereas CR was close to the five percent level). The third practice, WR, revealed a non-significant trend in the same direction.

Because of the nature of the ethnic group populations at the practices we were able to be more specific. Practice HR's Asian population is predominantly Pakistani Muslim and so it seemed as though they were taking their children more often to the doctor than the non-Asian population. Practice CR's Asian population is almost predominantly Sikh, and since we obtained similar figures at practice CR in the pilot study, we concluded that Sikh parents were also taking their children to the doctor more often than the non-Asian population.

There is a complication in the consultation patterns, though. At practice WR the predominant Asian population is also Pakistani Muslim, and yet there was no significant difference in numbers of consultations between Asians and non-Asians - although the trend was still apparent. This tends to differ from data which the GPs at this practice had collected over a twelve month period previous to our study. For the age group of zero to fourteen, they had found that Asian consultations were forty percent higher for Asian children when compared to the non-Asian group (O'Shea & Bell, 1986); we found an increase of eleven percent for two- to eleven-year-olds. This difference could be in part due to the inclusion of very young babies in the GP's study, as well as having a count over all four seasons of the year;



our study was carried out in the summer months when illnesses are less frequent and not so severe.

Another relevant point here, and one which I haven't pointed out before, is that the number of consulters was highest overall in practice HR (44% of the number registered), next highest in practice CR (38% of the number registered), and lowest in practice WR (32%). These differences can be accounted for by higher numbers of Asian consultations (rather than lower numbers of non-Asian consultations), which suggests that the Muslims at practice HR and the Sikhs at practice CR were actually consulting more often than average

#### Why do the Asian parents consult the GP more often?

Once we had established this phenomenon at the practices we were working from, we sought to understand the reasons why; consultations being an important component of the overall processes parents go through when managing their children's illnesses. Almost all the anecdotal evidence about numbers of consultations - from doctors, receptionists, and interpreters - did suggest that they were aware of a higher Asian consultation rate. So it wasn't a surprise to us. Usually these anecdotal observations were accompanied by explanations, which I felt were important to include in this report, given the experiences which many of these informants had had living and working in these



multi-ethnic communities.

The Pakistani interpreter who worked with me at the interviews made a particularly interesting observation:

"I think that one of the reasons that Asian people are so favourable towards doctors is because almost anything is preferable to what they would be used to back in Pakistan and India. Doctors are really awful back there, with a tendency to give on-the-spot injections. If they die on them, they have them carted off! Also, with this doctor, he speaks their language. They won't be able to see any wrong in him" (Pakistani interpreter).

The doctor which she referred to was the single practitioner at practice HR. I have already made the connection between the high number of Asian consultations at practice HR and the Asian GP. This could be one of the reasons why we observed a particularly high number of Asian consultations at this practice.

One of the parents in the study also made comparisons between patterns of behaviour in this country and those in Pakistan, this time with respect to medications:

"In our country we very rarely go to the doctor. Self-medication is the best practice. It is expensive to buy medicines which are prescribed by the doctor, but here the position is completely different. You can get free health treatment and cheap medication from the doctor" (MF11).

This parent was about to return to his job in Pakistan as an environmental health officer, and so may well have been quite in touch with general feelings regarding medication, its availability, and how this might influence the parents'



decisions to consult the doctor.

Other anecdotal evidence to explain increased consultations has centred around the idea that the Asian groups have a very strong belief in Western medicines. Recall that when I asked the parents what they specifically consulted the doctor for that time, some of the Pakistani Muslims told me that it was just for "medicine" or "a good medicine"; and that parents who wanted this medicine were more likely to consult.

This request for medicine is often presented to the doctors, since three of the six GPs spontaneously mentioned to me in the interviews that their Asian patients were more likely to believe in the efficacy of the medicines prescribed to them:

"I think there are different beliefs about the nature of illness and how you deal with symptoms overall. I think in general, probably, Asian patients tend to feel that there must be a medicine for each symptom" (GP, CR).

"I think also there is this tremendous faith in Western medicine - for instance, after they have had their cold for 48 hours, or perhaps 24, and you have given them some treatment - and they'll be back the following day saying 'that medicine hasn't made me better; can I have some good medicine please?' And they firmly believe that there is a medicine there that will make them better, and the only reason that they're not getting it is that the doctor has not hit on the right one, or that he's too bloody-minded to give it to them...They really do believe that there is a medicine that will cure them" (GP, WR).

Recall, though, that the Sikh families were most likely to favour their own remedies, and some actually expressed a



strong mistrust of the 'chemist's cures'. The environmental health officer could be more accurate, and consultations could just as easily be linked to the relatively cheap medicines, as they are to a belief that they are any better than those they would obtain in the Indian sub-continent. I will return to discuss the relative roles of self-medication and prescribed medications later in the chapter.

One of the things which does come through in these statements by the GPs, is the limitations of the doctor in the role of 'curer of illnesses'. Yet given the role which allopathic medicine assumes for itself within the world field of health and health care, it shouldn't come as too much of a surprise that a parent expects the doctor can give something to cure the child's cold.

Returning to the issue of consultations and what we do know: the higher numbers of consultations by the Asian groups can essentially be explained by more consultations for respiratory and febrile illnesses (Chapter 4-1). These consultations - which make up almost half of all consultations for children in this age group (again see chapter 4-1) - do appear to be increased for Asian groups at all three practices. And this is something which was also noted, just before our study, by a GP in Burnley at his practice (Molyneux, 1987).

So how do these findings fit in with similar studies comparing children's consultations across ethnic groups? I could only find three studies which compare the use of GPs



for children; and all three were concerned with young infants. Ronalds et al (1977) found no difference between Asian immigrants and British born, white mothers in their use of general practitioner services. Watson (1984) found that Bengali mothers were equally likely to visit the GP in the first eight weeks of their babies lives, as were indigenous and English-speaking, immigrant mothers. The initial suspicion of these authors was that the Asian parents would consult less, because of the fear and difficulties they would experience when contacting a system which was entirely new to them - as well as the language barrier.

Pless and Hood (1967) compared West-Indian and indigenous one-year-olds and again found no difference in the parents' quantitative use of the health services (see the last section of chapter 1. for a fuller discussion of these studies).

The fact that the two studies comparing Asian with non-Asian families, found no difference in consultation rates is interesting, because they do suggest that Asian mothers, English-speaking immigrant mothers, and indigenous mothers tend to use the services in similar ways - at least for the very young infants involved in these two studies. We have to be careful when making comparisons with the slightly older children of our study; infants do tend to suffer from slightly different illnesses, and it is possible that all parents are more sensitive to illness in their younger



babies.

Also, we always have to be careful when drawing comparisons between studies using 'Asian' as an ethnic group definition. The Sikhs and Pakistani Muslims of our study are a good example of the very wide differences between the groups of people who tend to get put in this category. Also, the Bengali families in Watson's (1984) study who lived in the Tower Hamlets area of London, were described as a very disadvantaged community, with a high percentage of non-English speakers. She pointed out that the Bengali families were a higher 'needs' group than the families to which she compared their health behaviour.

I would like to move on to review the findings from the interview study, which provided us with a great deal of information regarding consultations, some of which would appear to be quite crucial with respect to what the important factors are for parents leading up to a visit to the doctor.

Recall that the consultation rate study was designed subsequent to our establishing the protocol for the interview study. The interesting patterns to emerge from the consultation rates - especially those for respiratory and febrile illnesses; the very ones which we had set out to ask the parents about - have given us an added dimension to the research. They can be a useful focal point from which we can weigh up the information which we got from the parental



interviews, and perhaps ultimately understand why consultation patterns were different for Asians and non-Asians.

We identified three possible reasons for the higher number of Asian consultations:

1. The Asian and non-Asian families differ in the numbers of illnesses their children get.
2. The two groups differ with respect to the perceived severity of individual illness episodes.
3. The families have different beliefs about, and perceptions of, their children's illnesses.

Throughout the next section I will try to bring together the information we collected from the parental interviews, and, in the process, look at the evidence for and against each of these three possibilities. It is important to bear in mind, though, that the interview study was not designed to answer these questions, and so the evidence is not always unambiguous.

#### The interviews with the parents

What was very much apparent from the interviews was the wealth of information which they did provide concerning how parents perceive their children's illnesses, and the decisions which they then make about them. The results sections highlighted some quite obvious differences in the responses which the groups of parents gave to some of the



questions. Trying to make sense of these varying patterns may well be our most difficult task in the discussion of the results, given the complexity which occasionally emerges when the responses are grouped. The responses to the vignettes are probably the best example of this complexity.

Yet overriding these different patterns is the overwhelming finding that all of the parents we interviewed - whether Pakistani consultants, or indigenous non-consultants - were in very close agreement on most of the major issues regarding the health care of their children; and these views didn't seem to differ from those of the doctors whom they visited with their children, which was most in evidence when we compared the responses of parents and doctors to the eight vignettes.

I will introduce each of the specific sections of the interviews in turn, to summarize these patterns and to see how the group differences which we did observe do fit into the whole picture.

#### The social and environmental factors

In the literature review I introduced some of the research which has correlated poorer health with being poor (see for example, Townsend & Davidson, 1982; Whitehead, 1987). More specifically, the social and environmental conditions in which the poor people of Britain are forced to live, does have a direct effect on their health - especially their



respiratory health (see for example, McCarthy et al, 1985; Strachan & Elton, 1986; Martin et al, 1987).

The first of the three possible explanations for increased Asian consultations is that they get more respiratory illnesses. As I have said, we did not set out to come up with such an explanation, but we can speculate using the social and demographic information collected from all the families.

In this study there were quite blatant social, economic and environmental differences between the ethnic group families. The Pakistani Muslims and Afro-Caribbeans were generally more deprived than the Sikhs and white, indigenous families. This was the response of one Pakistani father when I asked him why he thought some children get more coughs and colds than others:

"Sometimes if you live in a damp house this can be bad for health. This house is no good for health; it has a lot of damp. The wet weather never allows it to dry. My wife and two of my children have asthma, and they are getting worse all of the time. We need to move to another house; our health is bad. Also, all of the children get rashes and spots. They've always had them living in this house. In summer this house is okay, but in winter time it is very cold. I cannot keep the heating on long enough because I cannot afford it. Three or four hours is all I can afford" (MF45).

The fact that the Pakistani families were significantly less well off than the indigenous families could go some way to explaining the increased Asian consultation rates - at least at practice HR. The link between the presence of more - and



more severe - respiratory illnesses and higher consultation rates has been documented. Mayall (1986) found that mothers in lower social classes and with higher consultation rates reported that their children suffered from more - and more severe - respiratory illnesses.

Wyke (1987) found a link between material deprivation and an increased likelihood for the parent to consult a doctor for a child's respiratory illness. In a multivariate analysis she found that this increased likelihood to consult could be explained by more severe illnesses, and the illness having a more pronounced effect on the child; and naturally this influenced the decisions which the parents made. Yet the non-significant differences we found in consultation rates at practice WR - where the deprivation suffered by Pakistani families was as pronounced as it was anywhere else we observed - indicates that the overall picture may be somewhat more complex than just the influence of social and environmental factors.

Further evidence for this greater complexity came from the Sikh families, where the situation was quite different. Being very similar to the indigenous families for most of the social and environmental variables obviously does not explain why they tend to consult more often. In fact two of the variables on which they did differ from the indigenous families might suggest that the Sikh families would be likely to consult less often.

The first of these concerns parental smoking. There is



mounting evidence on the adverse effect on children's respiratory health of parental smoking (Gardner et al, 1984; Butler & Golding, 1986); and in our study the parents from the indigenous families were far more likely to smoke than they were in any of the Asian families.

The second emerged in the study by Campion & Gabriel (1985), who looked at factors associated with parental consulting behaviour and discovered that as the number of children in the family increased, the likelihood of the mother making a consultation decreased. Butler & Golding (1986) also found this factor associated with the uptake of immunizations by young mothers. The Sikh families in our study had slightly more children on average, and so if this relationship is robust we might expect it to decrease the level of consulting among these families. Having said that, though, Wyke (1987) did not establish such a relationship in her larger study of 234 families.

I think what we have established is the very obvious likelihood that some of the children in our sample will get more severe respiratory illnesses than others, and that they are more likely to be Pakistani Muslims or Afro-Caribbeans (recall that the Afro-Caribbean families also lived in poorer social and environmental conditions). But the relationship between the number and severity of these illnesses and how often the parents consult their GP, is almost certainly linked to the presence of other confounding variables. The anecdotal evidence suggesting that the



Afro-Caribbean families are possibly the lowest attenders of all groups, is further testament to the argument that other factors - such as the parents' perceptions of, and beliefs about specific illnesses, and what happens when a multi-ethnic population have to interact with services designed to provide for an indigenous population - have an important role to play.

#### The severity of the children's illnesses

When we included the section on the parents' perceptions of the severity of one specific episode, we did so because we were interested in the 'types' of symptoms and child behaviours which do - and don't - lead to consultations. We were able to compare each of the ethnic groups on this severity measure, and so we could establish whether the 'severity threshold' for consulting differed across the ethnic groups. Recall that the second explanation we identified for different consultation rates was that the groups made contact with the doctor with illnesses which differed in severity. If, as some GPs maintain, the Asian population tend to consult for more trivial illnesses (Wright, 1983), then we could expect to see a lower 'threshold for consulting' (as we called it) in the Asian families who we had identified as consulting the doctor recently.

Recall from the severity measures that the group of consulters reported more severe illnesses than did the



non-consulting families. Yet when we looked at the comparative statistics for the four ethnic groups we discovered no significant differences regarding perceived severity, for either the consulters or the non-consulters. So if we interpret this finding back into our terminology, we can say that the parents in the four ethnic groups of our study do, in fact, have similar 'thresholds' for consulting the GP with their children's respiratory and febrile illnesses.

We pursued the issue of severity in slightly more depth, this time looking to see if the 'predictor variables' of Wyke's (1987) study could elucidate the matter any further. Remember that these variables were the six most important influences which Wyke found correlated with the parental decision to consult the GP, and were all related to the clinical condition or the behaviour of the child. We looked at each of these variables in turn and found very strong agreement among the four ethnic groups: The consulters in all groups were more likely to report the presence of these symptoms than were the non-consulters.

So what do our findings on the perceived severity of the illness tell us? Certainly there is a strong suggestion that parental thresholds for consulting the doctor are very similar for the four ethnic groups; and that the illnesses for which a doctor was consulted were perceived as far more severe than those in which no consultation was initiated. This may appear as a statement of the obvious, but in the



light of much recent conjecture about how ethnic minority groups using the health services, we regard it as an extremely important point. It implies that parents of all groups appear to respond to their perceptions of their children's illnesses in appropriate ways. And, with respect to consultation rates, an explanation of differences would have to address the possibility that more illnesses are reaching the threshold level for the Asian groups, rather than there being different thresholds for consulting. Purposely designed research would be required to completely unravel the issues here.

The third of our possible explanations for different numbers of consultations was linked to the perceptions and beliefs of the parents regarding the ill child. On the basis of our pilot work, we did have strong grounds to believe that different cultural beliefs were likely to be implicated. It was this pilot work which enabled us to adopt a better position from which to address this issue. One of the main aims of the parental questionnaire was to provide information about the ethnic groups' beliefs regarding their children's respiratory and febrile illnesses.

