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Infant Feeding Practices And Postnatal Depression of South Asian Women Living In The United Kingdom

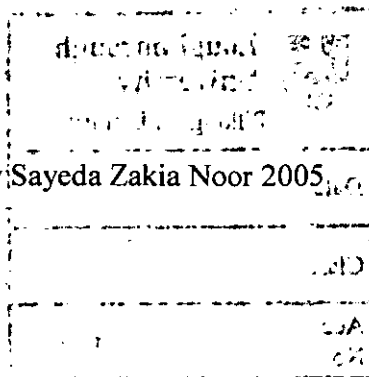
by


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A thesis submitted in partial fulfilment of the requirements for the award of
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Abstract

The work reported in this thesis deals with the infant feeding practices and postnatal depression of South Asian women living in the United Kingdom. It is made up of two independent studies - the first one is conducted on the Bangladeshi women living in Loughborough with particular emphasis on infant feeding while the second one is conducted on essentially the Bangladeshi and the Pakistani women living in the Sure Start Westgate area of Newcastle Upon Tyne with particular interest in maternal mental health. The methodology of the work involves questionnaire surveys on women in Loughborough and Newcastle (n=28 and n=86 respectively). In addition to these, qualitative data were collected during home visits and focus group discussions for mothers. Both of these groups are relatively disadvantaged in terms of income, employment and education with the Newcastle group being slightly worse off.

Findings from the study highlight the complexity of infant feeding practices for this group of women. Although some specific observations such as delayed initiation of breastfeeding, earlier (than recommended) introduction of solid food or the presence of smokers in a household etc. may possibly be explained by lack of education and poorer knowledge of English, but the impact of socio-cultural and religious influences, which are found to be very dominant, is not so obvious. An interesting, and previously unreported, significant association has been found between infant feeding methods and depression indicators. Contrary to popular beliefs, gender of the child is not a significant matter in general, but shows some association with the feeding method. Belief in supernatural forces and incidence of traditional practices are associated with ethnicity and the mothers' place of birth. In terms of health service and community support there are areas of concern, such as: low attendance at antenatal classes; communication problems due to language and lack of articulation and the attitude of both health professionals and mothers in respect of understanding of each other's culture.

The study highlights the importance of educating the whole community, instead of only the mothers, to raise awareness of better infant feeding, to lead a healthier lifestyle and to prevent misconceptions. Both the mothers and health professionals share the joint responsibility of improving the scenario of service delivery and uptake.

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To the memory of my mum and dad

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Chapter 1

Introduction and Background

Infant feeding practices of the South Asian mothers have long been a cause of concern among the health workers (Shaw *et al*, 2003; Jones, 1987; Jivani, 1978). There is no disagreement that a balanced diet in the early stages of human life is vital for various reasons, but unfortunately, this is not always the case. The caring mothers of the Asian community (just like other mothers) often feed their babies in a way which is not always understood by the health professionals. A large number of factors are responsible for this. The socioeconomic status, cultural and religious beliefs, maternal health, domestic influences, advice from health professionals etc. together determine feeding practices.

In order to obtain a detailed picture of infant feeding practices and related issues among South Asian women, two different studies were conducted, one at Loughborough with particular emphasis on the details of feeding and the other in Newcastle Upon Tyne with particular emphasis on mother's mental health and other factors that influence the mothers. First, in this chapter, the background literature is reviewed in an attempt to highlight the present status of research in this area.

1.1 A brief account of history of Asian migration

The term South Asian (SA) or Asian is used to refer to those individuals whose ancestral origin lies in the Indian subcontinent – mainly India, Pakistan and Bangladesh and includes those born in the UK and others migrating to the UK via a third country (for example, Kenya) (Rankin and Bhopal, 1999). A slightly different definition is also common, whereby 'Asian' or 'South Asian' refers to people with some connection with South Asia (Pfeffer, 1998) comprising India, Pakistan and Bangladesh, nations shaped by the British Imperialism.

1.1.1 Direct migration from the subcontinent

Asian migration to Britain began early in the twentieth century. Only the males came to this country in this period mainly for economic gain. These early immigrants used to work in British ships as stokers or galley-hands. When the ships docked in British ports, these seamen used to 'jump' ship and sought alternative employment. During these periods, heavy industries were booming in the UK and the immigrants usually found jobs without much difficulty. The other occupations in which these early Asians engaged themselves were door-to-door selling of clothes (Faux, 1980) or running small tea-shops (Little, 1948). The number of Asians was very few; for example the total number of Asians in Birmingham in 1949 was only about one hundred.

In time the number of Asian immigrants to the UK has gradually increased. According to Robinson (1986), the mass immigration of Asians from the sub-continent can be largely attributed to the 'push' and 'pull' factors. High rural population densities, pressure on the land, fragmentation of land holdings because of the laws of inheritance, the Partition i.e., creation of India and Pakistan (East^a and West), and some other local phenomena such as the construction of the Mangla Dam in West Pakistan, all combined to create unusually strong 'push' factors. At the same time, the booming British economy with associated opportunities for economic and social gain acted as strong 'pull' factors. However, the relative effect of these two factors on an individual community in Asia is very different from one other.

There are other schools of thought (for example, Pettigrew, 1972) on the causes of migration, which support the push factors (largely economic explanations) by including the cultural and social ethos of the sending society. Their point is that the values of the sending society in the first half of the previous century was more of feudal type and hence the status or honour (*izzet*) of the individual was very important and it was directly related to the material wealth of the family. As a result, when the less well-off people

^a East Pakistan became an independent country in 1971 and is known as Bangladesh. Since then West Pakistan became Pakistan.

started to migrate in order to improve their economic status and (hence *izzet*) the other group, still relatively well-off but apprehensive of anticipated subdivision of family wealth, emigrated to increase their status. Britain was a very good choice for people of all categories due to the two centuries of colonial history and the relaxed immigration laws of the UK at that time.

It is during this period (late fifties or early sixties) the Asian communities began to grow in various places of the UK. The settlement patterns were determined almost purely by economic or 'pull' factors. Jones (1996) considers that Asian settlements contain two separate elements, both related to labour shortages. Firstly, settlement took place in areas where white labour was scarce because of the pace of economic expansion e.g., Greater London, Birmingham and their respective satellites. Secondly, settlement also occurred in those areas where there was a labour shortage in certain industries because of the poor conditions of employment e.g., the textile industry of Manchester, Leeds, and proximate towns or heavy industries of the North. The immigrants until now were almost entirely the males either single or married. These people never thought of a long term settlement in this country and hence they started to live in Victorian terraced houses on short lease. They used to be 'lodgers' and several of them used to live in one big house (Jones, 1996). The fact that the Asian communities are so close knit and encapsulated from the rest of the indigenous population stems from this period. The new immigrants naturally came to their near kin and friends, where they got emotional and social support. This acted in a cycle with a new immigrant sponsoring a newer immigrant and gradually the communities began to grow. The desire to maintain social encapsulation encouraged voluntary clustering. It is relevant to mention here that most of the people from the Indian subcontinent came from a few relatively prosperous rural areas. These areas are mainly the districts of Sylhet in Bangladesh, Mirpur in the province of the Punjab in Pakistan and Gujarat and the Punjab in India.

During the mid-sixties the Asian settlers started bringing in their families from back home. They include the wives, sons and daughters and often the parents. With the arrival of these families the community began to grow at a much faster rate than before. The

flow attained maximum momentum in the late sixties and the early seventies, by which time the Asian communities were established in various cities and towns of the UK. The employment pattern also changed around this time; and although unskilled labour was still the most important profession, several of the Indians started their own business in restaurants, corner shops etc.

1.1.2 Migration from Africa

The migration of the East African Asians followed a completely different route. Although these Asians are now part of the Asian Communities of Britain, their migration history is very different from the voluntary immigrants directly from the sub-continent. There are largely three factors (Jones, 1996): firstly East African Asians are not primary migrants in the sense that they have moved directly from their ancestral homelands to Britain; secondly they came from a different colonial social structure from that which existed in India; and thirdly they were refugees rather than voluntary migrants. The Asians who came from East Africa are descendants of manual labourers introduced by the British to build the East African railway in the middle of the nineteenth century. Later generations thrived by virtue of their hard work and apparent flair for business (Rattansi and Abdulla, 1970). So, by the time the East African countries, mainly Kenya and Uganda, obtained independence from the British, the Asians represented a community which owned a significant portion of the nation's wealth but they were largely skeptical of the African's ability to rule the country. Hence the Asians started to look for a new home and began transferring their wealth to other countries such as the UK and Canada. The situation took a dramatic turn by various legislations put forward by the rulers of the country where Asians were clearly deprived of their rights to jobs. Due to their historical connection with Britain, large numbers of refugees (mostly of Gujarati origin) started arriving in this country during this period and they mostly concentrated in the Leicester area where there was already a community of Asians. Without going into further detail which may be found in Jones (1996) and others, these Asians represent the latest Asians migrating to the UK. Generally, they are much wealthier than the main stream Asians from the sub-continent. Also due to their experience of living an immigrant life in another country,

they are more resilient in terms of tackling the social and cultural forces of the English society. But what is more interesting to observe is that most of their cultural and social behaviours are very similar to the primary migrants (i.e., the ones who came directly from South Asia). Possibly these behaviours are so deeply rooted to the Indians that even after passing a few generations in an alien continent, such *values* and *norms* of the people remained virtually unchanged, for example, the custom of ‘arranged marriages’, food habit, type of relaxation, religious beliefs etc.

In the context of the current study, where the focus is on infant feeding practices and related matters of the South Asian community, it is believed that all of the South Asians form a somewhat homogeneous group from socio-cultural point of view. However, from socio-economic point of view the East African Asians are different from the main stream Asians from the subcontinent by virtue of their relative prosperity in material wealth. These are, however, debatable issues as mentioned by, among others, Bhopal *et al* (1991).

1.2 Demography of the Asian population

According to the 2001 census, the total South Asian population represents 3.5% of the total population of the UK. Table 1.1 shows the total population and percentage of Asian people in the whole country and compares it with the corresponding data of Leicestershire and Leicester City. What is not obvious from this Table is that the distribution of the Asian population is not uniform across the country. Some areas have a high proportion of Asians, whereas in other areas the proportion is very low. For example, the highest concentrations of Bangladeshi and Pakistani population in the UK are in the Borough of Tower Hamlets in London and the city of Bradford respectively. In Leicester city, for example, the Indians (most of whom are from East African countries) represent 28.8% of the total population of the city. There are several reasons behind this non-uniform distribution but probably the main reason is job opportunity as discussed in the previous section. The other factor is related to their origin in the home countries. People migrating from the same village in Bangladesh or Pakistan tend to settle in the

same area in the UK. This kind of distribution has largely contributed to the fact that many traditional aspects of the lifestyles, food habits and cultural values of these communities have been preserved over the decades. Hence the British Asians retain many typical characteristics of the Asian population.

Table 1.1: Population data (2001 Census)

Ethnic Group	Whole of UK		Leicestershire		Leicester City	
	Total population	% of total population	Total population	% of total population	Total population	% of total population
Total Population	58,789,194	100.0	889,499	100.0	279,921	100.0
Indian	1,053,411	1.99	90,552	10.2	72,033	25.7
Pakistani	747,285	1.37	5,179	0.6	4,276	1.5
Bangladeshi	283,063	0.54	3,311	0.4	1,926	0.7

Economic status determines the living and working conditions and hence may have direct and indirect effect on health and behaviour of people. For example, poor housing directly affects both physical and mental well being, impacting on the incidence of allergies, asthma, household accidents and depression among occupants (Whitehead, 1992). Further, economic status determines the ability to access health services. For example, having a car in the family makes using health services significantly easier. According to the 4th National Survey of Ethnic minorities (Modood, 1997), the unemployment rate for men as defined by the proportion of economically active men without work was significantly higher for minority ethnic men in general, than white men. The rate of unemployment for Indian, Pakistani and Bangladeshi men (19%, 38% and 42% respectively) were significantly higher than the white men (only 9%). The situation of the Bangladeshi men, in reality are even worse due to the fact that their weekly earnings are also much lower than the other ethnic minority and white population. The weekly earnings are shown in Table 1.2.

Table 1.2: Male Employees Earnings (Modood, 1997)**Percentage of male full-time employees**

Weekly Earnings	White	Indian	Pakistani	Bangladeshi
<£116	4	9	13	41
£116-£192	14	22	39	29
£193-£289	33	30	28	10
£290-£385	19	16	9	8
£386-£500	14	13	4	4
>£500	15	10	6	8

In line with the earning and employment status of a particular group, the housing situation is also worse for ethnic minority communities. Table 1.3 shows that the housing tenure is very uniform when one considers the whole ethnic population as one unit. But it is not so when individual communities are considered. Also what this survey does not address is the quality of housing. Experience from a Leicestershire survey (Noor, 1996) shows that, the quality of housing for the Bangladeshi and Pakistani population is much inferior to that of the Indians and whites.

Table 1.3: Housing Tenure in Britain (Modood, 1997)**Percentage of Ethnic Group in each category**

	Own	Rent Local Authority	Rent Housing Assoc.	Rent Private
White	67	20	3	9
Indian	85	7	2	7
Pakistani	79	13	2	6
Bangladeshi	48	35	10	8
All ethnic minorities	66	20	6	7

Another contrasting feature of the Asian population in comparison with the mainstream population is the size of the family (Lee *et al*, 1998). The 4th National Survey of Ethnic Minorities (Table 1.4) reveals that the family sizes were largest for the Bangladeshi and Pakistani families with 33% and 42% of the families having four or more children. Obviously, such a situation gives rise to overcrowding which may have a very significant effect on the health of Asian children and women.

Table 1.4: Number of children (%) per family (Lee, 1998)

Ethnic Origin	One	Two	Three	Four or more
White	38	44	14	4
Indian	28	42	19	11
Pakistani	24	23	21	33
Bangladeshi	20	20	18	42

A very important and interesting feature of South Asian families is the presence of female relatives in the same household. For all the three South Asian communities nearly half of the households had a female relative, usually a mother/mother-in-law or sister/sister-in-law. For the White population, presence of a female relative is almost non-existent as shown in Table 1.5 (Thomas and Avery, 1997). These relatives, being usually more experienced and older, play a very influential role on the mother of the newborn in her decision about feeding practices as well as other aspects of infant caring.

Table 1.5: Female Relatives Living in the Household (Thomas, 1997)

Proportion of households with:	White (%)	Indian (%)	Pakistani (%)	Bangladeshi (%)
Female relative	5	41	44	46
Mother/mother-in-law	4	37	33	38
Sister/sister-in-law	1	18	32	33

Finally, it is well known that the religious beliefs and cultural taboos are still very important in the South Asian households. These are rather qualitative assessments and quantifying such factors is extremely difficult, if not impossible. Some attempts were made in the 4th National Survey (Modood, 1997) where respondents were asked to identify whether they had any affiliation to a religion and, if so, to name that religion. Thirty per cent of the Whites said that they had no religion and the rest (70%) said they were Christian. Fifty per cent of Indians identified themselves as Sikhs and 32% as Hindus. Almost all the Pakistani and Bangladeshis (over 95%) identified themselves as Muslims. What is more significant is the fact that between 50%-80% of the Bangladeshis, Pakistanis and Indians (irrespective of their religious faith) consider religion to be very

important in their life as against only 10%-20% of the White population who consider the religion to be very influential.

1.3 Health issues of the South Asian population

Since the early 1980s there has been considerable interest in the health of ethnic minorities in Britain. For example, Balarajan and Soni Raleigh (1993, 1995) related work on ethnic variants to the Health of Nation's targets; Smaje (1995) provides a comprehensive overview of the existing state of affairs in research on health and ethnicity; Ahmad (1993) takes a critical perspective on several of the key issues in this area, Marmot *et al* (1984) is a classic epidemiological study of ethnicity and health.

In the next two sections, the health issues of Asian women and children are briefly discussed. This is believed to be important in the sense that it gives an overall idea about the health concerns of these communities and also it highlights some of the socio-cultural and socio-economic issues that may prove important in understanding the infant feeding practices.

1.3.1 Women's health

Women's health among the South Asian population is influenced by many factors. Among these, some are common to all women irrespective of their ethnic origin, for example, those related to pregnancy and childbirth, but there are a number of factors such as those related to their roles within the family and within the community and hence are distinctly different. These are often based on beliefs, cultural practices and traditional female virtues.

As shown by Thomas and Avery (1997), the percentage of South Asian first time mothers attending ante-natal classes is very low in comparison to the mainstream white population. For example, the above reference shows that only 14% of Bangladeshi first-time mothers attended the antenatal classes compared with 77% of the White population. There are a number of reasons for this difference of which the language barrier,

inconvenience of timing, being too busy with household work or attending relatives are the specifically mentioned reasons by the respondents of the survey. Some of them mentioned that they have never heard of such classes. However, the majority mentioned that they just didn't want to go. The report doesn't go further as to why 'they just didn't want to go?' This clearly indicates that there must be some gaps or inefficiencies among the service providers and something could be done to improve the situation. The situation is also influenced by the fact that back in their villages in the countries of origin, antenatal classes are uncommon and often the practice is not to discuss pregnancy. The lack of awareness and education are just two of the reasons behind this non-attendance. It is worthwhile to mention here that the level of literacy within the Bangladeshi and Pakistani women is very low. For example, a study published by the Health Education Authority in 1994 shows that of 3500 Asian (men and women together), 24% of Indian, 37% of Pakistani and 48% of Bangladeshi were unable to read English or native language. The situation is further worrying because, about 93% of Pakistani and 96% of Bangladeshi middle-aged women cannot even read their own native language. Attendance of antenatal classes and level of literacy play a very important role in the decision making of infant feeding. Also the uptake of preventive services for cervical and breast cancer is low among women from the Indian sub-continent and minority groups often experience difficulties in accessing appropriate services for prevention. (Doyle, 1991; Austoker, 1993; Pilgreim, 1993). The need for equitable provision for all ethnic groups has been emphasised by, among others, Balarajan (1993).

Bowler (1993) found that the quality of antenatal care is poorer for mothers from minority ethnic populations and Parsons *et al* (1993) reported ethnic differences in rates for induced labour and Caesarean section with a possible impact on birth outcomes. In particular, they describe lower rates of induced labour among Bangladeshi women. A Birmingham study (MacArthur *et al*, 1993) also supports the above observation for South Asian women compared to the White women. A study by Firdous and Bhopal (1989) shared a number of these results, and also found that South Asian women experienced greater communication problems about their reproductive health, had less knowledge and made less use of services. They suggested that such factors may partially underlie poorer

pregnancy outcomes. All of these studies highlight the need to consider the role of health care in mediating infant mortality. According to Henley (1997):

Many pregnant Asian women arrive in hospital without knowing what will happen, and their stay in a maternity ward may be their first experience of being away from their families. They may find it difficult to fit into the routine and they may not know anyone well enough to ask what is expected. Sometimes her fears can make things difficult for the delivery team, and any frustration and irritation they may show will make things worse.

Iron-deficiency anaemia is a serious health issue among South Asian women especially during the period of pregnancy and childbirth. This is mainly due to an inadequate diet, so that sufficient iron stores are available to support the increased haematopoiesis and the demand of the fetus.

When a South Asian woman is diagnosed anaemic, several other factors need to be looked at such as - presence of infections (particularly of the urinary tract), tuberculosis (mainly pulmonary lesion), Chronic malaria and intestinal helminthis. Vitamin D deficiency is also common among Asian women. Lack of vitamin D causes osteomalacia.

Also, the job of looking after the disabled, weak or sick people automatically fall on Asian women. In a country such as the UK, the carer service is an extra burden on the South Asian women-folk. The number of carers among the South Asian women is significantly higher than the White population (Noor, 1996). The workload on these women is even higher than the whites and this, ultimately, has a tremendous effect on the individual's health. Needless to say that without improving the health condition of women, the health problems of South Asian children cannot be solved on its own.

1.3.1.1 Issues related to maternal mental health

The impact of perinatal mental ill health can be widespread. If the attachment and bonding between mother and infant is broken in the early years of life, it may have a long lasting influence on the social and intellectual development of the child. In the past 50 years there have been dramatic improvements in the health and general welfare of expectant and recently delivered mothers and their infants (Royston and Armstrong, 1989). However, Kumar *et al* (1995) comment that in comparison with indices of maternal physical health, two important measures of women's mental health, i.e., rates of

postnatal depression and postnatal psychosis have shown no parallel improvement in post war years.

Postnatal depression (PND) was first systematically studied by Pitt (1968) who reported that 10% of women were becoming clinically depressed in the first 2-3 months after childbirth. Pitt's findings have been confirmed many times (for example, Kumar, 1994) and there is overwhelming evidence among the practitioners that the percentage is probably much higher among women from disadvantaged backgrounds (Johnston, 2003).

The common predicting factors of postnatal depression are as follows:

Strong factors

- Past history of psychiatric disorder (usually depression).
- Poor marital relationship.
- Lack of social support.
- Recent stressful life events.

Weak factors

- Indicators of social status, including low family income, occupational status of mother.

Core features

Most typical features

- Low/sad mood.
- Loss of interest and pleasure.

Other features:

- Poor bond with baby.
- Poor concentration.
- Disturbed sleep.
- Fatigue/loss of energy.
- Change in appetite or weight.
- Feelings of guilt or worthlessness.
- Agitation/slowing of movement or speech.
- Pessimism/hopelessness about future.

Race and culture may have a significant impact on perinatal mental health (Templeton *et al*, 2003). The traditional extended family of the Indian subcontinent contrasts markedly with the British nuclear family, reflecting differing attitudes to roles, responsibilities, and authority. British health professionals must avoid imposing ethnocentric views of 'normal' family life on their Asian patients, and should learn to work with these different systems rather than against or despite them. Topics requiring particular sensitivity and understanding include moral responsibility and obligations, arranged marriages, and family honour (McAvoy and Donaldson, 1990).

In the Indian subcontinent pregnancy is often viewed as a high-risk activity, and women are accorded special treatment before and after the birth, and encouraged to rescind many of their everyday responsibilities. Adhering to such customs can be difficult in Britain, since many women have to go out to work when pregnant, and many may not enjoy extended-family support networks. Indeed, Asian women can be caught between two cultures, and the period of child-bearing and rearing can be particularly traumatic. This is a time of life when many women, irrespective of their ethnic background, feel particularly vulnerable. For South Asian women, especially problems of communication, isolation, loneliness, and cultural conflicts can be compounded by the feelings of guilt, inadequacy and depression (McAvoy and Donaldson, 1990).

In her presentation in the workshop on postnatal depression in the SA community, Day (2001) raised several issues that are influential for the PND in this group of people but are totally non-existent in the White population. Some of these are related to immigration, unfamiliarity with antenatal care, difficulty of adjustment into husband's family etc. She also points out that the indicators of post-natal depression as mentioned previously may be misleading for SA women because the languages used to describe the feelings are distinctly different from the White population.