Remember that the severity we were looking at was perceived severity, and, naturally, this is the important component of explanations of parental consultations. We recognized that if parents' general attitudes and beliefs about these illnesses differed, then the number of illnesses which reach the consultation threshold could also differ,



without the actual severity of the illness differing. For example, some symptoms or illnesses may be more worrying to some groups of parents over other groups.

Whilst realizing that different ethnic group beliefs could play a very influential part in the parents' health behaviour, we did accept that we couldn't completely separate this factor from the second possible explanation; that is, the parents' perceptions of the individual episode. It is important to recognize though, that the questions used to make up the severity scale were as objective as possible, which fully justified the distinction.

#### The parents' beliefs about their children's illnesses

The most interesting outcome which we obtained from the inclusion of this section in the questionnaire was the variety of different beliefs which parents held with respect to these kinds of childhood illnesses. The patterns of responding suggest some very different cultural beliefs regarding these illnesses, despite the fact that the parents from all groups seem to recognize and respond to the more severe illnesses in very similar ways.

More specifically, we found large ethnic group differences in the beliefs concerning aetiology, prognosis and treatment. With respect to aetiology, the Muslims, Sikhs and Afro-Caribbean parents were more aware of the cold and damp British climate as a cause of their children's coughs



and colds, whereas the white, indigenous parents preferred the idea that these illnesses are caused by germs going from person to person. One of the fathers from Pakistan said:

"There's much more flu and things like that in this country, because back in Pakistan we have seven or eight months of warm weather; but also we get a gradual change in the temperature, so your body can adjust gradually. In this country you never know what is going to happen from one day to the next - kids go out with t-shirts on when it's very cold" (MF64).

I should point out, though, that many of the parents mentioned more than one cause of these illnesses in children, and that the preferred responses to this question could be slightly misleading. For example, the indigenous parents were well aware that their children contracted more of these illnesses in the winter, but may have felt that I was testing their knowledge of viral theory. On the other hand, the other groups - particularly those with more than one child, or a school-age child - were aware of the contagious element of coughs and colds. Parents in all groups believe that the cold weather is implicated, yet in the case of parents originally from Asia or the West Indies this factor could be foremost in their minds, possibly because they hadn't really adjusted to the climate in Britain. The above quotation is indicative of this, as well as our finding that almost three-quarters of those parents born outside of Britain felt that children get more coughs and colds here - inevitably because of the cold weather.



One of the more obvious cultural differences in the beliefs the parents had concerning aetiology, was the importance of the child's diet. Most noticeable was the belief among the Sikh community that coughs and sore throats are commonly initiated by eating and drinking incompatible foodstuffs, most noticeably greasy foods and cold or fizzy drinks. In fact, the importance of the diet was mentioned more often by parents than the responses to this question indicate. For example, one Afro-Caribbean mother who didn't mention the diet when I asked about general causes, gave this response when I asked about possible causes of her son's recent illness:

"He (her son) is a really bad eater, which could be contributory. She (her daughter) eats everything: Vegetables, meat, fruit; she likes everything. He just eats bread and jam and hamburger and chips. There's no balance in that kind of diet, but I can't change him. The result is that he picks up every cold there is around. She never seems to get anything" (ACM39).

Although we did observe these quite distinct parental beliefs concerning the causes of their children's illnesses, there wasn't anything which would obviously link the parents to a particular course of action should the child develop one such illness. When we moved on to review how parents perceive the progress of these illnesses, a very distinctive pattern emerged which we felt could be linked to the decisions which parents make about what to do for the child.

This pattern emerged from the question concerning what



happens to a normal childhood cold if it is left alone, untreated. The white, indigenous families generally felt that it would get better on its own (presumably through years of experience with such illnesses), which was in direct contrast to the Sikhs and Muslims who felt that it would get worse. Also, the consulting group overall tended to believe that it would get worse, and the non-consulters believed that it would get better. Because there was no interaction in this data, the natural conclusion was that the Sikh and Muslim families were more likely to hold the view that coughs and colds get worse if left untreated; and, given that view was held, then they were more likely to consult the doctor.

Of course, the usual situation is not quite as simple as that because as we found out later in the questionnaire the parents would not generally leave any febrile or respiratory childhood illness alone, but instead would first tend to apply their own preferred treatment. Also, it was possible that the consulting families held this view because they had very recently been to see the doctor with their child; that is, they were less optimistic about prognosis because this most recent episode had been quite severe. Hopefully this influence was not a strong one, since it was made apparent that these questions were very general. Also, they were asked before the specific questions about severity and so I hadn't yet induced the parents to start thinking again about the recent episode.



This finding does point to a quite interesting ethnic group difference in beliefs - one which both the Asian groups share and are quite different in this from the indigenous families. One Sikh mother said to me:

"If we have a cough or a cold in India then there is something more serious, and it will probably last longer" (SM56).

This belief is similar to that found by Harwood (1971) in the study I recently mentioned, regarding Puerto Rican Americans' health beliefs. The indicators that we in Britain have of a 'common' cold - i.e. runny nose, sneezing, sore throat etc. - Harwood suggests are indicative of more serious illness in these hotter climates. This could be because the relative infrequency of these conditions in the West Indies, Central America and Asia does not allow the same resistance to be built up in the body in order to combat these viruses.

Some of the doctors also mentioned similar links to consulting behaviour:

"...of course, if you have a temperature in Pakistan, you may have malaria, so your anxiety level is that much higher. If you have a cough and a cold you may be developing TB. I would think that they would be bound to have higher anxiety levels, particularly in the more remote areas - medical resources aren't as readily available as they are here" (GP, WR).

What is also interesting about the responses we got to the question regarding prognosis was its general association



with consulting behaviour, regardless of ethnic group. When we add this to some of the other information gathered from the consulters and non-consulters, it does appear as though there is something intrinsically different about their beliefs and behaviour.

First, there was an indication that the consulters believed their children got more coughs and colds (this was close to the five percent level).

Second, the only difference which we found among the eight vignettes was that the consulters were more likely to say they would CONSULT a doctor for what was regarded by the whole group (and the doctors) as a relatively minor illness. Remember that the vignette were presented to the parents as hypothetical illness situations which might arise with their child, and they were to speculate on what they usually/would do in the circumstances.

And third, the symptoms which the parents said would trigger a consultation - the more worrying symptoms - tended to be less severe for the consulting group than those for the non-consulting group. Recall that the severity of these symptoms were judged by the paediatricians in the Newcastle study.

More about these two groups was revealed when we decided to look to see if there was any apparent difference in the numbers of families with target children who had a history of respiratory illness, and those who had no such history. We found no difference between the ethnic groups,



but did find many more children with such a history among the consulters. In fact, only two of the non-consulting families reported that their child had ever suffered from asthma, bronchitis or chronic wheezing, compared to fifteen consulters. Finding children who had not been taken to the doctor in the previous six months proved to be difficult, with the result that we appeared to have selected a group with low morbidity levels for these specific illnesses.

I would suggest that this history of respiratory illness does have a very noticeable influence on the health-related behaviour of the parents, and included in this is the decision to go and see the doctor. It was evident to me that the history of illness is very much in the parent's mind when making a decision about what to do for that particular child:

"...It differs between my two sons. The older one quite simply gets a runny nose. That's all. The younger one has a tendency to suffer more from respiratory conditions, and so colds can quite easily go to his chest" (IWM67).

"My younger son is asthmatic and he does tend to get worse. I have to treat his colds at once, or else he will get bad with a high temperature" (ACM57).

"I always take him down (to the doctor) immediately. You see John suffers badly from catarrh, which then means he has breathing problems" (IWM15).

"I put it down to having a weak chest. My youngest has; if she gets anything it goes straight to her chest" (IWM70).

Parents of children with a history of respiratory illness did put particular emphasis on the fact that 'minor'



symptoms do tend to reach their chests very easily. This is most probably why the consulting group, with its much larger number of children with a history of respiratory illness, were more likely to be 'triggered' into a consultation for 'minor' symptoms. For many of these parents the symptoms were indicators that something worse would develop, and this fear was also linked to very cold weather. It seems that the Muslim and Sikh parents generally have a similar belief in this respect: The more common cold symptoms are most likely to develop into something worse.

"It's too cold in this country. It's bad for the chest. Kids will get runny noses in India of course, but it doesn't go on the chest the way it does in this country" (SM18).

It is also important not to forget the Afro-Caribbean families, of whom fifty percent also believed in a poor prognosis when no treatment was given.

That is not to say that parents with asthmatic or bronchitic children rush to the doctor at the first runny nose. In fact we obtained evidence that under certain circumstances these parents will be less likely to consult a doctor. The vignette which involved the onset of wheeze elicited responses suggesting that some parents will be used to dealing with this situation, and so would be content to rely on the skills which they had built up over the years.

In our sample sixteen percent of the children had had a history of respiratory illness. So although this figure is



uncomfortably high, the large majority of the parents are dealing with similar illnesses without having had these experiences (although we shouldn't discount the possibility that a sibling has had such a history, or that the parent has gained these experiences through some other means).

Before moving on to some other aspects of the parental health beliefs, it would be worthwhile to very briefly reflect on what we have established from our three possible explanations for the different consultation rates between Asians and non-Asians. Our findings suggest that the parents from all groups perceive the severity of their children's illness episodes in very similar ways, and, most importantly, do respond appropriately to these perceptions. We have evidence to suggest that the Sikh and Muslim families are more worried about what the more common childhood ailments can develop into, and so this could be related to the number of visits to the doctor. Our evidence also suggests that Muslim and Afro-Caribbean children are likely to get more respiratory and febrile illnesses.

#### The use of non-prescribed medications

I would like to return now to the more general coughs and colds which almost all the families have to deal with at some stage, and review what came out of the interviews concerning the type of treatments the parents use apart from



those obtained on prescription.

Recall from the introduction that Jefferys and colleagues (1967) and Cunningham-Burley & MacLean (1987) had concluded that the use of proprietary drugs was not correlated with decisions about consultations. Yet the more recent study by Wyke (1987) did not support this finding, but instead produced data which indicated that parents were less likely to consult a doctor if they had tried to treat the illness themselves. In our study the consulters and non-consulters said that they used treatments, other than those prescribed by the doctor, equally often. This appeared to be verified by the fact that both groups were equally likely to have tried their own treatment for the specific episode I asked them about - regardless of whether they then went on to consult the doctor or not.

We felt that the likelihood of a consultation was possibly related to whether or not the parent felt that their own intervention had worked, but this didn't emerge. Ninety-five percent of all parents who used their own remedies felt that they worked in some way. This made more sense when we realized that very few parents actually believed that the medication they used would cure the child's illness; only between four and five percent did. The emphasis was on relieving the symptoms, with many mentioning the possible placebo effect which I pointed out earlier (chapter 4-5).

Perhaps our findings differed from those of Wyke



because we had a multi-ethnic sample? Of course this is possible, but it doesn't seem likely since all four ethnic groups suggested that they used other remedies for both coughs and colds equally as often. Also, our results agreed with other research in this area suggesting that non-prescribed medications are very popular (Spencer, 1984; Mayall, 1986; Cunningham-Burley & MacLean, 1987). In our study approximately eighty percent of the families did use their own preferred treatments, at least some of the time.

Cunningham-Burley & MacLean (1987) suggest that one of the reasons parents buy and administer proprietary drugs is so that they can be seen to be responding to their child's illness. This was something which some of the parents in our study mentioned:

"No, I don't think it ("lemony cough mixture") cures it. I get it because she's a child and it looks as though I'm doing something; and so she feels better for it" (ACM87).

It seems that some parents see it as important for the well-being of the child that they are seen to be intervening on their behalf, even if, as some parents felt, there was no real cure and the illness would just have to run its course:

"Coughs don't really worry me as much as colds, because you can predict how they are going to be. When they have a cough it's easier to treat; with colds nothing seems to work. You have to just try and make them as comfortable as possible, until it runs its course" (IWM9).



These beliefs about remedies are obviously intimately linked to the beliefs I have already discussed about prognosis. Those parents who believed that a cold will run its course whatever the intervention tried, tended to be the ones who felt that a cold will get better on its own; and, as I have said, these beliefs were more prevalent among the white, indigenous population.

Actually, the comment made by this last parent (IWM9) emphasizes how we need to be very careful when making connections between perceived severity, the anxiety felt by the parents, and decisions about what to do. Recall that, in general, illnesses in which the child also had a cough were perceived as more severe. Yet it is apparent from the above comment that severity alone is not the only information we need when making predictions regarding the behaviour of the parent. The predictability of the illness and how it responds to readily-available treatments are obviously contributory factors as well. As are the factors which I have already mentioned concerning how skilled the families have become in dealing with particular illness situations.

Many of these illnesses seem to be part of a process which the parent is quite accustomed to, and so make their interventions at the same stage each time. This could be the main reason why all the indications from our sample were that the medications the parents use themselves are not an alternative to going to see the doctor:



"I rarely go to the doctor straight away. With the very young one I will treat it myself at once. With the older ones I don't really worry so much, unless their temperature is very high, or the cough persists after I've tried some linctus... You've got to give them some time to try and fight it off themselves. Of course I'll take them down to the doctor if I feel they need checked over, or to get something stronger" (WIM57).

Wyke (1987) and Cunningham-Burley & MacLean (1987) mention the use of the chemist for advice, which seemed to be an alternative to consulting the doctor. This option will depend on the friendliness of the local chemist as well as the accessibility of the doctor. None of the parents in our study mentioned the chemist as someone they would use for advice, this difference probably being in large part due to the relatively small geographical area covered in our study compared to Wyke's. Having said that, though, I didn't specifically ask the parents about the role of the chemist, which, coupled with the use made of proprietary medicines, would be an interesting area for further study, particularly since it was another question involving medications which produced another possible reason for the higher number of Asian consultations.

From the question concerning the best thing to receive from the doctor for these type of illnesses, it transpired that there were group differences. The Pakistani Muslims were less likely to say that they wanted reassurance, and more likely to want a medicine (other than antibiotics). The Sikhs were also more likely than the other two groups to want medicine from the doctor. I have already suggested the



possibility that this medicine provides the reassurance - particularly for those parents who did not speak English.

We also found that parents who wanted a medicine were more likely to consult, which is why we postulated that this could be a factor intricicated in the higher number of Asian consultations. Perhaps the Asian parents either prefer to go to the doctor, or make up their own milder medications, whereas the indigenous families will usually pick them up at the chemist. It could be that the doctor is a figure whom the Asian groups trust more than the chemist. This is certainly a subject which could benefit from more specific research into the chemist's role in a multi-ethnic area.

Asking the parents to talk about their general beliefs regarding the respiratory and febrile illnesses of childhood turned out to be very interesting and informative. The variety of views relating to causation, treatment and prognosis gave us an idea of the complexities involved when making predictions about parental health-related behaviour. Having said that, the finding which emerged most clearly to me was that most parents do go through a quite thorough process, evaluating the situation at each stage of the illness:

"If I thought he was feverish I would give him Calpol. If he was sniffing a lot I would put some Carvol on his t-shirt. Also, I would have to think back to how he picked it up. Question whether he had been in the cold, to find out how and when it started. If it persisted, and he lost



his appetite, I would take him to the Dr." (IWM62).

Wyke (1987) was also very much aware of this process in the families which she interviewed.

We found that for some families specific illnesses/symptoms do cause more anxiety than they do for others; and that this is related to different cultural experiences. This wouldn't necessarily eliminate the overall procedures which parents go through, but it would tend to speed it up; and so these parents would perhaps consult a doctor more quickly than average. The Asian families we interviewed were more worried about the prognosis of the cold, and so would perhaps contact a doctor at an early stage of the illness.