Similar concerns were also raised by other authors. For example, Thompson (1997) mentioned that the cultural and linguistic differences can hinder the detection and treatment of PND among the SA community. She also demonstrated that a high level of

skills is required to detect PND and care for Asian women. As a result, the most commonly employed diagnostic tool, the Edinburgh Postnatal Depression Scale (EPDS, Cox *et al*, 1987), ceases to provide accurate information for the level of PND among this group of women.

Sonuga-Barke *et al* (1998) suggest that the Muslim mothers living in extended families display unusually high level of depression and anxiety and suggested that the socio-cultural factors, which may have a strong bearing on the onset of PND, need to be carefully investigated, identified and isolated.

The above brief review highlights the need for a systematic investigation of maternal mental health of SA women. According to Kumar (1994), systematic research across cultures will lead to better recognition of maternal illness as well as better prevention and management.

1.3.2 Child health

A child's growth reflects, better than any other single index, his state of health and nutrition (Eveleth and Tanner, 1976). Rona *et al* (1988) have shown that children from all minority ethnic groups, with the exception of those from Caribbean populations, have a lower average height than the national figure, and that height is associated with factors such as parental socio-economic status, household overcrowding and school meal provision. The health problems which are specifically common to Asian children are divided into three groups namely, nutritional disorders, acquired diseases and genetic disorders.

1.3.2.1 Nutritional disorders

Among the nutritional disorders vitamin D deficiency and iron deficiency anaemia are the two most common deficiencies in children. McAvoy and Donaldson (1990) and Warrington (1988) show that the deficiency of vitamin D among Asian children is

significantly higher than the corresponding White population. The deficiency of Vitamin D can cause various clinical problems such as rickets in childhood and osteoporosis and osteomalacia in later life. There are several reasons for vitamin D deficiency among Asian children. Muslim mothers are often not exposed so much in the sunshine because of 'purdah' or veil (a religious practice of covering whole body except face, when going outside) and, on the other hand, many Indians live on a vegetarian diet and 'chapati' which contains less vitamin D (Dwivedi and Varma, 1996). High level of phytate in chapati flour may contribute to vitamin D deficiency by inhibiting calcium absorption through the gut (Edwards *et al*, 1995). There is a common misconception among Asian parents that fresh cow's milk is better than supplemented infant formulas as a weaning food for the infants which contains very little vitamin D. The older people living with the young parents like grandparents of the infant are often the persons who advocate such 'beliefs'. While 'purdah' of Muslim women or the diet of Indian women may have contributed partially to the deficiency of vitamin D; it is probably the attitude and lack of awareness of South Asian women, in general, that prevents them from exposing themselves and their children to direct sunlight even in their own backyard. Breast feeding by mothers who are lacking in vitamin D is also one of the causes of vitamin D deficiency of their children.

Glasgow was one of the first cities to draw attention to the problem of vitamin D deficiency among the South Asian community more than 40 years ago (Dunningham, 1962). Since then there has been reports from other cities in the UK including London (Stamp, 1982), Birmingham (Swan, 1971) and Manchester (Hodgkin *et al*, 1973). Iqbal and Garrick (1994) also indicate that vitamin D deficiency may be a continuing and significant problem among the Asians in Leicester. They also found that over 50% of Asian people suspected of being deficient with vitamin D, 32% having undetectable levels. Leicester Health Authority had a mother and baby campaign for the prevention of rickets in the early 1980s. In spite of these, the above study found that both the clinical and subclinical vitamin D deficiency is noticeable. It is worthwhile to mention that Leicester was one of the three national centres chosen for the 'stop the rickets' campaign in 1981, but did not adopt a policy of issuing free vitamin D supplements. Increasing the

awareness of the problem with some form of vitamin D supplementation would seem a desirable way (Iqbal *et al*, 1994).

Studies have shown that children from Asian families may be more prone to get iron deficiency than White children (Erhandt, 1986; Grendulis, 1986). One reason is possibly the poor socio-economic status (level 4 and 5 out of 5 socioeconomic classes of the families). Here social class refers to the definitions employed by the Office of Population Censuses and Surveys (1980)^b. The other reasons include a (not properly balanced) vegetarian diet, being overly protective about what the infants need (Jones, 1996), prolonged breast feeding and a delay in starting carbohydrate based weaning foods.

In an attempt to identify the causes of nutritional deficiency among ethnic minority children, some attention has been paid to iron deficiency and infant feeding and weaning practices among South Asian populations (Kurtz, 1993). Bhopal and Donaldson (1988) provide a critical account of some of these concerns. More generally, interaction between minority ethnic status, inner city residence and deprivation is clearly likely to have a major impact on the health of children from minority ethnic groups.

There are certain dietary restrictions for most of the Muslims, Hindus and Sikhs. In Islam, the holy Quran determines the dietary restrictions, the principal one being the total prohibition of the pork and pork products, non-halal (meaning the animal not being slaughtered in the proper 'Islamic' way) meat, alcohol, eels and the shark family and non-halal fat. Similarly beef is totally prohibited for the Hindus and the Sikhs.

Birthweights of babies of Asian origin are generally lower than the Caucasians and may be linked to the fact that the parents are also of smaller size. There are also variation in birthweights among the different communities of the South Asian population. Some

^b According to the Office of Population and Censuses Surveys (1980), the whole population can be divided into 5 socioeconomic classes. These classes are defined by taking into account the income, education level, housing condition, health status etc. Level 5 represents the lowest and level 1 represents the top level within the society.

statistics about birthweight are given in Table 1.6. It is not unlikely that diet may also have an effect on the growth of the fetus.

Table 1.6: Breakdown of Birthweights in Leicestershire (1976-81)

Birth Weight (grams)	Hindu (%)	Muslim (%)	Bengali (%)	Sikh (%)	All births in Leicester Royal Infirmary (%)
1500-2000	1.4	0.7	0.5	0.6	1.8*
2001-2500	13.9	9.0	13.5	8.8	5.8
2501-3000	44.1	38.1	31.3	32.6	22.0
3001-3500	31.5	35.8	42.7	39.7	37.4
3501-4000	8.2	14.0	9.2	15.5	24.9
4001+	0.9	2.4	2.7	2.7	8.1
*High figures due to referrals especially for area neonatal intensive care unit					

As already mentioned, iron deficiency anaemia is very common among Asian children, because many infants are introduced to cow's milk earlier than advisable (and cow's milk is a poor source of iron), either for convenience or through lack of trust in commercial (western) tinned milk and food. Hindus are concerned about beef, Muslims are forbidden to eat foods with pork or lard and vegetarians avoid both.

1.3.2.2 Infectious and parasitic diseases

Asian infants are more exposed to a wider variety of infectious and tropical diseases than White infants. This is due to frequent visits by the infants to the Indian subcontinent

where they are more exposed to these diseases and also there is a greater probability that an infective adult from Pakistan, India or Bangladesh may visit them.

South Asian families visiting Bangladesh, Pakistan and India do not always take adequate Malaria prophylaxis. Since these medicines are to be taken regularly for a long period, most of the time the families discontinue it. Some of them do not take them at all. Prophylaxis is sometimes not given to the infants for various reasons such as these drugs (proguanil and chloroquine) are toxic for the infants.

1.3.2.3 Genetic disorders

The third type of diseases are the genetic disorders. There are many examples when the offsprings born out of consanguineous marriage develop some sort of disorders. Percentage of such marriage is highest among Pakistanis, and also common among the Bangladeshis (McAvoy, 1990). Since the custom of 'arranged marriages' are still popular among these communities, marriage between first- and second-cousins is a common practice. Such marriages have led to relatively high frequencies of genetic disorders such as Beta-thalassaemia, Glucose-6-phosphate dehydrogenase, Haemoglobin D-thalassaemia, Haemoglobin E-thalassaemia, multiple malformation etc.

1.4 Background study on infant feeding

“Patterns of culture and social behaviour are often easy to see from the outside, but may not, to people who know the whole picture from the inside, seem at all accurate. Furthermore you cannot treat individuals on the basis of generalizations about their culture, but you have to know the culture in order to understand the individual brought up within it.”

(Henley, 1997).

Infant feeding is an extremely important topic for many reasons. The early development and growth of the infants are directly related to what, when and how they are fed. Infant

feeding generally refers to three types of feeding: breast-feeding, bottle-feeding and weaning food. A large number of studies have been conducted in the past dealing with different aspects of infant feeding among the various communities of the UK. According to the definition of Labbok and Krasovec (1990), feeding outcome was classified into (i) exclusive breast-feeding (ii) high, medium and low partial breast feeding, (iii) token breast feeding and (iv) formula feeding. Initiation of breast-feeding was defined as the baby having been put to the breast even if only once (Pat, 1999).

Akre (1989) noted that “*Breast feeding of human infants has been a common feature of all cultures and all times because our very survival has depended on it*”.

Medical research is also showing the benefits of breast-feeding for both mothers and babies (Howie, 1990; Wilson, 1998). However, nutritional requirements of healthy newborns vary widely according to weight, gestation age, rate of growth and environmental factors. Infants fed only breast milk require no additional water, even in any hot climate (Almroths, 1978), unless another high-osmotic food is given or they lose excessive volumes of water due to diarrhea or become severely over heated. Regarding the frequency of breast-feeding, it is advisable for many reasons to feed young babies whenever they indicate need (Neifert, 1988; Clarke, 1989). It is worthwhile to mention here that newborn infants are able to breast feed vigorously within the first two hours after birth. There is no doubt that lactation is the most energy efficient way to provide for the dietary needs of the young.

Prevalence of breast-feeding in the UK is associated with age, social class and poverty (Thomas, 1997). A woman’s choice of feeding has been shown to be strongly associated with her husband’s opinion if he had a definite preference, and with the feeding method of her own mother (Jones, 1987). The qualitative study by Hoddinott (1999) on 21 white women from low income groups in the east end of London reveals that embodied knowledge gained through seeing breastfeeding may be more influential than theoretical knowledge about the benefits of breastfeeding. The study also highlights that embarrassment is a major factor for not continuing with breast feeding. Mathews *et al* (1998) found that the major reasons for not choosing breast-feeding were embarrassment

and discomfort with the idea. They also state that younger and less educated mothers with lower incomes were less likely to start breast feeding and more likely to feed their babies cheaper evaporated milk. Bacon (1976), MacGowan (1991) and Nyqvist (1997) also found similar results regarding breast feeding. In developed countries, educated mothers from higher social class breast feed their infants for longer periods, but on the other hand, in developing countries, according to Rogers (1997) and Marandi (1993), affluent mothers with a high educational level had a shorter duration of breast feeding.

Chaturvedi and Banait (2000) conducted a hospital-based study on 600 mothers in India during 1996-97 to assess their knowledge and attitude regarding breast feeding. Among those who were attending antenatal classes and those who were not attending antenatal clinics, statistically significant differences were found with regard to knowledge about positive breast-feeding. Mothers who attended the antenatal classes wanted to initiate breastfeeding early and did not want to give water supplement.

Hull *et al* (1990) conducted a study in all the major hospitals throughout Indonesia to assess the mothers' practices and attitudes regarding several key aspects of breastfeeding. Among other things, the surprising outcome was that none of the mothers understood the importance of frequent suckling in promoting milk production. Although this study was conducted in a different geographical location, it highlights the importance that would-be mothers need to be taught through health professionals, relatives or friends such that they would be able to make the right decision regarding infant feeding.