#### The practices, practitioners and parental satisfaction

I would like to turn now to look more closely at the three general practices where the parents were all registered. We can take the parents' comments in the section on satisfaction along with the information from the doctor interviews, to try to understand how these factors may influence the parents' management of their children's illnesses, particularly with respect to the decision to consult the doctor.

It is quite apparent why a strong relationship can develop between previous experiences with the doctor and the decisions which the parents make about their children's health and health care. Almost as a rule, the parents in



this study came across as very satisfied with the care they received at their general practice, although an unfortunately large number did mention problems, particularly with respect to experiences at other practices:

"Before Dr. X was there, we had a different Dr. In the end I stopped going to him he was so bad. If I took any of the kids when they were sick he wouldn't even check them. One time Jane was really bad; I didn't know what was wrong with her. When I took her to see him, before I could open my mouth he had a prescription written, and I was out the door. He didn't check anything. He was SO rude" (IWM33).

"The receptionists are a pain. They tend to take the decisions on themselves when it comes to kids. They have no medical background whatsoever and yet they often make decisions about children's health. They know no more than I do, and so if I have decided that X needs to see the Dr. then they should put you to him" (ACM40).

"At the old surgery we went to it was terrible. The Dr. would ask what was wrong, we would tell him, and then he would write out a prescription. They never checked anything. That's not a consultation" (SF56).

Q/ DOES THE DOCTOR GIVE YOU ENOUGH INFORMATION ABOUT YOUR CHILD'S HEALTH?

"No, I don't think he gives me enough. But he feels if we know too much, we would get more worried. But he should explain, so as we do understand. Understanding stops us worrying, and also stops us being told by the doctor to stop worrying about nothing" (ACM87).

It is interesting that Wyke (1987) found receptionists making it easy for parents to see the doctor as the only one variable in her satisfaction section correlated with consulting the doctor. She had many practices from which her sample came and so she was able to look at the receptionist effects quantitatively. We were unable to do this, but we



did have quite a lot of parents who were not very happy with the receptionists at the practices, and who made similar comments to the parent above (ACM40).

Without doubt, the role of the receptionist in general practice is becoming more important, and more difficult, acting as a buffer between patient and doctor when patient lists are getting larger and waiting times increase as a consequence.

The point made by the parent above - as another parent put it: "the receptionists playing doctor" - was very consistent with a large proportion of the comments made by patients in a study of patient attitudes in the London and the South East (Arber & Sawyer, 1985). Receptionists who were more inquisitive in their questioning or who worked in practices where the appointments book was always full received greater criticisms from patients.

This latter point is important, because we do have to recognize that receptionists in these situations will also have the most difficult jobs. Finding a balance between appeasing patients who cannot get an immediate consultation and the doctors who do not want to find themselves over-booked can be a very stressful working environment - as some of the receptionists in the practices I worked in quite openly pointed out to me.

It wasn't surprising to read in the Arber and Sawyer study that most complaints came from parents of young children. This seemed to be because they made up most of the



consultation caseloads, as well as more often asking for home visits; but also, I would suggest, because parents are so very much aware of changes to their children's health and when these are worrying to them, they cannot believe that a receptionist will try to put them off - even if it is to ask them to come into the surgery with the child. It is possible that such a situation arouses so much anger that parents afterwards relate the story as one in which the receptionist seems to think s/he knows better, rather than the reality of congested appointment books.

When I interviewed the GPs I specifically asked them about their policies, particularly in relation to home visiting for young children. There were no obvious differences between the policies of the three practices - all GPs said that they gave priority to the very young and the very old.

Our analysis of the different aspects of parent satisfaction threw up some perceived differences between the four ethnic groups, but not between the consulters and non-consulters. Getting access to the doctor - that is, the difficulty experienced in getting an appointment, and usual waiting times at the practice - was regarded as easiest by the Sikh families, less so by the white and Afro-Caribbean families, and significantly less so by the Muslim families. We were aware that this could have been an effect of the practice attended, since the Sikh families were virtually all congregated in practice CR. When visiting the three



practices, my own general feelings were that the large clinic where practice WR was situated and the single practitioner practice HR were less well organized than practice CR. This factor could go some way to explaining the increased satisfaction levels of the Sikhs, but it doesn't explain why the Muslims and Afro-Caribbeans were generally less satisfied than the average parent.

The parents' satisfaction with what usually happens in the interaction with the doctor also produced significant differences between the ethnic groups. These variables related to the concern, care and time spent by the doctor, his/her willingness to listen, and the amount of information given by the doctor. The Afro-Caribbeans were least satisfied with these aspects of the general practices and once again the Muslim parents did not express as much satisfaction as the Sikhs and indigenous parents. Referring back to table 4-7c. we can see that the Afro-Caribbean families, although fairly small in number, are quite evenly distributed throughout the practices, and so this finding would be difficult to reconcile with a specific practice effect.

In the interview I usually had a space for the parents to elucidate on their immediate response, especially if they had indicated discontentment with the practices. Some of the more common complaints were that the doctors often appeared to be in too much of a hurry, and, what is probably a consequence of that, they didn't explain things as well as



they might:

"I'd prefer him (the Dr.) to be a bit more patient. He rushes things. I haven't finished what I have to say before he's writing out the prescription and it's goodbye" (ACM39).

"I think doctors should have a policy of talking to patients who want advice. Because our daughter is asthmatic and continually suffering, we both want to know from the doctor what is happening - particularly since there doesn't seem to be anything that they can actually do for this at the moment.

If a patient wants to talk for 20 minutes with the Dr., the Dr. should give him the time. It builds confidence in the doctor and takes away a lot of worries that patients have" (IWF53).

The third measure of satisfaction was an aggregated one relating more to the practices overall; considering the friendliness of the receptionists, as well as the care given by the doctors. This time we did not record significant differences between the groups, although, once again, it did elicit a certain degree of variation, with Afro-Caribbean families least satisfied again.

So despite the fact that satisfaction levels were high overall, there was a strong suggestion that Afro-Caribbean and Muslim families were less satisfied than the Sikh and white, indigenous families, particularly with respect to getting access to the doctor and the doctor-patient interaction. The fact that the Afro-Caribbeans were quite evenly distributed throughout the three practices suggests that at least part of this trend is not dependent on the practice attended. Also, the quite distinct differences between the Muslims and Sikhs with



respect to the non-Asian groups gives us no grounds to suspect that the higher Asian consultation rates are implicated here. We can't discount the possibility that the higher number of Sikh consultations are linked to their relatively high satisfaction levels, although we do have to bear in mind that these can be explained by higher numbers of consultations for respiratory and febrile illnesses specifically. It would be interesting to observe how satisfaction levels measure up when the parents are asked about consultations for themselves.

It is possible that our links with the practices did tend to have an effect on the things which the parents were prepared to say about the doctors and the service provided. The parents knew I wasn't a doctor, but they also knew that I communicated with the doctors, which may have influenced what they decided to reveal. Wyke (1987) found an equally high level of satisfaction, as did one of the larger Northern Regional stud's (Barton et al, 1988), using similar procedures of going through the practices.

Even if parents were imparting all their views on these issues, we do have to address the fact that the Afro-Caribbean and Muslim parents we interviewed were not as satisfied with the GP services for their children as the indigenous and Sikh parents were. This is likely to have an adverse effect on consultation rates for these two groups. Anecdotal evidence suggests that Afro-Caribbean consultation



rates are low, and the implications for those of the Muslim families are that they could have been even higher.

It also has implications for the whole issue of the provision of health care in a multi-ethnic country - and not only with respect to children. Even more worrying is the fact that we have detected these differences at practices whose doctors do seem to be making special efforts to accommodate their multi-ethnic clients, witnessed by their participation in the study and by a variety of things to emerge in the interviews.

Language barriers and difficulties in understanding were often mentioned by the doctors when I interviewed them. Although we didn't ask the parents specifically about the problems with language, we might expect dissatisfaction, when it does exist, to manifest itself in response to question pertaining to the adequacy of the information the doctor gives them; and, even more likely, whether or not they usually understand what the doctor tells them.

It turned out that all of the parents except for one Afro-Caribbean said that they understood what the doctor told them. When I asked if the doctor gave them enough information there were significant differences between the groups, although these were not indicative of problems with language. Ninety-six percent of Sikhs, Eighty-six percent of whites, seventy-nine percent of Muslims, and sixty-one percent of Afro-Caribbeans felt that they got enough information from the doctor. So it doesn't appear as though



the difficulties in understanding the doctor are uppermost in the Asian parents' minds.

What does seem to be linked to the lower satisfaction levels which we measured for the Afro-Caribbean families was a general finding throughout the questionnaire that these parents are not quite so convinced by the efficacy of the whole general practitioner service, and the way medicine is practised within this institution:

Q/ DO YOU GET WHAT YOU WANT FROM THE DOCTOR?

"Not always. He often prescribes medicine for a cold when she doesn't have a cold. You see my daughter suffers from various allergies you know. If she doesn't get better after two or three weeks, then I'll take her to a private doctor. They have much more time to see you" (ACF72).

In the end I feel that we have to be somewhat tentative in our interpretations of how satisfied the parents actually were. Not only because of the interviewer's(my) 'potential' links with the doctors, but also because of the previous experiences of a multi-ethnic population. Remember the Pakistani environmental-health officer:

"In our country we very rarely go to the doctor. Self-medication is the best practice. It is expensive to buy medicines which are prescribed by the doctor. Here, the situation is completely different. You can get free health treatment and cheap medication from the doctor...You also have to remember that in Pakistan you have to wait hours in queues to see the doctor, and usually the doctor has very poor conditions to work in" (MF11).



Most of the non-indigenous parents who have had experiences with medical services in their own countries, will be inclined to make these comparisons, whether they are conscious of doing so or not. It would obviously be a mistake for the medical profession to judge their services purely on the basis of satisfaction levels.

### A summary/interpretation of our results

Before moving on to look at the implications of our results I would like to bridge the gap with a summary of the main findings, with respect to what we initially set out to achieve by carrying out such a study.

Primarily our results demonstrated that parents from all cultural groups show a very acute awareness of their young children's health, and, on the whole, will go through quite systematic health-care procedures when an illness becomes apparent. The recognition of a child's illness is an area in which the parents - especially the mothers - do excel. This may not seem like a particularly specialized skill, but consider that the parents are not only basing their judgements on the clinical characteristics of the illness, but often on behavioural characteristics which tend to emerge before the more recognizable physical symptoms: "I take my cues about what to do from his (her two-year old son) behaviour. He knows when it is bad" (ACM10). Thus parents can, and do, prevent childhood illness, as well as



manage it.

All the four ethnic groups in our study demonstrated this very acute awareness of the more serious clinical and behavioural characteristics of their children's illnesses. The more severe illnesses, as they perceived them, were taken to the doctor. The severity of the illnesses reported by consulters and non-consulters represented the most distinct difference between any groups throughout the questionnaire. And the very high agreement between the parents and the doctors when responding to the vignettes (table 4-7e.), demonstrated that parents perceive the same things to be of importance as the doctors do.

Returning briefly to our discussion of the 'health belief model' in the introduction, perhaps we can shed more light on the reasons why it has little predictive success. Recall Berkanovic and colleague's (1981) study which illustrated that the predictive power of the model increases when the focus point is a specific illness episode. These authors also found that the important variables for predicting behaviour are those related to the 'need' for that specific episode. Their conclusions were similar to those of Cunningham-Burley & MacLean (1986) and Wyke (1987) in their work with parents of young children: The severity of the clinical characteristics of the illness and the abnormality of the behavioural characteristics of the child are the most important predictors of whether the parent will initiate a consultation. Similar also are Blaxter &



Paterson's (1982) 'frightening symptoms'.

The models have included 'the perceived seriousness of disease 'X'' and 'the perceived threat of disease 'X'' (see figure 1a.), but have not emphasized their importance above other factors. Any serious attempt to predict a person's health behaviour through models would have to give added weight to the perceived seriousness, severity and threat.

A variety of modifying factors are included in the model, all of which will undoubtedly play a part at some time. Yet on most occasions these more general factors will be completely redundant, as very specific details take precedence. For example, one mother responded to the relatively mild symptoms described in vignette D (off food with a slight temperature): "I would go down to the doctor. She has a monstrous appetite and is very rarely off her food" (IWM29). Specific events which surround one particular episode of illness are not encompassed by the model. One parent I asked why she had consulted on that occasion said:

"Well I wasn't really worried, you know. She had been coughing at night, so I thought it would be a good thing to have her chest checked over. But I wanted some advice from the doctor anyway about their injections" (IWM66).

It is these specific details which allowed Berkanovic et al (1981) to explain a great deal more of the variation in consulting behaviour, through the monitoring of specific episodes.

There were other aspects of our study which pointed to



the importance of specific details. We observed that Asian consultation rates were higher than those of non-Asians. We argued that the Muslim families are more likely to suffer from more, and more severe, illnesses due to the environmental and social conditions in which they live. This would increase the number of consultations. Yet we also discovered that the increased consultations for Muslims were much more pronounced at the practice with a single Asian practitioner. It seems likely that this had an influence on how often the Muslim families took their children to the practice.

Another factor which seemed to influence the decision to consult was the beliefs which the parents held about these particular illnesses. It seemed likely that because the majority of Sikh and Muslim parents believed that their children's colds would develop into something worse if left untreated, then they would be more predisposed to consult a GP at the early onset of these symptoms. The health belief models include socio-demographic variables, such as ethnicity, as modifying factors on behaviour, but more work has to be done on the relationship between ethnicity and health beliefs before we can actually be sure how these modifying factors will operate, and if they do so in a systematic fashion.

Other factors which were most likely to have an influence on the decisions which parents made were the families' previous experiences with this kind of childhood



illness and their previous experiences at the general practitioner; the latter of which is linked to satisfaction with the service. If the anecdotal evidence, which indicates that the Afro-Caribbean families are relatively low attenders, is correct, this could be in part due to the relatively low satisfaction scores which we recorded for this group. Research suggesting that racism is rife in the NHS (Brent Community Health Council, 1981) implies that the health belief models would also have to consider 'institutional barriers to action' as well as 'perceived barriers to action'.

Finally, we also have to recognize that people - and, in particular, parents of young children - are continually having to make decisions about their children's health in, what can be for many families, the most trying of circumstances:

Q/ IS IT EASY FOR YOU TO GET TO THE SURGERY?

"No, it can be very difficult. My wife doesn't speak English, so I have to go down as well. Also we have to take the three younger ones as well. If we take the little girl, then we will have to carry the little boy. Then there's the time I have to take off work. The clinic is always so busy that sometimes you have to wait two hours to be seen. One time I couldn't get the time off work and my wife went with the three younger ones. She waited for an hour and then she had to come back to get the older ones from school, and to cook the dinner. She then had to go back down again" (MF64).

In summarizing the points I have made concerning the health belief models, I would have to make two main points. First, they have to give more weight to the severity of the specific episode; and second, they have to be sensitive to more specific details about the people they are trying to



predict the behaviour of.

We have considered the results of our study and their relationship to previous relevant research. In this final section I propose to look at the implications of our findings, and consider these implications with respect to possible avenues of further research.