The information supplied by the health professionals such as GP's, health visitors and midwives plays an important role in mother's decision-making process in respect of infant feeding. The limitations of a health promotion model and the need for more socio-cultural models for understanding how a woman makes decisions about infant feeding is discussed by Maclean (1989). She highlights the lack of qualitative research in a topic where surveys predominate. Rajan (1990) conducted a questionnaire survey of 549 women about infant feeding practices and they found that women who experienced a delay of more than half an hour between birth and first suckling, and those who were given pethidine during labour breast fed for a shorter period, as did those who gave

complementary bottle feeds. By considering the women's reasons for discontinuing or not initiating breast-feeding, this paper highlights that improved social support from health professionals and others in the postnatal period can increase breast feeding success rates. In another qualitative study on an inner city family practice, Marchand and Morrow (1994) state that timely interventions in the postpartum period by service providers often play a critical role in the initial success of breast feeding. From their study, five key themes emerged (i) knowledge alone does not ensure any particular decision about breast feeding, (ii) support is primarily from family networks, with health care providers in a secondary role, (iii) mothers and their families want to provide their infants with quantifiably sufficient nourishment, (iv) physical and psychosocial satisfaction with the feeding method chosen is important, and (v) breast-feeding in public is not acceptable. Ekwo *et al* (1983) found that friends who had successfully nursed infants were as influential as immediate family members in the mother's decision to breast feed. He also mentioned that women choose breast feeding because they believe that it would provide protection to infants against infection. Kaufman and Hull (1989) conducted a prospective study to examine the influences of the social network on the choice and duration of breast feeding among 125 mothers of pre-term infants. It was found that women with no source of support were six times more likely to cease lactation than women with six sources of support.

The relatives of mothers, especially the older female members of the family, play a very important part in deciding the feeding practices of the South Asian infants. As already shown in Table 1.5, about 40% of the Bangladeshi households have a relative (for example mother-in-law, sister-in-law) staying with the mother. However, little work has been carried out to evaluate these important sources of information and the extent to which they serve the needs of new mothers, breast-feeding or otherwise. A study conducted by Bentley *et al* (1999) examines how individuals within a woman's life influence her infant feeding intention. They interviewed 441 African-American women and found that friends and other relatives were not very influential. Grandmothers' opinions were important, but their influence was reduced after considering the opinion of the baby's father.

There are also some cultural factors which determine the breast feeding pattern. For example, there is a belief amongst many South Asian mothers that colostrum is harmful (Rogers, 1997), resulting in breast feeding being delayed for two to three days until the milk 'comes in'. This should not be interpreted as indicating a desire not to breast-feed at all. With encouragement and support and the use of glucose feeds, lactation can be established while still respecting women's cultural beliefs (McAvoy, 1990).

The significance of culture is highlighted from the finding that eight out of ten mothers who stopped breast-feeding in this country said they would have continued breast-feeding for a much longer period if they were in their country of birth (Thomas and Avery, 1997). In fact what may have happened is that the mothers of the South Asian community are rather confused and the breast-feeding message remains unheeded. Asian mothers start breast-feeding as part of their culture and when they 'feel' that the baby is not getting the proper nourishment, they would try to top it up with other food. Again, there is a great need to identify the 'factors' responsible for such beliefs.

The survey by Thomas and Avery (1997) reports that the incidence of breast feeding in the first week of baby's birth is highest among the Bangladeshi community (about 90%) in comparison with 62% for the White population, which is in line with the accepted practice in the Indian subcontinent. It is also revealed that of the mothers who started to breast-feed, Pakistani and Bangladeshi mothers stopped breast-feeding sooner than either Indian or White mothers. Another study on Bangladeshi women (Jones, 1987) based in Tower Hamlets, found an increased tendency to bottle feed. Asian mothers were also more likely to be both breast and bottle feeding at discharge from the hospital. However, none of these studies clearly explains the reasons for this situation.

Jaeger (1997) conducted a qualitative and quantitative study of infant feeding practices in three neonatal care unit (Intensive care units for the infants). They interviewed 44 mothers of diverse ethnic origin and found that all the mothers interviewed had at some time provided breast milk and rates of breast feeding on this unit were higher than the

neonatal averages. Mothers also expressed some difficulties with hospital facilities and researchers expressed that there was a need for more consistent advice and practical help for mothers.

As the baby grows there is more demand for a balanced diet and breast feeding must be supplemented by other food which is called *weaning food*. Weaning may be defined in nutritional terms as the period of dietary changes during which a baby progresses from breast milk or 'formula' to family diet ('accustoming' in old English) (Duggan *et al*, 1992). The period between 4 to 6 months of age has been seen as suitable for infants to begin to adapt to different foods, food textures and mode of feeding. Around 6 months of age breast fed/ formula fed infants require complementary feeding and are fully developed functionally to cope with it. When the head is held erect, hands are put to the mouth and semi-solid foods are accepted without difficulty (indicating the disappearance of extrusion reflex) an infant is ready to begin receiving complementary weaning foods (Akre, 1989). From the nutritional point of view, complementary foods slowly replace breast milk/ formula milk, which is a complete and balanced food.

In analyzing the mothers' assessment of infants' eating habits, Thomas and Avery (1997) mentioned that Bangladeshi mothers reported more feeding and weaning problems than any other group as the children grow older. Such views mentioned by the mothers are, in many cases, often a subjective opinion rather than a reflection of actual food intake. This may be related to the culture and a popular prejudice that a mother will harm her own baby, if she says that the baby's health is very good. To what extent this or any other factor has influenced feeding practices is a matter for further investigation.

A study conducted in the Borough of Tower Hamlets (Hilder, 1993) has shown that the risk of a subsequent birth within 12 to 18 months for Bangladeshi women was at least twice that reported nationally for women in the UK. Such short intervals in childbirth are stressful to both the mother and infant. It is probable that subsequent childbirth may also influence the feeding practices of infants. A closer study specifically aimed at the

relationship between subsequent childbirth and infant feeding will reveal more interesting information.

The quality of the weaning diet of Asian babies living in Britain has been questioned (Jivani, 1978; Jones, 1987). Warrington and Storey (1988) have reported that the Asian mothers were found to have introduced solid food earlier than they would have done in the Indian subcontinent. This has also been observed in other studies (Goel *et al*, 1978). The study also shows that, unlike Caucasian mothers, Asian mothers did not adopt their own home cooked food but gave mostly cereal and dessert varieties of commercial weaning foods avoiding many of the savoury varieties available in the market containing non-halal meat. By 9-10 months of age, Asian babies slowly adopt normal family food such as rice, lentils or may be a bit of curry. But in between 4 to 9 months, there may be a gap in balanced nutrition among the Asian infants. This practice has been noted by, among others, Harris *et al* (1983). There is therefore an urgent need for effective education on infant weaning in this community (Jones, 1987).

Several studies on infant feeding and weaning (for example, Duggan *et al*, 1992, 1996; Warrington, 1988; Treuherz *et al*, 1982) reported that the evidence provided by health professionals working with Asian communities have suggested that the babies born to mothers of Bangladeshi, Indian and Pakistani origin may not have achieved their full growth potential and this may be due, in part, to early feeding practices.

Some interesting quantitative information about the relationship of growth and infant feeding are provided by Thomas and Avery (1997). They found that at nine weeks old White babies are heavier than Asian babies. Over the first fifteen months, Pakistani and Indian boys and girls gained more weight than Bangladeshi boys and girls. At nine weeks white boys were longer than Asian boys. Both White boys and girls had a longer head circumference at all ages than Asian babies.

The recent study by Patel *et al* (2004) shows that there is a significant association between postnatal depression and infant growth among infants from low income families

in South Asia. Although the study was conducted in India, it will be unreasonable to assume that such a situation is not possible among the Asian communities of Britain. Given the fact that prevalence of postnatal depression among this community is believed to be higher than the accepted norm of 10-15%, this appears to be an area yet to explore.

1.5 Overall objectives based on the literature review

The literature review presented in this chapter highlights that although a body of research has been carried out on infant feeding practices, most of the works appear to have concentrated on one or few particular factors and the works are either qualitative or quantitative. In other words, these works are mostly of an isolated type. But as pointed out before the infant feeding practices amongst the South Asian communities are determined by a complex interaction of socioeconomic factors, cultural, religious and family values and beliefs. So there is a need for research that will look into all of these matters together, on one particular sample and within a particular time period. Hence the methodology for the current study has been designed such that both quantitative and qualitative data are collected during the course of the work.

Most households of Asian people especially Bangladeshis and Pakistanis have female relatives. They are also very influential on the new mother. But very few studies have seriously looked into this matter. There is great need in studying the role of female relatives on infant feeding.

The literature review also shows that the level of education and understanding of English among the South Asian mothers is low. On the other hand, midwives, health visitors and other service providers are mostly English speaking. So there is a possibility of service gap, which needs to be looked at more carefully.

Access to health care for South Asian people is still very poor. To improve the situation, more studies are required to establish the exact gaps in the health services. Also, it is

important to raise the awareness among young medical practitioners by providing them training on ethnic matters. In this context, McAvoy and Donaldson (1990) quotes:

“Number of habits and customs which are part of Asian culture may be unfamiliar to the indigenous population, and may give rise to negative reaction or misunderstanding.”

It was also highlighted that the extent of postnatal depression is probably higher among the SA mothers. Since the mother infant bonding is crucial to the development of a child, this issue needs careful investigation.

Finally, despite the potential barriers, every new generation in the South Asian population is changing in their knowledge, education and cultural values. The extent to which these changes impact on the health of the infants and their mothers is a particularly important area of investigation.

1.6 Outline of the thesis

The thesis is divided into five chapters. The next chapter presents the results and analysis of the work carried out on a Bangladeshi sample of Loughborough. The main emphasis of this work is on revealing the detailed feeding practices and relevant influential factors. Chapter 3 describes the study on a mixed South Asian sample in the city of Newcastle Upon Tyne. The focus here is on maternal mental health and related issues including feeding pattern. This study is an in-depth investigation on the cultural and religious factors that are essential in understanding the South Asian mothers' minds. Chapter 4 brings together the findings from the two separate studies and highlights the important observations throughout the course of the work. Some critical assessments are also made in this chapter. Finally, conclusions and limitations of the study are briefly enumerated in chapter 5. References and appendices are included at the end of the thesis.

Chapter 2

Study 1: Loughborough Study

This chapter describes the work carried out in Loughborough. The bulk of the study consisted of information collected through a semi-structured questionnaire. To clarify certain aspects and obtain new information, a focus group discussion was also held. The important findings from these studies, both quantitative and qualitative, are presented in this chapter. The objectives of the study and the methodology of the investigation are also briefly described.

2.1 Objectives

The objectives of this phase of the study are as follows:

- To gain a broad picture of the socio-economic status of the sample.
- To have a better understanding of the SA baby feeding practices and the influencing factors.
- To establish the role of primary health care services in relation to infant feeding.
- To identify gaps in service provision in relation to childbirth and the perinatal period.
- To use this study as a background for a more in-depth study of maternal mental health issues on a larger SA sample.

2.2 Methodology

As already mentioned, the bulk of the data were collected through a semi-structured questionnaire (Appendix A). The questions were broadly grouped under four categories namely, questions related to parents and babies and questions related to infant feeding and service from health professionals. The groupings were done such that a particular 'theme' of information is highlighted at every stage of the data collection process, which is believed to be convenient for the participant as well as for the researcher. Most of the questions were expected to yield closed answers. However, a significant proportion of

questions were deliberately kept open-ended in order that the mothers could speak out freely.

The primary sources from which the questionnaire was designed are the Infant Feeding survey by Thomas and Avery (1997) and the COMA report (1994). However, most of the questions included in the present study (Appendix A) have been modified and, in particular, the number of choices reduced for practical reasons (National survey vs. local survey). All of the open-ended questions (descriptive answers) were designed by the author. It was thought that, for a less articulate community such as this, open-ended questions would reveal interesting information. The questions that were specifically designed by the author are as follows:

- (i) All of the questions of section I.
- (ii) Questions 9-12 and 22-26 of section II.
- (iii) Questions 3-5, 10, 12, 14, 16-18, 23-28 and 40-41 of section III.
- (iv) All of the questions of section IV.