### The implications of the findings for health care and for further research

In this study we have gathered a lot of evidence to suggest that parents are extremely knowledgeable in their ability to recognize, and skilled in their management of, their children's illnesses. We have found this to apply to parents from white indigenous, Muslim, Sikh and Afro-Caribbean groups. The decisions which the parents make regarding consultations at the GP are based on objective criteria, such as the presence of serious signs and symptoms, but also the behavioural changes in the child. This was also the main finding reported by Wyke (1987) in her research with an indigenous population in the North of England.

We have to address what this finding means for general practice. It could be that we are simply stating the obvious. An anonymous writer reviewing the papers presented to the 1988 Annual Health Psychology Conference thought so: "Not a lot of people know that" (Anonymous, 1988, p.17) was



the sarcastic response to a paper presented by Wyke (1988), based on her doctoral findings.

It makes sense that parents who continually have to manage the health of their children, become very skilled at doing so, and able to recognize when something is wrong. Yet if the health services actually act on this knowledge, then why do we hear so often from the medical profession, especially general practitioners, that many of their clients consult for trivial ailments, or consult inappropriately? (Wright, 1983). Parents of young children, and the immigrant population from the Indian sub-continent are two groups to have suffered most from such criticism - criticism which our research demonstrates as being unfounded. In fact none of the research in this field has substantiated this criticism of health service users.

So the implications are that general practitioners have to recognize and understand the clients' perspectives on their illnesses. This brings us back to the issue of illness versus disease, which I reviewed in some depth in the introduction. The parent takes a child with an illness to see the doctor, and this consultation can be influenced by such things as the socio-cultural background of the family and previous experiences at the doctor. But these factors will only make a difference if they have a prominent and lasting effect on the perceptions and beliefs of the parents.

In our study, one of the strong findings to emerge was



that ethnicity plays a large part in shaping people's beliefs about their health and illnesses; experiences of health and illness can be very different depending on which part of the world the person lives. This implies that the medical profession as a whole has to apply itself to the study of 'ethnomedicine' if it is to seriously attempt the provision of 'a fair and equal service for all'.

It could be argued that the parents' perceptions of severity are distorted, and the result is inappropriate consultations through over-anxiety. Once again, though, we have found in this study that parents would respond to hypothetical illness situations in very much the same way as that recommended by the doctors. One of the ideal ways in which further research could benefit a study of this nature would be by obtaining a completely objective measure of the severity of the illnesses. But how would this be done? The actual consultation itself could be monitored (perhaps tape-recorded), but invariably this procedure imposes on the 'naturalness' and spontaneity of the consultation. This would also favour the doctor's analysis of severity. Can we believe that this would be more objective than the parent's? We have already addressed the fact that doctors tend to get some of their information about severity from the patient anyway. We have also focused on the importance of those aspects of the child's illness which are associated with behavioural changes, not seen by the doctor in a five minute consultation. Often it is just a feeling that the parent has



which is difficult to explain. This is one indigenous mother talking about bad experiences at the doctor:

"When I had my first child, I was having a lot of difficulty feeding him. I was sure something was wrong - he didn't look well. When I took him to see the doctor he told me I was just being neurotic and said, 'what do you know? This is your first child'. When I persistently went back he sent me to a paediatrician who diagnosed a hernia. He then spent four weeks in hospital, and I changed doctors" (IWM36).

This seemingly inherent knowledge of the child which the parent has could be very valuable to doctors if they used it and respected it.

One of the main problems stemming from the biological model of disease is that if there is no obvious physiological pathology, then many doctors will lose interest. Strachan (1988) argues that the well-documented link between household mould/damp and children's respiratory illnesses, occurs because those parents who have mould in their house know about it, and this results in them being more aware of their children's respiratory health. In that study they took a large sample of primary school children and found that the parents who lived in houses with mould perceived their children to have more wheezing, but this was not corroborated by physiological measures of bronchospasm.

I don't think there is any doubt that those parents living in impoverished conditions will be more worried about their children's health (in general), but the question that remains unanswered is, how similar are the measures of



perceived wheeze and bronchospasm changes? Once again we arrive back at the criticism levelled at the practices of medicine in the Western nations. It reduces a person's illness, and everything that goes with it, to a physiological measurement of a disease entity.

Further research could consider the possibility of having two separate measures of severity, one gleaned from the doctor and one from the parent. The obvious limitation of this method is that it misses out all of those illnesses which the parents continually have to manage and make decisions about, and which never get taken to the doctor.

It is important to emphasize that we are not arguing that the parent always knows. On the contrary, managing children's illnesses is a continuous learning process. Parents are faced with a multitude of difficult decisions to make, especially when it is the first child:

Q/ DID YOU CONSIDER TAKING X TO THE DOCTOR ON THIS OCCASION?

"Yes. I've been considering it for the past week, even although he's fine during the day. I'm not at all sure what to do about this. Nobody has ever told me how long it takes to get rid of catarrh, or whether it clears up on its own; or whether you should use antibiotics to clear it. In the past it has eventually gone away, but this has been after many nights when he slept badly. Snoring. And he has difficulty breathing. I'll give this two more days and if it hasn't cleared I'll definitely go to the doctor to get something for it" (IWM75).

This common problem for mothers with first children very strongly suggests that the general practitioner should take every opportunity to discuss the health care of the child



with the parents. Wyke (1987) says, "If the discussion took into account the parents' own skills and knowledge it would foster parents' sense of competence and ability rather than failure and culpability" (p.212).

This has implications for general health policy. General practitioners have got to be released from a ludicrous system of payment which is linked to the number of listed clients and the 'throughput' of those clients. Twelve of the parents in our study spontaneously mentioned the fact that they had had some experience of the doctor writing a prescription before they could say anything. In this atmosphere it is hardly any wonder that many of the parents also complained that there just wasn't any time to discuss things. They felt that they were 'bothering' the doctor, or 'wasting his/her time'. It would be useful if further research looking at the ease of access to the doctor considered these experiences.

And finally: One thing which it is possibly most important for further research to consider is a multi-disciplinary approach to a study of this nature. Research contracts should always be available to community medical practitioners to focus on the incidence and causes of respiratory ill health in children; to anthropologists to observe the ethno-cultural aspects of health and illness; and to sociologists and psychologists to look at health beliefs and behaviour. These contracts should be available to teams of such experts if any serious attempt is to be



made to improve the health of, and health care for, our children.



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THE CARE OF CHILDREN IN GENERAL PRACTICE  
QUESTIONNAIRE FOR PARENTS

CONFIDENTIAL

EXPLANATION OF PROJECT:

I This questionnaire is part of a project which is trying to find out some of the causes of poor health among children in Britain. It is well known that people in this country suffer from many coughs and colds. Young children seem to get more of these type of illnesses than anyone else, particularly in the winter time. For this reason, many of the questions are about your children's coughs and colds.

The questionnaire has different types of questions:

- (i) To get some background details, there are some questions about yourself and your family. Also, there are some questions about your house here, where you live.
- (ii) Doctor's themselves don't really know what causes coughs and colds and what is the best treatment. I am interested in what the parent thinks about this and what they think it is best to do for their children when they have a cough or a cold.
- (iii) Also there are some questions about the practice you go to and about your doctor.
- II The interview is confidential. Each form has a number and no names will be written on it.
- III The interview should take about 40 or 50 minutes.
- IV (OBTAIN CONSENT TO CONTINUE).

I.D. NUMBER            1  
                          [ ] [ ] [ ]  
  
PRACTICE CR = 1  
          HR = 2    [ ] 4  
          WR = 3



Card No. 1

INTERVIEWEES RELATIONSHIP TO CHILDREN:

Mother = 1  
Father = 2  
Both = 3  
Grandparent = 4  
Aunt/Uncle = 5  
Other (SPECIFY) = 6  
.....

INTERVIEWEES ETHNIC GROUP:

White Indigenous = 1  
Muslim = 2  
Hindu = 3  
Sikh = 4  
Afro-Caribbean = 5  
other (SPECIFY) = 6  
.....

DATE OF INTERVIEW:

[[ ] 6  
[[ ] 7

TIME AT START OF INTERVIEW:

[[ ] 6  
[[ ] 7

SEX OF CHILD: (Male = 1; Female = 2)

[[ ]

GENERAL BACKGROUND INFORMATION

I would like to start by asking some of the questions I mentioned about yourself and your family

1. First of all, could you tell me your date of birth?  
(RECORD AGE)

[[ ]

2. (DISCOVER MARITAL STATUS): Married? (Yes = 1; No = 2)  
IF YES GO TO 3.  
IF NO, RECORD MARITAL STATUS:

[[ ]

Single = 1  
Divorced = 2  
Separated = 3  
Widowed = 4  
Other = 6  
(SPECIFY)  
.....

[[ ]

3. What is your Nationality?

British = 1  
Indian = 2  
Pakistani = 3  
West Indian = 4  
Chinese = 5  
Other (SPECIFY) = 6  
.....

[[ ] 24

Card No. 1

4. What is your country of birth?

Britain = 1  
Indian sub-continent = 2  
East Africa = 3  
West Indies = 4  
China/Hong Kong = 5  
Other (SPECIFY) = 6  
.....

[[ ] 25

IF BRITAIN GO TO 5.

IF OUTSIDE BRITAIN ASK:

(a) How long have you lived in Britain? (YEARS)

[[ ]

5. How many children do you have? (RECORD NUMBER)

[[ ]

Starting with the eldest, can you tell me their sex, how old they are, and whether they live with you here.

Sex? Age? Live in same house?  
(M = 1 (RECORD (Y = 1; N = 2)  
F = 2) IN YEARS) Other arrangement = 6  
(SPECIFY BELOW)

(i) .....  
(ii) .....  
(iii) .....  
(iv) .....  
(v) .....  
(vi) .....  
(vii) .....  
(viii) .....

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[[ ] 100

6. Do you have a paid job at the moment? (Yes = 1; No = 2)  
IF NO GO TO 7.

IF YES ASK: (a) What is the job? (PROBE FOR PLACE, POSITION, GENERAL DESCRIPTION, DISTANCE FROM HOUSE)

[[ ]

(b) Is it full-time or part-time?

Full-time = 1  
Part-time = 2  
Other (SPECIFY) = 6  
.....

[[ ] 64



Some questions about your education:

7. Do you have any qualifications from school or anywhere else?  
IF NO GO TO 8.  
IF YES ASK: (a) What are these? (RECORD HIGHEST) [ ] 65

- (i) Higher Education..... = 1
- (ii) 'A' Levels..... = 2
- (iii) 'O' Levels..... = 3
- (iv) C.S.E..... = 4
- (v) Other (SPECIFY)..... = 6

8. Have you left education now? (Yes = 1; No = 2) [ ]  
IF NO GO TO NEXT SECTION  
IF YES ASK: (a) How old were you when you left? (RECORD YEARS) [ ] [ ]

IF INTERVIEWEE IS SINGLE THEN SAY: Now can I ask you some questions about your house and where you live? (Q.15, Page 7.).

IF IT WAS PREVIOUSLY INDICATED THAT S/HE WAS MARRIED THEN SAY:

Now can I ask you some questions about your husband/wife?  
QUESTIONS ABOUT HUSBAND/WIFE.

9. What is his/her date of birth? (RECORD AGE) [ ] [ ]

10. Nationality? [ ]

British	= 1
Indian	= 2
Pakistani	= 3
West Indian	= 4
Chinese	= 5
Other (SPECIFY)	= 6
.....	

11. In which country was s/he born? (RECORD PLACE) [ ] 73

Britain	= 1
Indian sub-continent	= 2
East Africa	= 3
West Indies	= 4
China/Hong Kong	= 5
Other (SPECIFY)	= 6
.....	

I. D. Number [ ] [ ] [ ]  
Card Number 2 [ ] [ ] 5

IF BRITAIN GO TO 12.  
IF OUTSIDE BRITAIN ASK:  
(a) How long has he/she lived in Britain? (RECORD YEARS) [ ] [ ] 7

12. Does s/he have a paid job at the moment? (Y = 1; N = 2) [ ] 8  
IF NO GO TO 13.  
IF YES ASK: (a) What is the job? (PROMPT FOR PLACE, POSITION, DESCRIPTION, DISTANCE FROM HOME). [ ]

(b) Is it full-time or part-time? [ ]

Full-time	= 1
Part-time	= 2
Other (SPECIFY)	= 6
.....	

13. Do you know if your husband/wife received any qualifications from school or anywhere else? [ ]  
(Yes = 1; No = 2; Don't know = 7)

IF NO OR DON'T KNOW GO TO 14.  
IF YES ASK: (a) Do you know what these are? [ ]

(i) Higher Education.....	= 1
(ii) 'A' Levels.....	= 2
(iii) 'O' Levels.....	= 3
(iv) C.S.E.....	= 4
(v) Other.....	= 6

14. Has your husband/wife left full-time education? (Y = 1; N = 2) [ ]  
IF NO GO TO NEXT SECTION  
IF YES ASK: (a) Do you know how old s/he was when s/he left? (RECORD YEARS) [ ] [ ] 15



Now I would like to ask you some questions about your house and where you live:

15. Is there anyone else who lives in this house that you haven't already mentioned?  
(Y = 1; N = 2) [ ] 16  
IF NO GO TO 16.  
IF YES ASK: Who is this?  
(PROMPT FOR RELATIONSHIP TO CHILD)  
Grandparents (Y/N)..... [ ]  
Other child (Y/N)..... [ ]  
Other relations (Y/N)..... [ ]  
Other (SPECIFY) = 6 [ ]  
.....

16. Do you own your own house? (Includes Mortgage)  
(Y = 1; N = 2) [ ]  
IF YES GO TO 17.  
IF NO ASK: (a) What sort of tenancy do you hold? Is it council, privately rented or tied accomodation?

Local authority = 1 [ ]  
Privately rented = 2  
Tied accomodation = 3  
Other (SPECIFY) = 6  
.....

(b) How much rent do you pay in a week?  
(RECORD IN POUNDS) [ ] [ ]

17. Can you tell me how much money is earned by your household in one week i.e. by you and your partner/wife/husband?  
(RECORD IN POUNDS) [ ] [ ] [ ]

18. How many rooms are there in your house (or used by your family)? [ ] [ ]

19. What sort of heating do you have in the house?  
(ASK ABOUT EACH) [ ]  
central heating (oil or gas)..... [ ]  
central heating (solid fuel)..... [ ]  
gas fires..... [ ]  
electric fires..... [ ]  
coal fires..... [ ]  
storage heaters..... [ ]  
other (SPECIFY)..... [ ] 36  
..... = 6

20. Are you warm enough in winter? (YES = 1; NO = 2) [ ] 37  
IF YES GO TO 21.  
IF NO ASK: (a) Why is that?  
(RECORD FIRST TWO)

No heating in bedrooms = 1  
No heating upstairs = 2  
Too expensive = 3  
House too cold = 4  
House too big = 5  
Other (SPECIFY).....  
..... = 6

21. Do you have any damp in the house? (YES = 1; NO = 2) [ ]

22. Do any of your family smoke?  
IF NO GO TO 23.  
IF YES ASK: (a) Who smokes?  
Mother (Y/N) [ ]  
Father (Y/N) [ ]  
Other (SPECIFY) [ ]  
..... = 6 [ ]

23. Does your family have a car?  
IF NO GO TO NEXT SECTION  
IF YES ASK: (a) How many? (RECORD NUMBER) [ ] 46



BELIEFS ABOUT COUGHS AND COLDS

The next group of questions refer to children's coughs and colds. Doctors are not always sure what causes these types of illnesses and what is the best thing to do about them. I am interested in what parents think of their children's coughs and colds. Please remember that there are no right or wrong answers to any of these questions. I'm simply interested in your opinion.