Selection of sample

Since the main objective was to look into infant feeding, including initiation of breast feeding and weaning, only those mothers whose most recent child was less than 12 months old were included in the study. The procedure to identify these women was as follows.

In the borough of Charnwood, the Bangladeshi population are highly concentrated in just two wards of Loughborough, namely Hastings and Lemington. These two wards are near the town centre. According to the census data of 2001, 80.7%^a of total Bangladeshi population of Leicestershire live in these two wards only. Names of Bangladeshi women who had either had a baby during the previous one year or who were expected to deliver a baby within a few weeks were collected from three Bangladeshi Liaison workers working for the community. During the chosen time period (December 2001 to May 2002) a total

^a According to 2001 census data, the Bangladeshi population of these two wards was 1,118, that of Charnwood was 1,249 and of Leicestershire county (excluding Leicester City) was 1,385.

of 32 names were collected^b. These mothers were then contacted by letter asking whether they would like to participate in a one-to-one interview with the researcher. Out of them, two mothers did not reply after one reminder and two more declined to participate without mentioning any reason, leaving a total of 28 participants. The fact that only the Bangladeshi mothers were contacted for this study is due to the researcher's fluency in Bengali. Inclusion of other SA ethnic people would have required an interpreter but was not possible due to lack of resources. The Bangladeshi community in the UK also has a more recent migration history, and is more socially and economically disadvantaged compared with other Asian ethnic groups in this country.

Completing the questionnaire

The questionnaires were completed during interviews with the researcher. Interviews were conducted in Bengali and most of them took place at participating mothers' homes at their chosen days and times. Some interviews were conducted in a local day centre. Few mothers chose to fill the questionnaires themselves and were allowed to do so. In this method of interview, even for mothers with very poor knowledge of English, there was no need for any translation. At the same time, the need for an interpreter was also avoided. Each interview lasted for about one hour.

Only in four cases, the husbands and/or another adult relatives were present either during the whole interview or part there of. This was clearly undesirable, but the mothers declined to give interview otherwise. As will be mentioned during the data presentation below that due to cultural factors, it is impossible for the young mothers to disobey their elders or husbands. During the whole process of the study, this was the only non-compliance observed by the researcher.

Confidentiality and legality

Mothers were assured of strict confidentiality. The names and addresses did not appear in the actual questionnaire. It is only on the front sheet, which is also the consent form, that the address and name were written. After the interview, this page was separated from the

^b The author's familiarity with the community led to believe that it was unlikely that the number of mothers unaccounted for, but within this category, would be significant.

questionnaire and a code number (1-28, chosen randomly) was assigned. The research was approved by the Ethical Advisory Committee of Loughborough University.

Data analysis

The questionnaire resulted in quantitative as well as qualitative data. The quantitative data were analysed using SPSS 11.5. A total of about 120 variables were entered into the data editor. The qualitative data were not entered into the SPSS worksheet, but were analysed separately as explained in section 2.4 of this chapter. Every single variable was analysed for descriptive statistics and only the important ones are included in the thesis. Attempts were made to find association between different variables, using appropriate statistical tests (chi-squared and Fisher’s exact test) and the meaningful results are presented in section 2.3.4.

2.3 Findings from questionnaire survey (Quantitative)

The questionnaire was divided under four sections (Appendix A). However, for the purpose of presentation, the results are presented under three headings.

2.3.1 Overall socio-economic status of the participants

The average age of women in the sample is 26 years and that of the men is 31 years 5 months (see Table 2.1). In terms of place of birth, all fathers except one and all mothers except four were born in Bangladesh and then migrated to the UK either with their parents or through marriage. The greater number of women than men born in the UK is typical for SA community, where girls are usually encouraged to marry men from their country of origin (Ballard, 1990).

Table 2.1: Age of parents (in years)

	Minimum	Maximum	Mean \pm SD
Mother’s age	19	36	26 \pm 4.2
Father’s age	22	41	31.4 \pm 4.5
Age difference	0	16	5.5 \pm 3.7

All mothers except just one are housewives. Among the fathers, unemployment level is high as shown in Fig. 2.1. Also, more than three-fifths of the men have no qualifications and are engaged in manual jobs.



Fig. 2.1: Employment status of the fathers

The effect of high unemployment and lack of skills is reflected in the net family income data as shown in Fig. 2.2. It is worthwhile to mention here that this data may not be the true reflection of the household for two reasons – firstly, women are sometimes unaware of the actual income or they do not feel comfortable revealing such information.

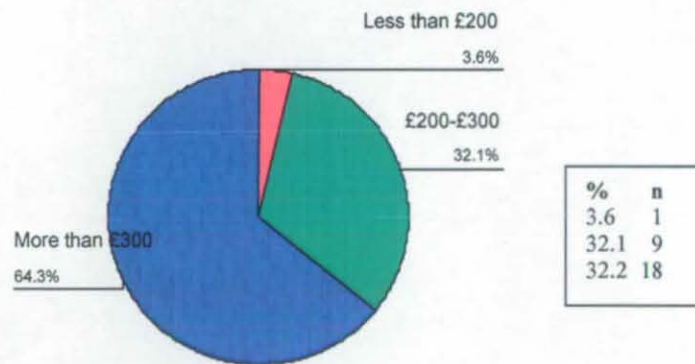


Fig. 2.2: Net weekly family income

The data related to property ownership, property type and size are shown in Table 2.2. It shows that about a third of the participants live in either council owned, rented properties or are living with friends and families. Most families live in two or three-bed terraced houses.

Table 2.2: Property related data

Ownership		Property description		Size of property	
Type of ownership	%(n)	Type	%(n)	No. of bedrooms	%(n)
Owned by council	10.7(3)	Terraced	85.7(24)	2 bedrooms	25(7)
Owned by parents	71.4(20)	Semi-detached house	10.7(3)	3 bedrooms	46.4(13)
Privately rented	10.7(3)	Detached	3.6(1)	4 bedrooms	21.4(6)
Living with family and friend	7.1(2)			5 bedrooms	3.6(1)
				6 bedrooms	3.6(1)

57% (n=16) of the respondents stated they were very happy with their property and 43% were happy. Interestingly, no one said that they were unhappy about where they live although there was an option for this. 57% of the families did not have a car.

Figure 2.3 shows the household composition by percentage in terms of number of people living in households (including the parents).

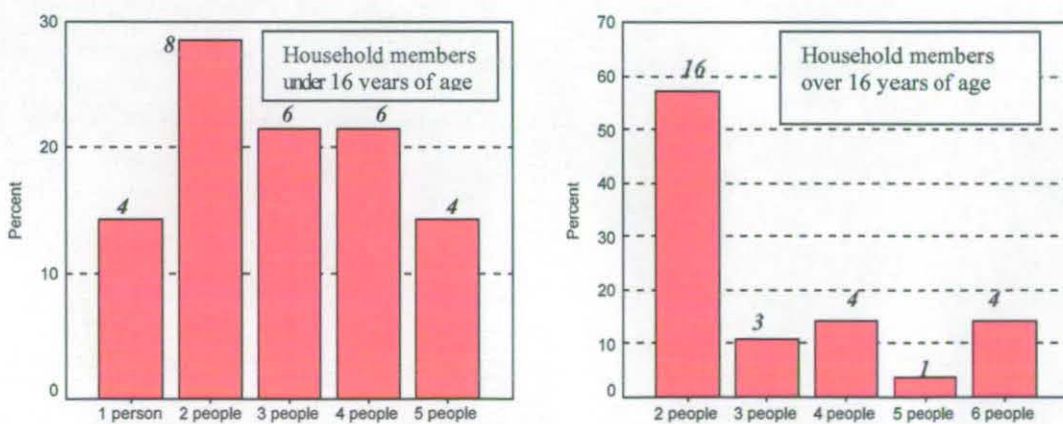


Fig. 2.3: Number of people living in a household
(Numbers in italics represent actual counts)

One common characteristic of South Asian households is the presence of adult relatives as shown in Fig. 2.4 In this sample, half of the families have at least one adult relative compared with only 7% for the mainstream white population. The most common relative is mother-in-law, followed by father-in-law and sister or sister-in-law or both. Culturally, adult relatives are held in great esteem and their opinions are not questioned, particularly when the opinions are from mother and father-in-law. Female adult relatives play a crucial role during pregnancy, childbirth and thereafter. More will be discussed about these later in the thesis.

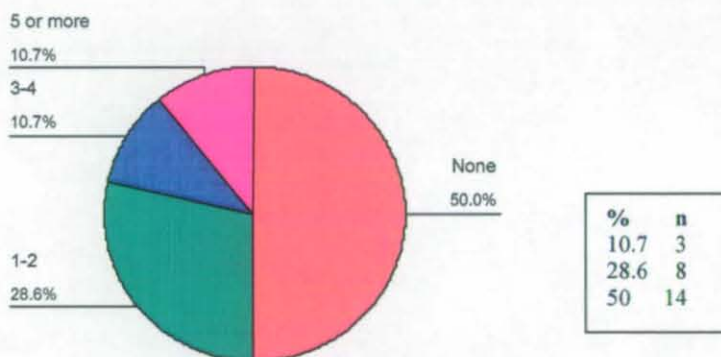


Fig. 2.4: Distribution of households with adult relatives

The literacy level and knowledge of English assessed by the participants themselves are shown in Table 2.3. It is interesting to see that although everybody (except one father) went to school up to 16 years, yet a large proportion of the sample (35 to 50 %) said that they can understand English but cannot read or write. This can only be explained by the fact these mothers/fathers did go to school (possibly in Bangladesh) but did not study English properly. This is a very serious hindrance towards service delivery and will be discussed later.

Table 2.3: Literacy level and knowledge of English of the parents

Level of Education			Knowledge of English		
	Mother %(n)	Father %(n)		Mother %(n)	Father %(n)
No schooling	0(0)	3.6(1)	Excellent	53.6(15)	42.9(12)
Left school after 16 years	71.4(20)	42.9(12)	Can understand but can not read or write	35.7(10)	50.0(14)
Left school after 18 years	14.3(4)	21.4(6)	Poor	10.7(3)	7.1(2)
Higher level	14.3(4)	32.1(9)			

The language spoken at home is essentially Bengali and only 10% (n=3) said that they speak in mixed language – both English and Bengali. All of the participants are Muslim by religion and usually eat ‘halal’ food. Just one mother identified herself as a vegetarian, while the rest said that they eat all kinds of food.

Smoking is very high among the sample. About three-fifths of the households have at least one smoker (Fig. 2.5). All of the smokers are men. The risk of passive smoking seems to be high as well. For example, when asked about the dangers of smoking, 14% of the sample said that ‘it does not affect the babies’ as shown in Fig. 2.6. This clearly shows that the message about dangers of passive smoking is not getting into the community so well.