24. How would you know if your child/one of your children has a cold? (PROMPT: What sort of symptoms would they have?)

(SYMPTOMS MENTIONED = 1 OTHERWISE = 9)	Runny nose	<input type="checkbox"/>	47
	Blocked nose	<input type="checkbox"/>	
	Sore throat	<input type="checkbox"/>	
	Cough	<input type="checkbox"/>	
	Temperature	<input type="checkbox"/>	
	Fever	<input type="checkbox"/>	
	Watery eyes	<input type="checkbox"/>	
	Headache	<input type="checkbox"/>	
	Earache	<input type="checkbox"/>	
	Sneezing	<input type="checkbox"/>	
	Vomiting	<input type="checkbox"/>	
	Off food	<input type="checkbox"/>	
	Sleepy/Tired	<input type="checkbox"/>	
	Irritable/Mangy	<input type="checkbox"/>	
	Other (SPECIFY)	<input type="checkbox"/>	
	.....		
	..... = 6		

25. Do you think children's coughs and colds come at the same time, or do you think that they can have a cough without having a cold.

Always together	= 1	<input type="checkbox"/>	62
Can have cough without cold	= 2		
Other (SPECIFY).....			
.....			
..... = 6			

I said before that even doctors are not sure how people get colds, so can I just ask you:

26. How do you think children get colds?

(IF MENTIONED = 1; OTHERWISE = 9)	Change of weather	<input type="checkbox"/>	63
	Cold weather	<input type="checkbox"/>	
	Damp weather	<input type="checkbox"/>	
	Germs/Bugs/Viruses	<input type="checkbox"/>	
	Changes in room temperature	<input type="checkbox"/>	
	Going out with wet hair	<input type="checkbox"/>	
	Not wearing proper clothes	<input type="checkbox"/>	
	Certain foods	<input type="checkbox"/>	
	Damp housing	<input type="checkbox"/>	
	Constipation	<input type="checkbox"/>	
	Lack of love/attention	<input type="checkbox"/>	
	Other (SPECIFY).....		
	..... = 6		
	..... = 6		74

Interview No. 1  
Card No. 3

27. What about coughs. How do you think children get them?

(RECORD FIRST 2 MENTIONED)	Same way as colds	= 1	<input type="checkbox"/>
	With a cold, the child coughs at night	= 2	
	Coughs come after colds	= 3	
	Develops from sore throat	= 4	
	Other (SPECIFY).....		
	..... = 6		

28. Do you think that some children get more coughs and colds than others? (Y = 1; N = 2)

IF NO GO TO 29.  
IF YES ASK: (a) Do you know why that is?

(THOSE MENTIONED = 1)	Some people are weaker/ have lower resistance	<input type="checkbox"/>	
	Some people are more prone Genetic transmission	<input type="checkbox"/>	
	Living in cold/damp climates	<input type="checkbox"/>	
	Living in damp houses	<input type="checkbox"/>	
	Living in houses with poor heating	<input type="checkbox"/>	
	Girls are more susceptible	<input type="checkbox"/>	
	Boys are more susceptible	<input type="checkbox"/>	
	Lack of routine in diet	<input type="checkbox"/>	
	Not looked after properly	<input type="checkbox"/>	
	Living in families prone to colds	<input type="checkbox"/>	
	Other (SPECIFY).....		
	..... = 6		
	..... = 6		20







35. In your opinion, what is the most important thing to receive from the doctor when you take your child (one of your children) with a cough or a cold?  
 (RECORD FIRST TWO MENTIONED)  
 Antibiotics = 1 ☐ 47  
 Cough mixture = 2 ☐  
 Other medicine = 3 ☐  
 Reassurance = 4 ☐  
 Other..... = 6 ☐

36. Do you usually get what you want from the doctor?  
 (Y = 1; N = 2) ☐

38. Do you try any of your own treatments for X when s/he has a cold?  
 (Y = 1; N = 2) ☐

IF NO GO TO 39.  
 IF YES ASK: (a) What do you usually try?

Calpol ☐  
 Vick ☐  
 Chemists cough mixture ☐  
 Junior disprin ☐  
 Paracetamol ☐  
 Honey and Lemon ☐  
 Inhaler ☐  
 Other (SPECIFY)..... ☐  
 ..... = 6 ☐ 58

(b) Does this just ease it and help X feel better, or does it actually cure it do you think?

(RECORD FIRST TWO MENTIONED)  
 Eases it = 1 ☐ 60  
 Cures it = 2 ☐  
 Helps X sleep = 3 ☐  
 Doesn't help = 4 ☐  
 Other (SPECIFY)..... = 6 ☐

39. What about coughs? Do you try any of your own treatments for them?  
 Yes = 1 ☐ 61  
 No = 2 ☐  
 Yes, same as colds = 3 ☐

IF NO OR SAME AS COLD GO TO 40.

IF YES ASK: (a) What do you usually try?

Chemists cough mixture ☐  
 Vick ☐  
 Calpol ☐  
 Honey and Lemon ☐  
 Junior Disprin ☐  
 Paracetamol ☐  
 Hot drinks ☐  
 Change of diet ☐  
 Other (SPECIFY)..... ☐  
 ..... = 6 ☐

(b) Does this just ease it and help X feel better, or does it actually cure it do you think?

Eases it = 1 ☐  
 Cures it = 2 ☐  
 Helps X sleep = 3 ☐  
 Doesn't help = 4 ☐  
 Other (SPECIFY)..... = 6 ☐

40. In your experience, how long do children's colds usually last, on average?

2 - 3 days = 1 ☐  
 4 - 5 days = 2 ☐  
 5 - 7 days = 3 ☐  
 1 - 2 weeks = 4 ☐  
 2 - 3 weeks = 5 ☐  
 > 3 weeks = 6 ☐

41. And what about coughs?

Same as colds = 1 ☐ 73  
 A bit longer than colds = 2 ☐  
 A bit shorter than colds = 3 ☐  
 Much longer than colds = 4 ☐  
 Much shorter than colds = 5 ☐  
 Other (SPECIFY)..... = 6 ☐



42. Sometimes when young children get coughs or colds they develop a high temperature or a fever. In your experience does this happen quite often, just occasionally, or is very rare?

Often	= 1	[[ 6
Occasionally	= 2	
Very rarely	= 3	
Never	= 4	
Other.....		
.....	= 6	

43. If your child did develop a high temperature or a fever, what do you think is the best thing to do? (RECORD VERBATIM).....

.....[IF NECESSARY, PROBE "Do you think it is best to keep the child warm, or to keep the child cool?").....[ ] [ ] [ ]

## VIGNETTES

The next few questions are examples of some of the more common types of problems children get when they have a cough or a cold. You may recognize them because one of your children has had something very similar. I would like you to say what you would be most likely to do if X, or a child of the same age, had these symptoms. Please remember that this is not a test of any kind and there are no right or wrong answers to these questions.

**A. The child's cough has lasted for seven days and s/he has also been sick, usually when s/he coughed. What would you do if that happened?**

(RECORD FIRST TWO  
MENTIONED)

Make appointment with Dr.	= 1	[[[111
Phone for the Dr.	= 2	
Give home remedy and if no improvement, take to Dr.	= 3	
Leave for a couple of days and if not better, to Dr.	= 4	
Let it pass by itself	= 5	
Other (SPECIFY).....		
.....	= 6	

C. The child's cough has lasted for three weeks and has not got any worse, but neither has it got any better. S/he has no other symptoms. What would you do?

	= 1	= 2	= 3	= 4	= 5	= 6
<b>(RECORD FIRST TWO)</b>						
Make appointment with Dr.						
Take back to Dr.						
Try home remedy and if no improvement, take to Dr.						
Leave a bit longer and if it doesn't improve, to Dr.						
Let it pass by itself						
Other (SPECIFY).....						
.....						

D. The child has been hot and miserable for 24 hours, drinking plenty of fluids, but refusing food. How would you react?

(RECORD FIRST TWO)		
Make appointment with Dr.	= 1	[[[
Leave a bit longer and if		
no improvement, take to Dr.	= 2	
Try home remedy and if no		
improvement, take to Dr.	= 3	
Keep a close watch on temp.	= 4	
Let it pass by itself	= 5	
Other (SPECIFY).....		
.....	= 6	

E. The child has had a runny nose and a fine rash for the last 24 hours. There are no other symptoms. What would you usually decide to do then?

(RECORD FIRST TWO)

Make appointment with Dr.	= 1	[[[19
Wait a while and if no improvement, take to Dr.	= 2	
Try home remedy and if no improvement, take to Dr.	= 3	
Keep child indoors	= 4	
Let it pass by itself	= 5	
Other (SPECIFY).....	= 6	



F. The child has been wheezing for 24 hours, so s/he couldn't go to school or playgroup and s/he couldn't play with other children. What would you do?

- (RECORD FIRST TWO)
- Make appointment with Dr. = 1
  - Phone for the Dr. = 2
  - Keep at home and if it gets worse, take to Dr. = 3
  - Put to bed = 4
  - Try home remedy and if no improvement, take to Dr. = 5
  - Other (SPECIFY)..... = 6

G. The child is off his/her food and has a slight temperature, but has no other symptoms.

- (RECORD FIRST TWO)
- Make appointment with Dr. = 1
  - Phone for the Dr. = 2
  - Wait for a while and if no improvement, take to Dr. = 3
  - Keep watch on temperature = 4
  - Try home remedy and if no improvement, take to Dr. = 5
  - Other (SPECIFY)..... = 6

H. The child quite suddenly had difficulty breathing and his/her lips changed colour to blue, in a period of about four hours. How would you react?

- (RECORD FIRST TWO)
- Take to hospital = 1
  - Phone for ambulance = 2
  - Make appointment with Dr. = 3
  - Phone for Dr. = 4
  - Give first aid = 5
  - Other (SPECIFY)..... = 6

The next set of questions are specifically about your child's (X) coughs and colds, and also whether you have been to see the Dr. recently for these types of problems. Most of these questions are about things which have happened in the past, so please do say if you can't remember.

44. Can you remember if X has had any coughs or colds in the past six months?
- Yes = 1
  - No = 2
  - Can't remember = 7

IF 'NO' OR 'CANT REMEMBER' GO TO 141. (PAGE 37).

IF YES ASK:

45. When was the very last time that X had a cough or a cold?
- Within previous 2 weeks = 1
  - Within previous month = 2
  - Approx. 2 months ago = 3
  - 3 or 4 months ago = 4
  - 5 or 6 months ago = 5

46. Can you remember, did you consult a Dr. for X that time? (Yes = 1; No = 2)

IF YES GO TO 47.

IF NO ASK: (a) Can you remember the last time that you did consult a Dr. for X's cough or cold?

- Within previous month = 1
- 2 or 3 months ago = 2
- 4 - 6 months ago = 3
- > 6 months ago = 4
- Can't remember = 7

IF NOT CONSULTED WITHIN THE LAST SIX MONTHS, OR CANT REMEMBER THE LAST TIME GO TO 98. (P.28 NON-CONSULTERS).

IF CONSULTED FOR X WITHIN THE LAST SIX MONTHS ASK:

47. Where did you see the Dr. that last time?
- Surgery = 1
  - Home = 2
  - Other = 6



48. Was there anything you particularly wanted from the doctor when you saw him/her that time?  
(PROMPT: "Was it medicine or just reassurance?")

Antibiotics = 1 [ ] 31  
Cough mixture = 2  
Other medicine = 3  
Reassurance = 4  
Other..... = 6

49. Did the Dr. give you a prescription for X that time?  
(Y = 1; N = 2) [ ]

IF NO GO TO 53. (NEXT PAGE)  
IF YES ASK:

50. Do you know what the medicine was? (Y = 1; N = 2) [ ]

IF NO GO TO 51.  
IF YES ASK: (a) What was it?  
(RECORD FIRST 2)  
Antibiotics = 1 [ ] [ ]  
Cough mixture = 2  
Calpol = 3  
Nose drops = 4  
Ear drops = 5  
Other (SPECIFY)..... = 6

51. Did X take all the medicine? (Y = 1; N = 2) [ ]

IF YES GO TO 52.

IF NO ASK: (a) Why is that?

Was well before it finished = 1 [ ]  
Wasn't a course of treatment = 2  
S/he didn't like it = 3  
Other ..... = 6

52. Did the medicine help at all?

Yes = 1 [ ] 38  
No = 2  
Partially = 3  
Couldn't tell = 4  
Other ..... = 6

53. Do you think that antibiotics are better for coughs and colds than the chemist's cough mixtures, or your own remedies at home?

Yes = 1 [ ] 39  
No, about the same = 2  
No, not as good = 3  
Only if there is "an infection" etc. = 4  
Other..... = 6

54. Is X now better from that particular episode?  
(Y = 1; N = 2) [ ] 40

IF YES GO TO 55

IF NO ASK: (a) So for how long has X been ill?  
< 1 week = 1 [ ]  
1 - 2 weeks = 2  
2 - 4 weeks = 3  
1 - 2 months = 4  
> 2 months = 5

NOW GO TO 57.

56. Can you remember, for how long was X ill that time?

2 or 3 days = 1 [ ]  
4 - 7 days = 2  
1 - 2 weeks = 3  
2 - 4 weeks = 4  
> 1 month = 5

57. For how long was X ill before you decided to consult the doctor?

< 1 day = 1 [ ]  
1 - 2 days = 2  
3 - 4 days = 3  
5 - 7 days = 4  
1 - 2 weeks = 5  
> 2 weeks = 6

58. Did X have a cough that time? (Y = 1; N = 2) [ ] 44

IF CHILD DID NOT HAVE A COUGH GO TO 75. (PAGE 23)  
IF CHILD DID HAVE A COUGH ASK:



Card No. 4

59. What was the cough like? What did it sound like?

Dry/Barking

= 1

Chesty/Wheezy

= 2

Tickly

= 3

Whooping

= 4

Loose/Productive

= 5

Other.....

= 6

60. Was the illness worse at a particular time of the day or night?

(Y = 1; N = 2)

IF NO GO TO 61.

IF YES ASK: (a) When was this?

At night

= 1

In the morning

= 2

During the day

= 3

Before bed

= 4

Other.....

= 6

61. Was X kept awake at night by the cough? (Y = 1; N = 2)

IF NO GO TO 62.

IF YES ASK: (a) For how many nights approx?

1 or 2

= 1

3 or 4

= 2

5 - 7

= 3

1 - 2 wks

= 4

> 2 weeks

= 5

(b) What was the main thing keeping him/her awake?

Cough

= 1

Difficulty breathing

= 2

Wheezing

= 3

Sore throat

= 4

Fever/Temp.

= 5

Other.....

= 6

62. Did X sleep more during the day when s/he had the cough?

(Y = 1; N = 2)

63. Did X need more comforting and attention during this time?

(Y = 1; N = 2)

64. Did X go off his/her food at all when s/he had the cough?

(Y = 1; N = 2)

Card No. 4

65. Did X have any of these symptoms while s/he had the cough?

(ASK ABOUT EACH)

Sore throat

.....

Earache

.....

Headache

.....

Pain when coughing

.....

Noisy or difficulty breathing

.....

A rash

.....

A runny nose or a blocked nose

.....