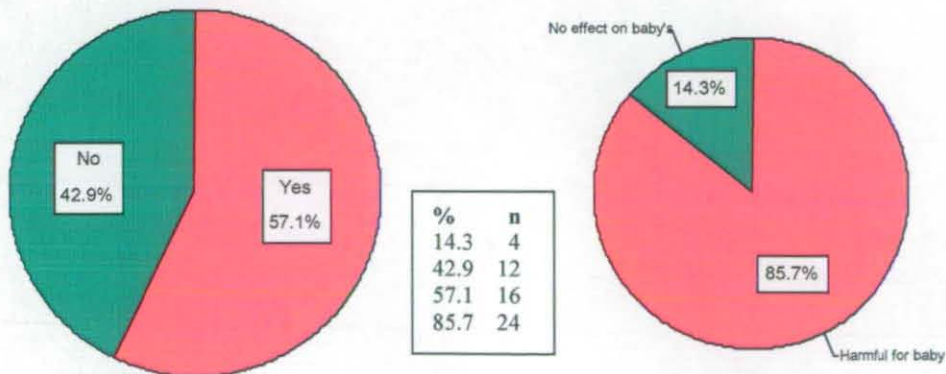


Fig. 2.5: Percent of household with smokers

Fig. 2.6: Women's opinion of passive smoking

57% of the participants said that they take the decision about daily food menu. About a quarter take the decision jointly (Fig. 2.7). More than 80% of the mothers cooked the household food themselves. In cases where the mother did not cook herself, it was done by a relative such as the sister or mother-in-law. 'Other' in this figure includes adult relatives such as mother-in-law, sister-in-law and sister.

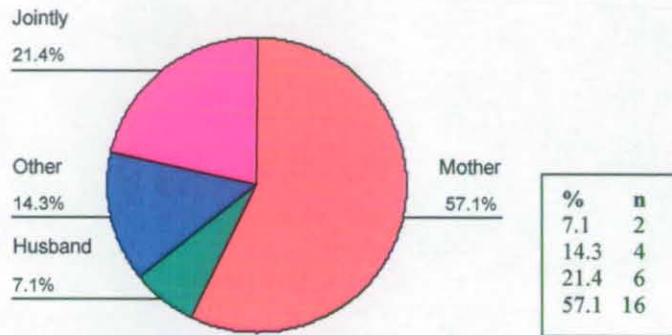


Fig. 2.7: Decision about daily food menu

Most of the mothers identified themselves as in good or excellent health (Fig. 2.8). Only a few of the participants (18%) changed their dietary habits after they had had their babies.

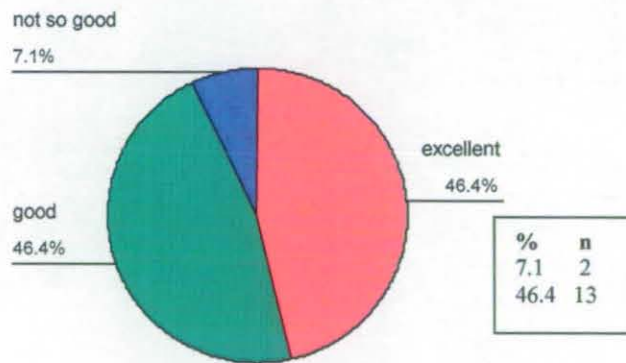


Fig. 2.8: Mothers' own health

Mothers were asked to recollect how their own mothers used to feed them as babies. The answers are mixed, but 50% said that they were breastfed only. The responses are to be treated with caution because the answers were not verified by their mothers or other sources. In fact, the young mothers somehow heard from either their own mothers or

other family friends or relatives. Hence the information is subject to uncertainty. The responses are given in Fig. 2.9.

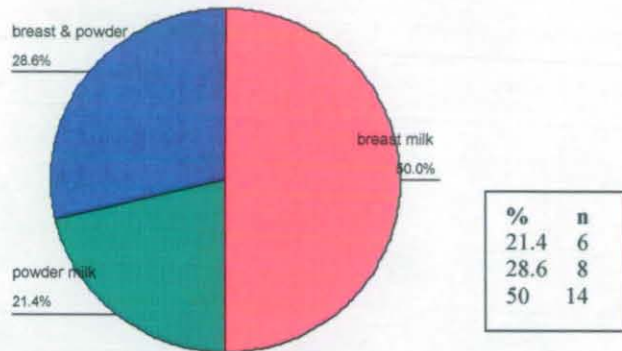


Fig. 2.9: How the young mother used to be fed as a baby

2.3.2 Infant feeding

Before presenting the results related to infant feeding, it is worthwhile to look at the characteristics of the babies under consideration. All of the babies were born in Leicester General Hospital. The sample consisted of 39.3% male (n=11) and 60.7% female (n=17) babies. The mean age was 4.1 months (SD=2.9, range, 1-10 months). The mean gestation age of the mother (reported by the mothers themselves) was 38.8 weeks (SD=3.6, range 23-42 weeks). Also, according to the mothers, the health status of the most recent child are classified as 85.7% excellent, 10.7% good and 3.6% (representing just one baby) bad. The birth-weights, reported by the mothers, are given in table below and compared with national data.

Table 2.4: Birth-weights of most recent child (kg)

	Male		Female	
	Mean	Std dev (range)	Mean	Std dev (range)
Present study	3.04	0.51 (2.31-3.66)	2.96	0.53 (1.5-3.63)
National data for SA sample, Thomas (1997)	3.2	0.5	3.0	0.5

2.3.2.1 Breast and bottle feeding

Several questions were asked regarding breastfeeding of babies. All mothers, except one, breastfed their babies, which means that the incidence of breastfeeding is very high among the sample, and is essentially in line with other observations such as, Thomas and Avery (1997). Most mothers (53.6%) started to breastfeed their babies in the hospital, but nearly half of them (42.9%) did not start breastfeeding until they returned home (Fig. 2.10).

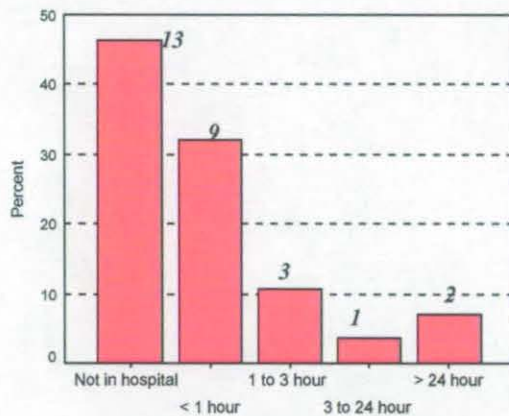


Fig. 2.10: How soon mothers started breastfeeding after baby's birth
(Numbers in italics represent actual counts)

82% of the mothers knew about the positive effect of breastfeeding. Also more than half of the mothers said that the health professionals showed them how to breastfeed their babies effectively.

Among the survey sample, 50% of the mothers were breastfeeding at the time of interview. Several had stopped breastfeeding by that time. The timing of breast and bottle-feeding are given in Figs. 2.11-12.

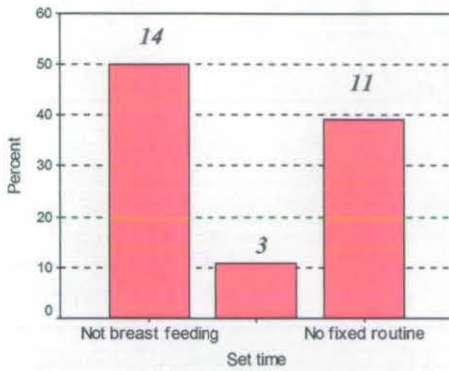


Fig. 2.11: Timing of breastfeeding
(Numbers in italics are actual counts)

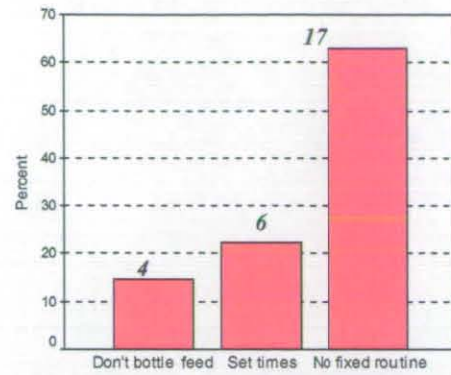


Fig. 2.12: Timing of bottle feeding
(Numbers in italics are actual counts)

It appears that most mothers are not so particular about the timing of bottle or breastfeeding. It is a bit unusual that most of the mothers even bottle-feed their babies without following a fixed routine.

2.3.2.2 Solid foods, additional drinks and supplementary vitamins

At the time of the interview, 57% of the infants (n=16) were introduced solid food. The other 43% babies were less than three months old and were not given any solid food. Of those who are given solid food, Figs. 2.13–16, show the age of introduction, type, frequency and amount of solid food given at each time respectively.

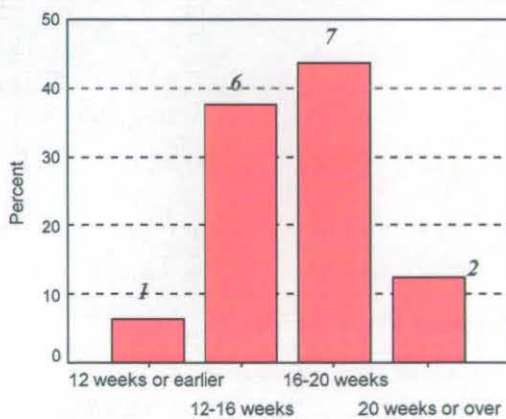


Fig. 2.13: Age of introduction of solid food.
(Numbers in italics are actual counts)



Fig. 2.14: Type of solid food given.
(Numbers in italics are actual counts)

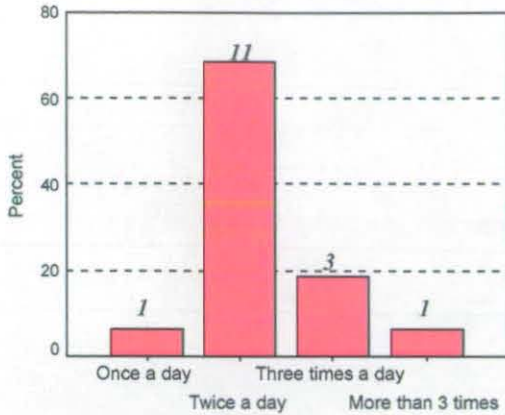


Fig. 2.15: Frequency of solid food
(Numbers in italics are actual counts)

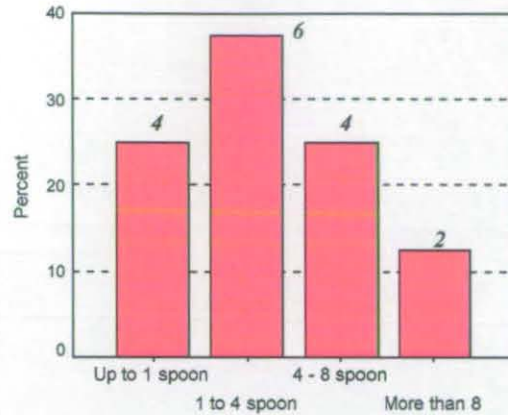


Fig. 2.16: Amount of solid food each time
(Numbers in italics are actual counts)

Mothers prefer shop prepared food compared to home cooked food. Most mothers prefer to give solid foods twice a day. As far as the feeding method is concerned, half of the mothers used spoons to give solid food and the amount of solid food given to them each time is also found to vary considerably (Fig. 2.16).

Regarding the advice about solid food, 50% said that they received no advice while a quarter of the mothers received advice from family members as can be seen in Fig. 2.17.

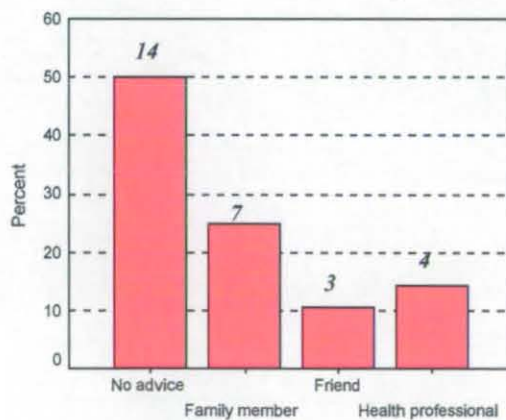


Fig. 2.17: Source of advice about solid food
(Numbers in italics are actual counts)

Asked if the mothers gave any fresh fruit to the babies, 40% said yes. Most mothers gave just one type of fruit and the others preferred two or more types as shown in Fig. 2.18.