66. Did s/he cough anything up?

(Y = 1; N = 2)

IF NO GO TO 67.

IF YES ASK: (a) Was that phlegm?

Phlegm

= 1

Other.....

= 6

(b) Do you know where it came from? (PROMPT "was it the chest? "or the nose and throat")

Nose and throat

= 1

Chest

= 2

Other.....

= 6

67. Did X vomit at all?

(Y = 1; N = 2)

IF NO GO TO 68.

IF YES ASK: (a) How many times approx?

once

= 1

2 or 3

= 2

4 or 5

= 3

6 or 7

= 4

> 7

= 5

68. Could you hear any sounds from his/her chest?

(Y = 1; N = 2)

IF NO GO TO 69.

IF YES ASK: (a) What were the sounds like?

(RECORD TWO IF MENTIONED)

Wheezy

= 1

Chesty

= 2

Catarrhl

= 3

Heavy breathing

= 4

Other.....

= 6

69. Was s/he sneezing at all?

(Y = 1; N = 2)

70. Did s/he have a high temperature or a fever at all?

(Y = 1; N = 2)







81. Did s/he vomit at all? (Y = 1; N = 2) ☐ 31

IF NO GO TO 82.  
IF YES ASK: (a) How many times?  
once = 1  
2 or 3 = 2  
4 or 5 = 3  
6 or 7 = 4  
> 7 times = 5

82. Could you hear any sounds from X's chest? (Y = 1; N = 2) ☐

IF NO GO TO 83.  
IF YES ASK: (a) What were they like?  
Wheezy = 1 ☐ ☐  
Chesty = 2  
Catarrhl = 3  
Heavy breathing = 4  
Other..... = 6  
(RECORD TWO IF MENTIONED)

83. Did X have a high temperature or a fever at this time? (Y = 1; N = 2) ☐

84. Was s/he sneezing at all? (Y = 1; N = 2) ☐

85. Did X have any other illnesses at this time? (Y = 1; N = 2) ☐

IF NO GO TO 86.  
IF YES ASK: (a) What were these? Ear trouble = 1 ☐ ☐  
Asthma = 2  
Bronchitis = 3  
Whooping cough = 4  
Measles = 5  
Other..... = 6  
(RECORD UP TO TWO)

87. How would you describe X's reaction to the illness? (PROMPT "How upset was s/he?")  
Very upset = 1 ☐  
Slightly irritated = 2  
Not bothered = 3

88. Did you keep X in bed or indoors or off school during this time? (Y = 1; N = 2) ☐

IF NONE OF THESE GO TO 89.  
IF YES RECORD WHICH:  
In bed = 1 ☐ ☐ 43  
Indoors = 2  
Off school = 3

89. Did anyone else in the family have a similar illness at this time? (Y = 1; N = 2) ☐ 44

IF NO GO TO 90.  
IF YES ASK: (a) Who?  
Parent ☐  
Sibling ☐  
Other..... = 6

## QUESTIONS FOR BOTH COUGHS AND COLDS:

90. Did you try any other treatments for X before you saw the doctor? (Y = 1; N = 2) ☐

IF NO GO TO 91.  
IF YES ASK: (a) What did you try?  
Calpol..... ☐  
Chemists cough mixture..... ☐  
Vick..... ☐  
Junior Disprin..... ☐  
Honey and Lemon..... ☐  
Paracetamol..... ☐  
Milk of Magnesia..... ☐  
Hot drinks..... ☐  
Inhaler..... ☐  
Garlic tablets..... ☐  
Other..... = 6 ☐ 57  
(RECORD ANY MENTIONED)

(c) How long did you use it for?  
1 day = 1 ☐  
2 or 3 days = 2  
4 or 5 days = 3  
6 or 7 days = 4  
1 - 2 weeks = 5  
> 2 weeks = 6

(d) Did it help? Yes = 1 ☐ 59  
No = 2  
Partially = 3  
Other.....



Card No. 5

91. What do you think caused X's illness?

- (RECORD ANY MENTIONED)
- Bugs/Germs/Virus going around..... ☐ 60
  - The weather..... ☐
  - Going outside with wet hair..... ☐
  - Not wearing proper clothes..... ☐
  - More prone/Runs in family..... ☐
  - Weaker/Lower resistance..... ☐
  - Something s/he ate or drank..... ☐
  - Poorly heated/Damp house..... ☐
  - Other..... ☐
  - ..... = 6 ☐

92. Do you think that X has more of these illnesses than other children? (Y = 1; N = 2) ☐

93. Can you remember approximately how often X has had similar illnesses in the past year?

- No other = 1 ☐
- Once = 2 ☐
- 2 or 3 times = 3 ☐
- 4 or 5 times = 4 ☐
- 6 - 10 times = 5 ☐
- >10 times = 6 ☐

94. Do you know if X's health is affected by any of the following (ASK ABOUT EACH):

- Housedust..... ☐
- Animals..... ☐
- Plants or grass..... ☐
- Running around or playing..... ☐
- Certain foods..... ☐
- Fabrics (eg. nylon or cotton)..... ☐
- Other allergy..... ☐
- ..... = 6 ☐

95. Has X ever suffered from asthma or bronchitis or a lot of wheezing? (Y = 1; N = 2) ☐

IF NO GO TO 96.  
IF YES ASK: (a) What?

- Asthma = 1 ☐ 79
- Bronchitis = 2 ☐
- Chronic wheeze = 3 ☐
- Other..... ☐
- ..... = 6 ☐

I. D. No. ☐ ☐ ☐

Card No. 6 ☐ ☐ 5

96. Does anyone else in the family have a history of asthma or bronchitis or wheezing? (Y = 1; N = 2) ☐

IF NO GO TO NEXT SECTION  
IF YES ASK: (a) Who?

- Mother..... ☐
- Father..... ☐
- Sibling..... ☐
- Grandparent..... ☐
- Aunt/Uncle..... ☐
- Other..... = 6 ☐

IF INTERVIEWEE WAS BORN IN BRITAIN GO TO PAGE 39.  
(THE PRACTICE)  
IF INTERVIEWEE WAS BORN OUTSIDE BRITAIN THEN ASK:

97. Do you think that asthma and bronchitis are more common in this country than in your country of birth? Or less common? Or, perhaps, no different?

- More common = 1 ☐ 13
- Less common = 2 ☐
- About the same = 3 ☐
- Don't know = 7 ☐

NOW GO TO 'THE PRACTICE' (PAGE 39.)

NON-CONSULTERS

QUESTIONS FOR PARENTS WHOSE CHILD HAS HAD A COUGH OR A COLD RECENTLY BUT WHO HAVE NOT BEEN TO SEE THE DR WITH THE CHILD IN THE PAST SIX MONTHS:

98. Did X have a cough that time? (Y = 1; N = 2) ☐ 14

IF CHILD DID NOT HAVE A COUGH GO TO 117. (PAGE 32)

IF CHILD DID HAVE A COUGH ASK:



99. How long did the cough last/has the cough lasted?

- 2 - 3 days = 1
- 4 - 5 days = 2
- 6 - 7 days = 3
- 1 - 2 weeks = 4
- 2 - 4 weeks = 5
- > 4 weeks = 6

[ ] 15

100. What was the cough like? What did it sound like?

- Dry/Barking = 1
- Chesty/Wheezy = 2
- Tickly = 3
- Whooping = 4
- Loose/Productive = 5
- Other..... = 6

[ ]

101. Was the illness (cough) worse at a particular time of the day or night?

(Y = 1; N = 2)

[ ]

IF NO GO TO 102.

IF YES ASK: (a) When was this?

- At night = 1
- In the morning = 2
- During the day = 3
- Before bed = 4
- Other..... = 6

[ ]

103. Was X kept awake at night by the cough? (Y = 1; N = 2)

[ ]

IF NO GO TO 104.

IF YES ASK: (a) For how many nights approx?

- 1 or 2 = 1
- 3 or 4 = 2
- 5 - 7 = 3
- 1 - 2 wks = 4
- > 2 weeks = 5

[ ]

(b) What was the main thing keeping him/her awake?

- Cough = 1
- Difficulty breathing = 2
- Wheezing = 3
- Sore throat = 4
- Fever/Temp. = 5
- Other..... = 6

[ ] 21

104. Did X sleep more during the day when s/he had the cough? (Y = 1; N = 2)

[ ] 22

105. Did X need more comforting and attention during this time? (Y = 1; N = 2)

[ ]

106. Did X go off his/her food at all when s/he had the cough? (Y = 1; N = 2)

[ ]

107. Did X have any of these symptoms while s/he had the cough?

[ ]

(ASK ABOUT EACH)

- Sore throat .....
- Earache .....
- Headache .....
- Pain when coughing .....
- Noisy or difficulty breathing .....
- A rash .....
- A runny nose or a blocked nose .....

[ ] [ ] [ ] [ ] [ ] [ ] [ ]

108. Did s/he cough anything up? (Y = 1; N = 2)

[ ]

IF NO GO TO 109.

IF YES ASK: (a) Was it phlegm?

- Phlegm = 1
- Other..... = 6

[ ] 34

(b) Do you know where it came from? PROMPT "was it the chest? "or the nose and throat"

- Nose and throat = 1
- Chest = 2
- Other..... = 6

[ ]

109. Did X vomit at all? (Y = 1; N = 2)

[ ]

IF NO GO TO 110.

IF YES ASK: (a) How many times approx?

- once = 1
- 2 or 3 = 2
- 4 or 5 = 3
- 6 or 7 = 4
- > 7 = 5

[ ] 37



110. Could you hear any sounds from his/her chest?  
(Y = 1; N = 2) ☐ 38

IF NO GO TO 111.

IF YES ASK: (a) What were the sounds like?

(RECORD TWO IF MENTIONED)

Wheezy = 1 ☐  
Chesty = 2 ☐  
Catarrhl = 3 ☐  
Heavy breathing = 4 ☐  
Other..... = 6 ☐

111. Was s/he sneezing at all? (Y = 1; N = 2) ☐

112. Did s/he have a high temperature or a fever at all?  
(Y = 1; N = 2) ☐

113. Did X have any other illnesses at this time?  
(Y = 1; N = 2) ☐

IF NO GO TO 114.

IF YES ASK: (a) What were these?

(RECORD TWO IF MENTIONED)

Ear trouble = 1 ☐  
Asthma = 2 ☐  
Bronchiitis = 3 ☐  
Whooping cough = 4 ☐  
Measles = 5 ☐  
Other..... = 6 ☐

114. How would you describe X's reaction to the illness?

Very upset = 1 ☐  
Slightly irritated = 2 ☐  
Not bothered = 3 ☐

115. Did you keep X in bed or indoors or off school  
during this time? (Y = 1; N = 2) ☐

IF NO GO TO 116.

IF YES RECORD WHICH:

In bed = 1 ☐  
Indoors = 2 ☐  
Off school = 3 ☐

116. Did anyone else in the family have similar trouble  
at that time? (Y = 1; N = 2) ☐

IF NO GO TO 131. PAGE 34 (BOTH COUGHS AND COLDS)

IF YES ASK: (a) Who was that?

Parent ☐  
Sibling ☐  
Other..... = 6 ☐ 52

NOW GO TO 131. PAGE 34 (BOTH COUGHS AND COLDS)

IF CHILD DID NOT HAVE A COUGH ASK:

117. Was the illness worse at a particular time  
of the day or night? (Y = 1; N = 2) ☐ 53

IF NO GO TO 118.

IF YES ASK: (a) When was it worse? At night = 1 ☐  
In the morning = 2 ☐  
Before bed = 3 ☐  
During the day = 4 ☐  
Other..... = 6 ☐

118. Was X kept awake at night by the illness?  
(Y = 1; N = 2) ☐

IF NO GO TO 119.

IF YES ASK: (a) For how many nights approx?

1 or 2 = 1 ☐  
3 or 4 = 2 ☐  
5 or 6 = 3 ☐  
1 - 2 wks = 4 ☐  
> 2 weeks = 5 ☐

(b) What was the main thing keeping  
him/her awake?

Coughing = 1 ☐  
Difficulty breathing = 2 ☐  
Wheezing = 3 ☐  
Sore throat = 4 ☐  
Earache = 5 ☐  
Other..... = 6 ☐

119. Did X sleep more during the day when s/he had the  
illness? (Y = 1; N = 2) ☐

120. Did s/he go off his/her food at all during this time?  
(Y = 1; N = 2) ☐

IF NO GO TO 121.

IF YES ASK: (a) For how long approx?

1 or 2 days = 1 ☐ 60  
3 or 4 days = 2 ☐  
5 - 7 days = 3 ☐  
1 - 2 weeks = 4 ☐  
> 2 weeks = 5 ☐



121. Did X need more attention and comforting during this time? (Y = 1; N = 2) ☐ 61

122. Did X have any of these symptoms during this time?

(ASK ABOUT EACH)

Sore throat ☐

Earache ☐

A headache ☐

Difficulty breathing ☐

A runny nose or a blocked nose. ☐

A rash ☐

123. Did s/he vomit at all? (Y = 1; N = 2) ☐

IF NO GO TO 124.

IF YES ASK: (a) How many times?

once = 1

2 or 3 = 2

4 or 5 = 3

6 or 7 = 4

> 7 times = 5

124. Could you hear any sounds from X's chest? (Y = 1; N = 2) ☐

IF NO GO TO 125.

IF YES ASK: (a) What were they like?

Wheezy = 1 ☐

Chesty = 2

Catarrhl = 3

Heavy breathing = 4

Other ☐

..... = 6

(RECORD TWO IF MENTIONED)

125. Did X have a high temperature or a fever at this time? (Y = 1; N = 2) ☐

126. Was s/he sneezing at all? (Y = 1; N = 2) ☐

127. Did X have any other illnesses at this time? (Y = 1; N = 2) ☐

IF NO GO TO 128.

IF YES ASK: (a) What were these?

Ear trouble = 1 ☐

Asthma = 2

Bronchitis = 3

Whooping cough = 4

Measles = 5

Other ☐

..... = 6

(RECORD UP TO TWO)

128. How would you describe X's reaction to the illness? (PROMPT "How upset was s/he?")

Very upset = 1 ☐

Slightly irritated = 2

Not bothered = 3

129. Did you keep X in bed or indoors or off school during this time? (Y = 1; N = 2)

IF NONE OF THESE GO TO 130.

IF YES RECORD WHICH:

In bed = 1 ☐

Indoors = 2

Off school = 3

130. Did anyone else in the family have a similar illness at this time? (Y = 1; N = 2) ☐

IF NO GO TO 131.

IF YES ASK: (a) Who?

Parent ☐

Sibling

Other ☐

..... = 6

### QUESTIONS FOR BOTH COUGHS AND COLDS:

131. Did you try any other treatments for X before you saw the doctor? (Y = 1; N = 2) ☐

IF NO GO TO 132.

IF YES ASK: (a) What did you try?

Calpol ☐

Chemists cough mixture ☐

Vick ☐

Junior Disprin ☐

Honey and Lemon ☐

Paracetamol ☐

Milk of Magnesia ☐

Hot drinks ☐

Inhaler ☐

Garlic tablets ☐

Other ☐

..... = 6

(RECORD ANY MENTIONED)



134. What do you think caused X's illness that last time?

(RECORD ANY MENTIONED)

Bugs/Germs/Virus going around..... ☐ 32

The weather..... ☐

Going outside with wet hair..... ☐

Not wearing proper clothes..... ☐

More prone/Runs in the family..... ☐

Lower resistance/Weaker..... ☐

Something s/he ate or drank..... ☐

Poorly heated/Damp house..... ☐

Other..... ☐

..... = 6 ☐

135. Do you think that X gets more coughs and colds than other children?

More = 1 ☐

Same = 2 ☐

Less = 3 ☐

136. Can you remember approximately how often X has had similar illnesses in the past year?

No other = 1 ☐

Once = 2 ☐

2 or 3 times = 3 ☐

4 or 5 times = 4 ☐

6 - 10 times = 5 ☐

>10 times = 6 ☐

137. Do you know if X's health is affected by any of the following (MENTION EACH):

Housedust..... ☐

Animals..... ☐

Plants or grass..... ☐

Running around or playing..... ☐

Certain foods..... ☐

Fabrics (eg. nylon or cotton)..... ☐

Other allergy..... ☐

..... = 6 ☐

138. Has X ever suffered from asthma or bronchitis or a lot of wheezing? (Y = 1; N = 2) ☐

IF NO GO TO 139.

IF YES ASK: (a) What?

Asthma = 1 ☐ 51

Bronchitis = 2 ☐

Chronic wheeze = 3 ☐

Other..... = 6 ☐

(c) How long did you use it for?

1 day = 1 ☐ 22

2 or 3 days = 2 ☐

4 or 5 days = 3 ☐

6 or 7 days = 4 ☐

1 - 2 weeks = 5 ☐

> 2 weeks = 6 ☐

(d) Did it help?

Yes = 1 ☐

No = 2 ☐

Partially = 3 ☐

Other..... ☐

..... = 6 ☐

132. Did you consider taking X to the doctor on this occasion? (Y = 1; N = 2) ☐ 24

IF NO GO TO 133.

IF YES ASK: (a) Why did you decide not to?

It wasn't serious enough..... ☐

S/he began to get better..... ☐

Didn't want to bother the Dr..... ☐

Other..... ☐

..... = 6 ☐

(b) Would you usually take X to the Dr. with this type of problem? (Y = 1; N = 2) ☐

133. Can you remember the last time you did take X along to see the Dr. when s/he had a cough or a cold? (REASSURE: "It doesn't matter if you can't remember").

(Y = 1; N = 2) ☐

IF CAN'T REMEMBER OR NEVER HAVE GO TO 134.

IF CAN REMEMBER THE LAST TIME ASK:

(a) Do you know approx. how long ago this was?

6 - 9 months = 1 ☐ 31

9 - 12 months = 2 ☐

12 - 18 months = 3 ☐

18 - 24 months = 4 ☐

> 2 years ago = 5 ☐



139. Does anyone else in the family have a history of asthma or bronchitis or wheezing? (Y = 1; N = 2) ☐ 52

IF NO GO TO NEXT SECTION  
IF YES ASK: (a) Who?

Mother ☐  
 Father ☐  
 Sibling ☐  
 Grandparent ☐  
 Aunt/Uncle ☐  
 Other ☐ = 6 ☐

IF INTERVIEWEE WAS BORN IN BRITAIN GO TO PAGE 39.  
 (THE PRACTICE)  
 IF INTERVIEWEE WAS BORN OUTSIDE BRITAIN THEN ASK:

140. Do you think that asthma and bronchitis are more common in this country than in your country of birth? Or less common? Or, perhaps, no different?

More common = 1 ☐ 59  
 Less common = 2  
 About the same = 3  
 Don't know = 7

NOW GO TO THE PRACTICE (PAGE 39)

IF CHILD HAS NOT HAD A COUGH OR A COLD IN THE PAST YEAR ASK:

141. Do you think that X has less coughs and colds than other children or about the same?

Less = 1 ☐  
 Same = 2  
 More = 3

IF THE SAME GO TO 142.  
 IF LESS (OR MORE) ASK:

(a) Why do you think that is?  
 They are always caught early = 1 ☐ 61  
 Not prone to coughs & colds = 2  
 Other ☐  
 ..... = 6

142. Do you know if X's health is affected by any of the following (MENTION EACH): ☐ 62

Housedust ☐  
 Animals ☐  
 Plants or grass ☐  
 Running around or playing ☐  
 Certain foods ☐  
 Fabrics (eg. cotton or nylon) ☐  
 Other allergy ☐  
 ..... = 6 ☐

143. Has X ever suffered from asthma or bronchitis or a lot of wheezing? (Y = 1; N = 2) ☐

IF NO GO TO 144.  
 IF YES ASK: (a) What?

Asthma = 1 ☐  
 Bronchitis = 2  
 Chronic wheeze = 3  
 Other ☐  
 ..... = 6

144. Does anyone else in the family have a history of asthma or bronchitis or wheezing? (Y = 1; N = 2) ☐

IF NO GO TO NEXT SECTION  
 IF YES ASK: (a) Who?

Mother ☐  
 Father ☐  
 Sibling ☐  
 Grandparent ☐  
 Aunt/Uncle ☐  
 Other ☐  
 ..... = 6 ☐

IF INTERVIEWEE WAS BORN IN BRITAIN GO TO PAGE 39.

(THE PRACTICE)  
 IF INTERVIEWEE WAS BORN OUTSIDE BRITAIN ASK:

145. Do you think that asthma and bronchitis are more common in this country than in your country of birth? Or less common? Or, perhaps, no different?

More common = 1 ☐ 78  
 Less common = 2  
 About the same = 3  
 Don't know = 7



I. D. Number

Card No. 8

THE PRACTICE

The next group of questions is about the practice where you see your doctor for X. This is to help me find out what the practice is like and what you think of it. Please remember it is confidential.

146. Do you usually have to make an appointment to see the doctor? (Y = 1; N = 2) ☐

IF NO GO TO 147.

IF YES ASK: (a) How do you normally make the appointment?

- Own telephone = 1 ☐  
Another private telephone = 2  
Call in = 3  
Public call box = 4  
Other..... = 6

IF PUBLIC CALL BOX ASK: (b) How far away is the nearest public call box (that works)?

- (IF RELATED IN TIME, MAKE THE DEDUCTION) ☐ 8  
Less than one quarter mile = 1  
One quarter to one half mile = 2  
One half to one mile = 3  
One mile to two miles = 4  
Greater than two miles = 5

(MAKE SURE WHICH PRACTICE THE INTERVIEWEE ATTENDS)

IF PRACTICE HAS ONE PRACTITIONER GO TO 150. (NEXT PAGE)  
IF PRACTICE HAS MORE THAN ONE PRACTITIONER ASK:

147. When you go to the practice, is it easy to choose which doctor you want to see for X? (Y = 1; N = 2) ☐

IF YES GO TO 148.

IF NO ASK: (a) Why is that?

- Dr. is too busy = 1 ☐  
Dr. is fully booked = 2  
Other..... = 6

148. So do you usually see the same doctor for X? (Y = 1; N = 2) ☐ 11

Card No. 8

149. Do you/would you like to see the same doctor each time for your child(ren), or do you not really mind?

- Yes = 1 ☐ 12  
Don't mind = 2  
No = 3

IF INTERVIEWEE LIKES THE SAME DR. ASK:

- (a) Why is that? ☐ 12  
Dr. gets to know you = 1  
Continuity of consultations = 2  
Child becomes more comfortable = 3  
Other..... = 6

IF INTERVIEWEE LIKES DIFFERENT DR.'S OR HAS NO PREFERENCE ASK:

- (b) Why is that? ☐ 12  
Dr.'s are all good = 1  
It means waiting too long = 2  
Get different opinions = 3  
Just need medicine = 4  
Other..... = 6

150. Except in cases of emergencies, how difficult is it to get an appointment with your child's Dr?

- Very difficult = 1 ☐  
Difficult = 2  
Not difficult = 3

151. How long do you normally have to wait to get an appointment?

- Straight away = 1 ☐ 18  
Same day = 2  
Next day = 3  
Within 2 days = 4  
Within 3 or 4 days = 5  
Longer than 4 days = 6



152. Is it easy for you to get to the surgery during surgery hours, or is it quite difficult?

- Easy = 1 [ ] 19
- Difficult = 2
- Very difficult = 3

IF DIFFICULT OR VERY DIFFICULT ASK:

(a) Why is that? (RECORD VERBATIM)..... [ ] [ ] [ ]

153. How long does it usually take you to get to the surgery?

- Less than 5 mins. = 1 [ ]
- 5 minutes = 2
- 10 minutes = 3
- 15 or 20 minutes = 4
- 30 - 45 minutes = 5
- longer than 45 mins. = 6

154. After getting there, do you feel that the time you usually have to wait to see the Dr. is too long or is it okay

- Too long = 1 [ ]
- Not too long = 3

155. How long do you usually have to wait?

- 5 minutes or less = 1 [ ] 25
- 6 - 10, 10 minutes = 2
- 11 - 15, 15 mins. = 3
- 20 - 30 mins. = 4
- 30 - 45 mins. = 5
- > 45 minutes = 6

IF THE PRACTICE HAS ONLY ONE DOCTOR THEN SAY:  
I would now like to ask you some questions about Dr. \_\_\_\_\_  
Please remember that it is confidential (NOW GO TO 156.).

IF THE PRACTICE HAS MORE THAN ONE DOCTOR THEN SAY:

I would now like to ask you some questions about the Dr. you see most often when you take X to the surgery, Dr. \_\_\_\_\_? (IF DON'T USUALLY SEE ONE DR. THEN REFER TO OWN DR.) Please remember that this information is confidential.

156. Is there anything that you particularly like about about Dr. ....?

- Careful ..... [ ] 26
- Pleasant/Friendly ..... [ ]
- Good doctor ..... [ ]
- S/he listens ..... [ ]
- S/he is honest ..... [ ]
- S/he speaks the same language ..... [ ]
- S/he comes out if asked ..... [ ]
- Other..... = 6 [ ]

157. In your opinion, how concerned is the Dr. with your child as a person?

- Very concerned = 1 [ ]
- Concerned = 2
- Not very concerned = 3

IF NOT VERY CONCERNED ASK: (a) Why do you say that?  
(RECORD VERBATIM)..... [ ] [ ] [ ]

158. How careful do you think Dr. \_\_\_\_\_ is when s/he examines X?

- Very careful = 1 [ ]
- Careful = 2
- Not very careful = 3

159. How willing is the Dr. to listen when you tell her/him about your child's health?

- Very willing = 1 [ ] 39
- Willing = 2
- Not very willing = 3



165. Have you ever had any bad experiences at the doctor's when you have been there with X? (Y = 1; N = 2) [] 51

IF NO GO TO 166.

IF YES ASK: (a) What happened?

(RECORD VERBATIM)

[][][]

166. Have you ever had any bad experiences at any of the doctors you have been to in the past with X? (Y = 1; N = 2) []

IF NO GO TO 167.

IF YES ASK: (a) What happened then?

(RECORD VERBATIM)

[][][]

167. Do you usually understand clearly enough the things that Dr. \_\_\_\_\_ tells you? (Y = 1; N = 2) []

IF YES GO TO 168.

IF NO ASK: (a) Why is that? (RECORD VERBATIM)

[][][]

168. Are there usually other things that you want to know apart from what s/he tells you? (Y = 1; N = 2) []

169. If you did want to ask the Dr. something about your child is there usually enough time for you to do that? (Y = 1; N = 2) [] 64

END

160. Do you feel that the Dr. gives you enough information about your child's health, or would you like more?

Enough = 1 [] 40  
Not enough = 2

161. When you see the Dr. with X, do you think s/he usually spends enough time with X, or not enough?

Enough = 1 []  
Not enough = 2

162. Have you ever felt when you have been there with X that the Dr. just tried to get rid of you?

(Y = 1; N = 2) []

IF NO GO TO 163.

IF YES ASK: (a) What happened? (RECORD VERBATIM)

[][][]

163. Or that the Dr. was too busy to spend enough time with you? (Y = 1; N = 2) []

164. Have you ever felt that the Dr., or other people at the practice, didn't care about you? (Y = 1; N = 2) []

IF NO GO TO 165.

IF YES ASK (a) Why was that? (RECORD VERBATIM)

[][][] 50



INTERVIEWER:

I	How easily did respondent cope with interview as a whole?	<div>No difficulty = 1 Slight trouble with some questions = 2 Difficulty with some questions = 3 Difficulty with many questions = 4</div>	<div>[ ] 65</div>
II	Time at end of interview?		<div>[ ] [ ] [ ] [ ]</div>
III	Length of interview? (Minutes)		<div>[ ] [ ]</div>
IV	Interview tape-recorded?	<div>(Y = 1; N = 2)</div>	<div>[ ]</div>
V	Interview interpreted?	<div>(Y = 1; N = 2)</div>	<div>[ ] 73</div>



APPENDIX II: Questionnaire for General Practitioners

THE CARE OF CHILDREN IN GENERAL PRACTICE

QUESTIONNAIRE FOR GPs

CONFIDENTIAL



**BRIEF**

The interviews I carried out with your patients - or more accurately the parents of your younger patients - included various questions regarding their beliefs about respiratory illnesses, as well as a satisfaction section. This satisfaction measure included direct questions about you as a doctor and about the practice/clinic as a whole. You may be interested to know that, on the whole, your patients are very satisfied with the service they receive at this practice.

We felt it would be appropriate to get the view from, perhaps not the other side, but certainly from another side. As doctors working in a multi-ethnic area, your views of your patients, of how they present with these type of illnesses in their children and also your personal views on the management of the more common respiratory complaints which frequently afflict the children of Britain, will be most helpful to this research.



SCRIPT

1. First of all, could you tell me how long you have been working as a GP in this particular practice.
2. Have you always worked in a practice area which includes many ethnic groups? (IF NO: What particular differences have you noticed from your time in a mono-cultural practice, if any?)
3. Obviously your practice area includes a number of people who speak English only slightly or not at all. Is the language barrier a problem for you as a GP, and, if so, what strategies do you use to get around it?
4. Do you feel that the quality of the consultation is diminished with those patients who speak English very little or not at all?
5. Having now looked through the attendance records over a fairly lengthy period of time, I have found that Asian parents - both Indian and Pakistani - consult more often for their young children. Certainly this is the case for respiratory complaints. Is this something that has come to your attention during your time practicing here?
6. IF INTERVIEWEE HAS DETECTED A DIFFERENCE ASK: Have you noticed that the differential consultation rates are for specific illnesses or patterns of illness, or does it appear that the Asian patients uniformly consult more often?
7. As we have found that consultations for children's coughs and colds and flus are more frequent among the Asian population, it is possible that severity levels are actually different for different ethnic groups. In your experience, have you ever observed that this might be the case?
8. We have also thought that it could be related to the beliefs that people hold about particular illnesses. Do you have any experiences which might suggest that Asian parents are more worried about these childhood illnesses which are so common in the British Isles?
9. Or perhaps they see the cold or the cough as a sign of something worse if it isn't treated quickly?
10. I have only recently started to analyse the data from the large study, so I don't have any pooled information from the interviews as yet. But one of the indications from the pilot work was that Asian parents may be more likely to perceive a high temperature, or even a fever, as a common symptom of a child's cold. Now if this is the case, on this basis alone you may expect to find more Asian consultations at the GP for the common cold. Do you have any views on this?