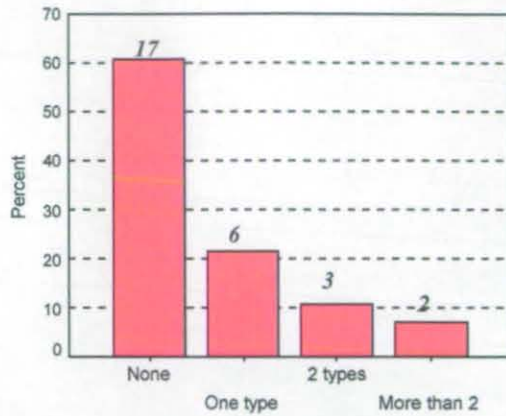
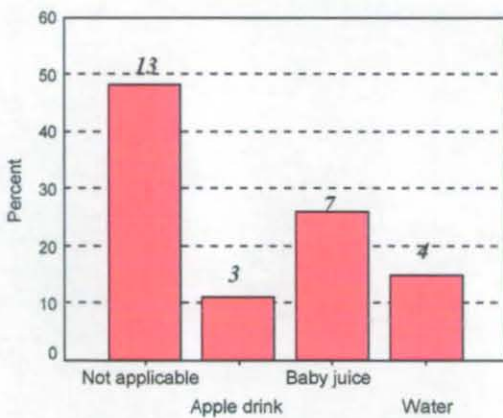
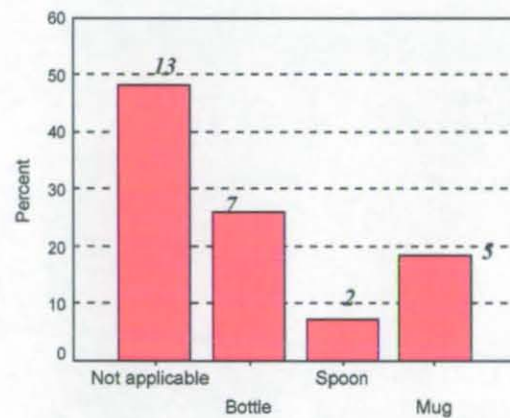


Fig. 2.18: How many types of fruits given to babies
(Numbers in italics are actual counts)

Regarding additional drinks apart from breast and bottle milk, about 50% said that they gave additional drink to the babies. As can be seen in Fig. 2.19, baby juice (a fruit juice prepared by baby food manufacturers) is more popular than other drinks. For giving drink to the babies, most mothers prefer to use bottle as can be seen in Fig. 2.20.



2.19: Additional drinks given to the baby^c
(Numbers in italics are actual counts)



2.20: How additional drinks given to baby^c
(Numbers in italics are actual counts)

Only 14.3% of mothers said that they gave extra vitamin to their babies. However, a quarter of the mothers did receive advice about giving vitamin to the babies. The main source of advice was the health visitors.

^c 'Not applicable' in Figs. 2.19-20 represents that these babies were not given any drink at all.

2.3.3 Perinatal care, service and help related

2.3.3.1 Antenatal check up and antenatal classes

Except one, all of the mothers had at least one antenatal check-up as shown in Fig. 2.21.

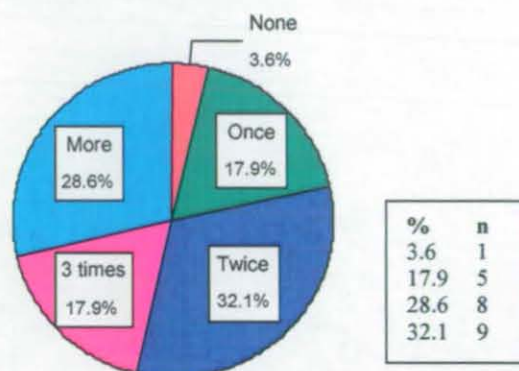


Fig. 2.21: Number of times mothers had antenatal check-up

Half of the women had two or three antenatal check-ups. This clearly indicates that the pregnant women take their pregnancies very seriously, and do not hesitate to see the health professionals.

On the other hand, antenatal classes are very unpopular. Only 25% of the mothers said that they had heard about such classes. The only source of information for this group of women was the health visitors. However, only 7% ever attended any antenatal classes and those who attended, mentioned that the classes discussed baby feeding. It is very clear from this survey that antenatal classes are not at all popular among the members of this community.

2.3.3.2 Findings about hospital stay during childbirth

Most of the mothers (57%) left the hospital less than two days and another 32% stayed between 3-5 days. Only 10% had to stay in hospital for more than 5 days as shown in Fig. 2.22.

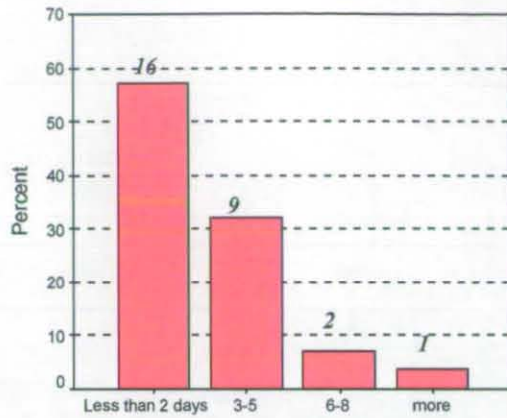


Fig. 2.22: Number of days stayed in hospital
(Numbers in italics are actual counts)

The other relevant findings about mothers' feelings during stay in hospital and quality of food are given in Figs. 2.23-24.

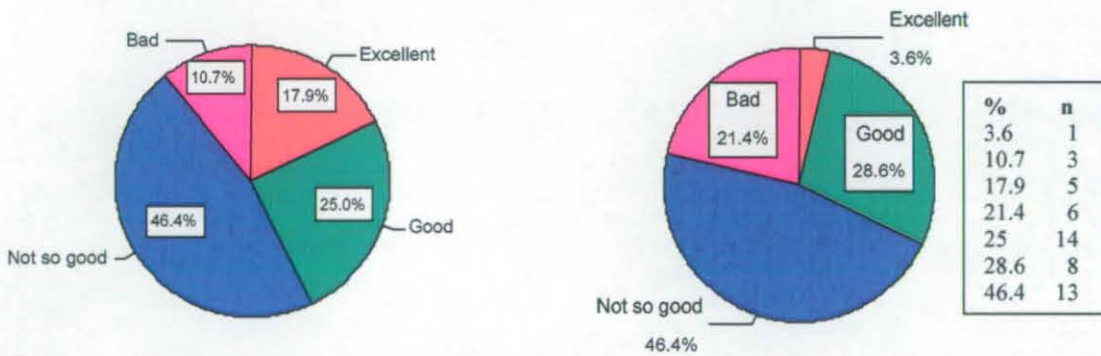


Fig. 2.23: Feeling in hospital

Fig. 2.24: Mother's comment about hospital food

Almost half of the mothers were not happy about hospital stay and quality of food that was served. A significant proportion was very unhappy about the treatment they received from hospital staff. These are detailed further in qualitative data analysis (section 2.4) of the thesis.

Only 14% of the mothers said that there was somebody available who could speak her own language during the time at hospital. Regarding travel to hospital, about two-thirds (64%) went by ambulance, while the rest went by car. Women found it difficult to travel from Loughborough to Leicester General by public transport.

About one-third of the mothers felt lonely or left-out during pregnancy. Asked if the situation would have been different in Bangladesh, three-quarters said 'yes', 14% said 'no' and the remaining respondents said 'don't know'.

2.3.3.3 Advice and service

It is very common and well known that language barrier, lack of understanding of cultural and behavioural matters of the ethnic minority people by the health professionals is a cause for concern for service delivery and uptake of service. The mothers are likely to get advice from two different sources namely adult relatives and health professionals and interestingly, a third of the participants said that the advice and information did vary (Fig. 2.25). More will be discussed on this issue later in the thesis.

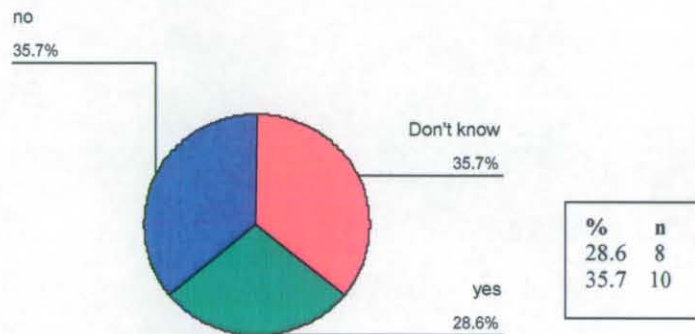


Fig. 2.25: Variation of advice between health professionals and relatives

Also, one quarter of the mothers said that they faced difficulty in getting help and services from health professionals as shown in Fig. 2.26.

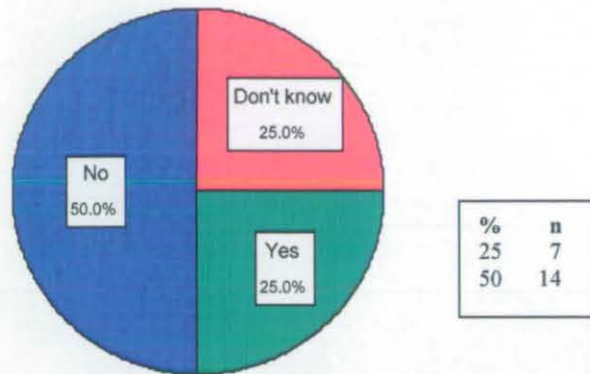


Fig. 2.26: Percent of participants found difficulty in accessing help and advice from health professionals

2.3.4 Statistical analysis of data

Cross-tabulations were performed between variables that are thought to be relevant to the research objectives i.e., those related to the feeding practices. To test the statistical significance Chi-squared tests were initially conducted - but they were found to be less meaningful due to the fact that 'expected counts' were less than 5. Fisher's exact test was hence used. After carefully analysing the cross-tabulated data and the associated p-values, only the ones that are particularly relevant in understanding the influencing factors on infant feeding are included in this section. Although statistical significance was not achieved for most cases ($p > 0.05$), the observed trends are believed to be helpful for conducting future studies on the topic and can be used for sample size power calculations.

First the association between age of introduction of solid food to the baby and other variables are explored. The noteworthy findings are shown in Table 2.5.

Table 2.5: Age of introduction of solid food vs. other variables

Influencing factor	Category	Introduction of solid food			p- value (Fisher's 2-sided exact test)
		Earlier than 16 weeks n (%)	At or later than 16 weeks n (%)	Total n (%)	
Mother's level of education	Up to 16 years	4(44.4)	5(55.6)	9(100)	0.671
	More than 16 years	3(42.9)	4(57.1)	7(100)	
	Total	7	9	16	
Presence of adult relative	Yes	4(57.1)	3(42.9)	7(100)	0.615
	No	3(33.3)	6(66.7)	9(100)	
	Total	7	9	16	
Total family income.	>£300	9(90)	1(10)	10(100)	0.001
	<£300	0(0)	6(100)	6(100)	
	Total	9	7	16	

It can be seen that there is no association between the age of introduction of solid food and mother's level of education or presence of adult relatives. However, statistically significant association has been found between introduction of solid food and total family income ($p=0.001$). Mothers with higher family income are more likely to introduce solid food earlier than the recommended sixteen-week age (COMA report, 1994). On the other hand, the lower income mothers are likely to introduce solid food at or later.