11. Do you have any further views on the higher number of parental consultations among the Asian population?
12. Going back to the subject of high temperatures and mild fevers in young children. Do you have any guidelines for parents with the management of these illnesses? That is to say, do you have a pamphlet which outlines the best procedures to follow, or perhaps you just have a standard set of instructions to parents?
13. IF DR USES A PAMPHLET OR STANDARD INSTRUCTIONS ASK: Do you follow this procedure with all parents, or is it just with those you perceive as having problems or who specifically ask for information?
14. Are parents, on the whole, receptive to your guidelines, or do you feel that for some illnesses it is quite difficult to get the message across? (IF INTERVIEWEE FEELS THAT THERE IS SOME DISCREPANCY BETWEEN THEIR OWN AND THE PARENTS BELIEFS HERE, DETERMINE WHAT THE DISCREPANCY IS).
15. When asking the parents about their management of their children's respiratory illnesses, the question of medication arose. The efficacy of the remedies offered over the counter in chemists are tendentious to say the least, but, not surprisingly, the 'cough mixture' is still by far the most common cough-cold remedy used by all parents. Do you have any views on chemist's cough and cold cures?
16. What about home remedies? Do you recommend to the parents that they try to treat these illnesses by their own devices?
17. Leading on from that, I have here eight vignettes, or hypothetical situations which were compiled by GPs in Newcastle. I asked each of the parents I interviewed what they thought they would do under each of these eight circumstances, if it was their child involved. As it was the target children I referred to, it is worth bearing in mind that the parents were responding for children varying in ages from two to eleven years old, and so this in itself could influence their decisions. I want to present you with these eight vignettes and ask you what you think would be the most appropriate action for the parent to take?
  - A The child's cough has lasted for seven days and he, she has also been sick, usually when he, she coughed. What would you do if that happened?
  - B The child is normally well, but for the past month has been getting a tight chest and wheezy when running. How would you react?



- C The child's cough has lasted for three weeks and has not got any worse, but neither has it got any better. He, she has no other symptoms. What would you usually do?
- D The child has been hot and miserable for 24 hours, drinking plenty of fluids but refusing food. How would you react?
- E The child has had a runny nose and a fine rash for the last 24 hours. There are no other symptoms. What would you usually decide to do then?
- F The child has been wheezing for 24 hours, so he, she couldn't go to school or playgroup and couldn't play with other children. What would you do?
- G The child is off his, her food and has a slight temperature, but has no other symptoms?
- H The child quite suddenly had difficulty breathing and his, her lips changed colour to blue, in a period of about four hours. How would you react?

The final section of the parental questionnaire concerned the parents' views on the practice and the doctors in it. This was a standard satisfaction measure which is also used in the Newcastle studies. Even although my analysis to date is incomplete, there is more than a suggestion that the interviewees were highly satisfied with the service, as I mentioned earlier.

There are a few things I would like to ask you about the way the practice is organized.

- 18. If someone asks for an appointment as soon as possible, how long would they usually have to wait on average?
- 19. Do you have special rules for children when the parent feels that they need to see a doctor at once?
- 20. What about home visits? Do you have a particular procedure that you follow when a parent asks for you to visit the child at home?
- 21. With respect to your receptionists, do you have explicit instructions for them in their dealings with parents seeking an immediate appointment, or for dealing with a worried parent seeking advice?
- 22. Now I know that some parents have voiced complaints about the way that some receptionists try to 'play doctor'. Do you have policies on the kind of questions that your receptionists should ask the patients when they seek an appointment?
- 23. Finally I would just like to ask you a very open question about being a GP in a multi-ethnic area of Britain. What are the advantages and disadvantages?



APPENDIX III: Scale of severity of the cough

devised by E. N. Hey.

<u>Question numbers</u>	<u>Questions</u>	<u>Rating score</u>
54a & 56.	How long did the cough last?	
	1-2 days	0
	2-4 days	0
	4-7 days, 'a week'	1
	7-8 days, '2 weeks'	2
	2-3 weeks, 'a month'	4
	More than four weeks	8
59.	What sort of cough was it? How long was it like that for?	
	Tickly, irritant: Less than 2 weeks	1
	Tickly, irritant: More than 2 weeks	2
	Chesty, wheezy: Less than 2 weeks	6
	Chesty, wheezy: More than 2 weeks	12
	Dry, harsh, barking: LT 2 weeks	2
	Dry, harsh, barking: MT 2 weeks	4
	Loose, productive, phlegmy: LT 2 weeks	4
	Loose, productive, phlegmy: MT 2 weeks	8
	Whooping: Less than 2 weeks	12
	Whooping: More than 2 weeks	24
	Other: Less than 2 weeks	1
	Other: More than 2 weeks	2
60 & 60a.	Was the cough worse at a particular time?	
	No	0
	Yes: Worse during the day	1
	Yes: Worse during the night	2
	Yes: Worse on rising	3
	Yes: Worse when went to bed	4



		<u>score</u>
61.	Was the child's sleep disturbed?	
61a.	For how many nights?	
61b.	What was the main problem?	
	No	0
	Yes. 1-2 nights: Cough	2
	Yes. 2-4 nights: Cough	4
	Yes. >4 nights: Cough	6
	Yes. 1-2 nights: Wheezing	6
	Yes. 2-4 nights: Wheezing	12
	Yes. >4 nights: Wheezing	18
	Yes. 1-2 nights: Difficulty breathing	8
	Yes. 2-4 nights: Difficulty breathing	16
	Yes. >4 nights: Difficulty breathing	24
	Yes. 1-2 nights: Other	4
	Yes. 2-4 nights: Other	8
	Yes. >4 nights: Other	12
62.	Did the child sleep more during the day?	
	No	0
	Yes	8
63.	Did the child need more comforting?	
	No	0
	Yes	4
64.	Was the child off his/her food at all?	
64a.	For how many days?	
	No	0
	Yes. 1-2 days	1
	Yes. 2-4 days	2
	Yes. 4-7 days	3
	Yes. 7 days - '2 weeks'	4
	Yes. '2 weeks' - 'a month'	6
	Yes. > 'a month'	8
65.	Did the child have a sore throat?	
	No	0
	Yes	2
65.	Did the child have earache?	
	No	0
	Yes	6



		<u>score</u>
65.	Did the child have a headache?	
	No	0
	Yes	2
65.	Did the child ahve pain when coughing?	
	No	0
	Yes	4
65.	Did the child have difficulty breathing?	
	No	0
	Yes	8
66.	Did the child cough anything up?	
66a.	What?	
66b.	Where from?	
	No	0
	Yes. Phlegm: Nose & throat	2
	Yes. Phlegm: Chest	8
67.	Did the child vomit at all?	
67a.	How many times?	
	No	0
	Yes: Less than 3 times	2
	Yes: 3-5 times	4
	Yes: > 5 times	8
68.	Could you hear sounds from the child's chest?	
	No	0
	Yes	12
68a.	What were the sounds like?	
	Rattle	8
	Wheeze	12



		<u>score</u>
71.	Did the child have other illnesses?	
71a.	What were they?	
	No.	0
	Yes. Ear trouble	12
	Yes. Whooping cough	12
	Yes. Measles	12
	Yes. Asthma	12
	Yes. Other chest trouble	6
	Yes. Bronchitis	6
	Yes. Other	6
72.	What was the child's reaction?	
	Very distresses by it	24
	Unwell	12
	Unaffected	0
	Other	4



APPENDIX IVa: Letter to Parents (English)

Head of Department:  
Professor A. J. Chapman

Department of Psychology  
Leeds LS2 9JT  
United Kingdom  
Telephone (0532) 431751

Dear

Can I ask for your help? I am a Research worker here at the University in Leeds. My work is concerned with the health of children and the care provided for them. More specifically, it is about children's coughs and colds. I have spoken to Dr. \_\_\_\_\_ at the surgery, and he is happy for me to contact some of his patients. I hope to speak to some of the parents of young children and ask them about their children's health.

I will call at your home within the next few days and ask you if you are willing to take part. If you do wish to help it will simply involve a short interview of about 30 or 40 minutes. Thank you for your help.

Yours Sincerely,

Andy Clarke  
Research student



APPENDIX IVb: Letter to Parents (Punjabi)

Head of Department:  
Professor A. J. Chapman

Department of Psychology  
Leeds LS2 9JT  
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Telephone (0532) 431751

ਪਿਆਰੇ

ਕੀ ਮੈਂ ਤੁਹਾਡੀ ਮੱਦਦ ਵਾਸਤੇ ਪੁੱਛ ਸਕਦਾ ਹਾਂ? ਮੈਂ ਲੀਡਜ਼ ਵਿਚ, ਇਥੇ ਜੂਨੀਵਰਸਿਟੀ ਵਿਚ ਖੋਜ ਕਰਨ ਵਾਲਾ ਕਰਮਚਾਰੀ ਹਾਂ। ਮੇਰਾ ਕੰਮ ਬੱਚਿਆਂ ਦੀ ਸਿਹਤ ਅਤੇ ਉਹਨਾਂ ਲਈ ਜਿਹੜਾ ਏਪਰਫਾਲ ਦਾ ਪ੍ਰਬੰਧ ਕੀਤਾ ਗਿਆ ਹੈ, ਨਾਲ ਸਬੰਧਤ ਹੈ। ਮੈਂ ਸਹਜ਼ੀ ਵਿਚ ਡਾਕਟਰ ਹੋਏ ਨਾਲ ਗੱਲ ਕਰ ਚੁਕਾ ਹਾਂ, ਅਤੇ ਉਹ ਮੇਰੇ ਵਾਸਤੇ ਆਪਣੇ ਕੁਝ ਮਹੀਨਾ ਨਾਲ ਸੰਪਰਕ ਕਰਨ ਲਈ ਰਾਜ਼ੀ ਹੈ। ਮੇਰੀ ਇਹ ਜਵਾਨ ਬੱਚਿਆਂ ਦੇ ਕੁਝ ਮਾਪਿਆਂ ਨਾਲ ਗੱਲ ਕਰਨ ਦੀ ਹੈ ਅਤੇ ਉਹਨਾਂ ਨੂੰ ਉਹਨਾਂ ਦੇ ਬੱਚਿਆਂ ਦੀ ਸਿਹਤ ਵਾਰੇ ਪੁੱਛਣਾ ਹੈ।

ਅਗਲੇ ਕੁਝ ਦਿਨਾਂ ਵਿਚ ਇੰਟਰਵਿਊਆਰ (ਮੁਲਾਕਾਤੀ) ਮੁਲਾਕਾਤ ਵਾਸਤੇ ਤੁਹਾਡੇ ਘਰ ਆਵੇਗਾ ਅਤੇ ਤੁਹਾਨੂੰ ਪੁੱਛੇਗਾ ਅਗਰ ਤੁਸੀਂ ਹਿਸਾ ਲੈਣ ਵਾਸਤੇ ਰਾਜ਼ੀ ਹੋ। ਅਗਰ ਤੁਸੀਂ ਮੱਦਦ ਕਰਨ ਦੀ ਇਹ ਕੋਸ਼ਿਸ਼ ਤਾਂ ਇਹ ਕੋਵਲ ਲੋਗਪੱਗ 30 ਜਾਂ 40 ਮਿੰਟਾਂ ਦੀ ਇਕ ਛੋਟੀ ਜਿਹੀ ਮੁਲਾਕਾਤ ਸ਼ਾਮਲ ਕਰੇਗੀ। ਤੁਹਾਡੀ ਮੱਦਦ ਵਾਸਤੇ ਤੁਹਾਡਾ ਧੰਨਵਾਦ।

ਆਪ ਦਾ ਹਿਤੁ,

ਮੈਂਤੀ ਕਲਾਗਕ ।



APPENDIX IVc: Letter to Parents (Bengali)

Head of Department:  
Professor A. J. Chapman

Department of Psychology  
Leeds LS2 9JT  
United Kingdom  
Telephone (0532) 431751

প্রিয়,

আমি কি আপনার সাহায্য চাচ্ছি? আমি লিডস ইউনিভার্সিটির  
সভ্যতা করছি, আমার সন্তান বাচ্চাদের সাহায্য চাচ্ছি। আমি কি বিদ্যার  
যন্ত্রের ব্যবহার আছে, যাতে নিজে, আমি আত্মীয়ের ডাকের সাথে  
সহ্য করছি। তিনি আমার অন্য আনন্দের সাথে তার সন্তানদের  
দ্রোণীর সাথে যোগাযোগ করেছেন। আমি সন্তানদের অন্যতম সাহায্য  
সাধার সাথে সহ্য করতে চাই এবং তাদের সাহায্য সাহায্য  
কিন্তু প্রায় অসম্ভব করে চাই।  
কিন্তুদিনের চার্জ সম্বন্ধে লোক আপনার সাহায্য আমার সাথে দেখা করে  
আছেন। তিনি আমার অসম্ভব করেছেন যে, আপনি এ সাহায্য  
সহ্যের অসম্ভব নিজে চান কি না। যদি আপনি সাহায্য করে চান, তবে  
৩০ অথবা ৪০ মিনিটের জন্য একটি ছোট সাহায্যের সময়।  
আমার সাহায্যের জন্য ধন্যবাদ।

আমার অসম্ভব,

এস্টেড স্টার্ক



APPENDIX IVd: Letter to Parents (Urdu)

Head of Department:  
Professor A. J. Chapman

Department of Psychology  
Leeds LS2 9JT  
United Kingdom  
Telephone (0532) 431751

محترم

کیا میں آپ سے مدد کی درخواست کر سکتا ہوں۔ میں ریڈز یونیورسٹی میں ایک ریسرچ وکرن ہوں۔  
میرے فرائض کا تعلق بچوں کی صحت اور اُس کے لئے سہولیات کی بہم رسانی ہے۔ میں نے ڈاکٹر رائے سے اُن کی  
سرمری میں بات چیت کی ہے اور وہ میرے لئے اپنے کچھ مریضوں سے رابطہ قائم کرنے کے لئے جوشی تیار ہیں۔  
میری خواہش ہے کہ میں چھوٹے بچوں کے والدین سے ملوں اور اُن کے بچوں کی صحت کے متعلق پوچھوں۔

آئندہ چند روز میں ایک آدمی آپ کے گھر آکر آپ سے پوچھے گا کہ کیا آپ اس بات چیت میں  
جسمہ لینا چاہیں گے۔ اگر آپ مدد کرنا پسند کریں تو یہ شخص ایک مختصر سی تیس یا چالیس منٹ کی گفت و شنید  
ہوگی۔

آپ کی اعانت کا شکریہ۔

آپ کا فضل

اینڈی ملارک



APPENDIX V: Letter to Doctors

Dear Dr. \_\_\_\_\_,

I wonder if you could give me some help? At present I am working on my doctoral thesis in the Psychology department here at the University in Leeds. My research is concerned with health behaviour, in particular parental use of General Practitioner services for their children's respiratory illnesses. My work is focused within the areas of Leeds 6, 7 & 8, since culture and ethnicity are at the forefront of my interest. I ask for your help because I would like to be able to interview some of the parents whose children are patients of yours.

I have already completed two studies from two other General Practices in this area: Dr. Adshead's practice on Chapeltown Road and Dr. Basu-Ray's on Hilton Road. It was Dr. Adshead who mentioned you as a GP who may be interested in work of this nature. At the moment I am planning a larger study, hoping to incorporate a wider area and group of people. If you feel that you could help, or at least are interested in hearing more about the study, I would be most pleased if you would let me know and we could arrange to meet.

yours sincerely

Andy Clarke  
Dept. of Psychology  
University of Leeds  
LEEDS LS2 9JT