Next, the association between initiation of breastfeeding and other variables are presented in Table 2.6 below.

Table 2.6: Initiation of breastfeeding vs. other variables

Influencing factor	Category	Initiation of breastfeeding			p- value (Fisher's 2-sided exact test)
		At hospital n (%)	Wait until go home n (%)	Total n (%)	
Mother's level of education	Up to 16 years	9(47.4)	10(52.6)	19 (100)	0.236
	More than 16 years	6(75)	2(25)	8(100)	
	Total	15	12	27	
Sex of the baby	Male	4(36.4)	7(63.6)	11(100)	0.257
	Female	11(64.7)	6(35.3)	17(100)	
	Total	15	13	28	
Total family income.	>£300	11(64.7)	6(35.3)	17(100)	0.257
	<£300	4 (40)	6(60)	10(100)	
	Total	15	12	27	

The cross-tabulated data show that a higher proportion of more educated mothers initiated breastfeeding in hospital compared with mothers with less education. It is also seen that proportionately more female babies are breastfed in hospital compared to male babies. Also, the mothers with higher family income are found to initiate breastfeeding in hospital than the mothers with less family income.

Finally, giving extra drink to babies in addition to milk has been found to be significantly associated with mother's level of education as shown in Table 2.7.

Table 2.7: Addition of extra drink vs. other variables

Influencing factor	Category	Extra drink in addition to milk			p- value (Fisher's 2- sided exact test)
		Yes n (%)	No n (%)	Total n (%)	
Mother's level of education	Up to 16 years	7(36.8)	12(63.2)	19 (100)	0.033
	More than 16 years	7(87.5)	1(12.5)	8(100)	
	Total	14	13	27	
Presence of adult relative	Yes	6(46.2)	7(53.8)	13(100)	0.706
	No	8(57.1)	6(42.9)	14(100)	
	Total	14	13	27	

Mothers with only 16 years or less of education are less likely to add any extra drink to their babies. Interestingly, those who add are proportionately the same. Amongst the more educated mothers, all but one are found to add extra drink. For the other association, it can be seen that the adult relatives are not influential on this issue.

2.4 Findings from the questionnaire survey (Qualitative)

As mentioned in the beginning of this chapter, some of the questions were deliberately kept open ended or some were designed to yield descriptive responses. This had advantages and disadvantages. The main advantage is that, women feel free to answer in their own way and are not pressured to ticking a specific pre-designed answer. Since these women are in general less articulate in their expression and use of vocabulary (Bowler, 1993), it was felt that such open-ended questions are suitable for them. Also, for a less researched community, such as this, the descriptive answers are expected to give clues to unexpected findings.

Analysing qualitative data is slightly more difficult than the quantitative data where robust and well-established statistical techniques exist and easy-to-use tools, such as SPSS, are available. The main difficulty is that the qualitative data are usually textual and observational and hence cannot be 'coded' so easily. Two popular methods for the analysis of qualitative information are the framework approach (Pope *et al*, 2002) and the constant comparative method (Boeije, 2002). In the framework approach, the data are categorised into various 'themes' after familiarisation with the full set of raw data (or a judiciously chosen subset if the data sets are too big). These are then indexed and rearranged for interpretation. This is clearly a tedious and time-consuming process. However, a careful and systematic approach can give rise to valuable findings. On the other hand, the constant comparative method uses 'comparison' as the prime mover for the analysis. According to Tesch (1990),

"The main intellectual tool is comparison. The method of comparing and contrasting is used for practically all intellectual tasks during analysis: forming categories, establishing the boundaries of categories, assigning the segments to categories, summarizing the content of each category, finding negative evidence etc. The goal is to discern conceptual similarities, to refine the discriminative power of categories, and to discover patterns."

The procedure adopted in this study is a combination of both. First the data were read again and again so that the researcher could familiarise herself with the bulk of the information that emerged from the interviews. All of the qualitative information were

first tabulated using a word processing software. They were then categorised into various 'themes'. The simple method of 'cut and paste' was followed in an iterative way, until the collected data were placed in identifiable and distinct groups. Clearly, software could be used for this purpose (Tesch, 1990); but it was not available and also the volume of data was not unmanageable. The use of software is only justifiable if the data sets were too big to be beyond the capacity of human memory. The time spent on identification of keywords for software could be substantial and hence the time required for the analysis could have been similar to, if not more than, the iterative process adopted in this work. The fact that most of the data were collected by the researcher herself in a face to face to interview was an additional advantage for this exercise. From the very beginning of the data collection phase, the qualitative information were compared within the same sample for any anomaly and inaccuracy; they were then compared with information from other similar or dissimilar samples in an attempt to interpret a particular trend and/or observation.

In the following sections, the outcomes of such analyses are presented under various themes.

2.4.1 Feeding related

Breast feeding

The message that breastfeeding is best for babies is very well known. Most mothers quoted that they were breast fed as an infant. Although such information may be biased, the consistent answers given by the mothers support the fact that the culture of breast-feeding is deeply rooted among this community. There was only one case where the mother mentioned that '*my husband does not like me breast feed*'. In another case, the mother complained that

'baby was not satisfied with milk supply which gradually decreased, so I gave bottle milk'.

The mothers also mentioned that they have been shown the effective breastfeeding method by health professionals i.e., nurses and midwives – presumably while in hospital. The influence of health professionals in this context is clearly remarkable.

As mentioned before, 43% of mothers did not start breastfeeding until they got home. The reasons mentioned by the mothers are as follows

I was tired.
I was not feeling well.
I was weak.
No milk came.

Only one mother mentioned that she was not sure whether she should try breastfeeding straightaway or not.

Feeding of other foods

A number of questions were asked to find out what other food and food supplements are given to the babies. In response to the question about how the mothers choose what brand of food they will give to their babies, there were mixed answers. The mothers followed the advice given by health professionals, adult relatives and friends and also *'just followed what others were following'*.

Among the fresh fruits banana seems to be the most common. The next popular fresh fruit is apple.

Asked if there are any concerns about baby's eating/feeding, a number of mothers complained that their babies were not eating much food. The answers were strikingly similar. However, there was no evidence that these babies had any 'real' problem in terms of growth or other development and all the babies, except one, were in good health (see section 2.3.2). Perhaps this is due to some cultural factors that if a mother says that her baby is eating properly, he/she would stop eating. Also, saying that the baby is not eating properly is one way of avoiding the 'nozor' (meaning 'evil look') of other people. It is relevant to mention here that a large proportion of the mothers of South Asian communities strongly believe in supernatural forces, black magic etc. and will be discussed in detail in the Newcastle study in the next chapter.

2.4.2 Influence of female relatives and other adults

Presence of female relatives is quite common in South Asian households and is also confirmed in the present study (Fig. 2.4). Mother, mother-in-law and sister-in-law of the participants play important role in the decision about what to cook. They are also the people who are in charge of cooking in cases where the participants do not cook. The influence is also noticed in choosing which brand of formula milk is to be given. One of the participants commented that

'My mum thinks Cow & Gate is best and I just carry on'.

Also, some mothers mentioned that they got advice about bottle-feeding and solid food from mother or mother-in-law.

2.4.3 Advice, help and support related

In terms of getting the most help during pregnancy and immediately after the baby's birth, women gave a mixed view. There is an overwhelming response that family members are the most helpful. Among the family members, husbands seemed to be the person who gave the most help. After that sister, sister-in-law and own mothers gave the most help. Only for three cases, health professionals are quoted as giving the most help.

The qualitative answers suggest that about 21% of the mothers thought that the advice given by health professionals and that given by adult relatives did vary. This is clearly a cause for concern, because the adult relatives are very influential and if their advice is significantly different from those of the health professionals, it might lead to further problems. However, except one mother who said that the advice varied in *'the way food is stored (in fridge) and milk is prepared'*, all others did not clarify their comments any further in the questionnaire. This issue is discussed in more detail in the focus group study.

2.4.4 Health concerns and health consciousness

Apart from high percentage of male smokers in the family (Figs. 2.5-6), the other health concern that emerged from the data is that only two mothers (out of 28) mentioned that they ate 'more fruit and vegetables' during this period. This clearly shows that there is a gap and the community needs to be educated.

Most mothers said that they use regular contraception methods. Pill is the most popular, followed by condoms. Interestingly, only one mother said that she stays separate from husband. This is in sharp contrast to the findings of the Newcastle study, to be presented in the following chapter.

2.4.5 Hospital experience

Only two mothers complained that there was no Asian or spicy food in the hospital. This is contrary to the menu at Leicester General Hospital where Asian food is always served. To explain this anomaly, the socio-cultural backgrounds of these two mothers were carefully scrutinised. Both of them were born in Bangladesh and identified their knowledge of English as 'can understand but cannot read or write'. One possible explanation is that the mothers could not read the menu and hence complained. One of the mothers arrived recently in this country while the other one has been living here for fifteen years. It is interesting to find that someone living in this country for such a long period of time and is still unable to read simple food menu written in English! Clearly, language is still the biggest single barrier to service delivery and uptake. A number of mothers found it difficult to communicate with the health professionals. Two mothers mentioned that they could not express their feelings in English. It may be worthwhile to mention that even with an interpreter one cannot express feelings so easily (Adams and Sobowale, 2003).

Experience of the hospital stay clearly varied. Although, the majority of the mothers were satisfied with the service they got from the health professionals, about a third of the mothers were disappointed for various reasons and to various degrees. Some of the comments are worth noting:

*The nurse was not very helpful.
Not enough staff and they were not friendly.
Bitchy nurse.
No one you can rely on.
I felt I was left out and the nurse was not helpful either.
Hospital too far from Loughborough.*

Except the last point, similar experiences were mentioned by many authors, and the reasons behind such comments lie in many factors such as racism (Anon, 1998; Karlsen and Nazroo, 2002), attitude of health professionals and mothers (Bowler, 1993), gaps in understanding each other's culture (Bowes, 1996), language barrier etc. This is a serious matter and needs to be looked at more carefully.

2.5 Focus group for mothers and the findings

As part of the investigation process, a focus group interview for mothers was organised at a local community centre in Loughborough on June 20, 2002. In this section, details of the focus group are documented.

2.5.1 Objectives

The main objective of the focus group was to find out the perceptions and feelings of the mothers on some issues that are directly or indirectly related to infant feeding. The second objective was to clarify some matters that emerged either through qualitative answers or quantitative data in the questionnaire. The third objective was to allow the participating mothers to speak out, so that 'notable quotes' can be collected.

2.5.2 Methodology

Focus group discussion is a popular method of information collection in qualitative studies (Adams and Sobowale, 2003; Condon *et al*, 2003). The greatest advantage of this method is that, it does not rely on a respondent's reading and writing ability and hence is very suitable for this sample. Also, since the participants build upon one another's comments, none of them has to be very articulate in their expressions.

The methodology followed for the design, conduct and analysis of the focus group is essentially the same as that described in Krueger (1994). The group consisted of six mothers and the researcher. Initially eight mothers from the study sample, chosen randomly, were contacted by telephone and all of them agreed to participate; but on the day of the interview, two of them failed to turn up – one due to family problem and the other decided to ‘change her mind’ without giving any reason. The details of the participating mothers (identified as M1 – M6) are given in Table 2.8, which shows the variation of the participants. At the same time, the participants were also homogeneous in the sense that they belonged to the same ethnic group and also were from the same geographical location i.e., borough of Charnwood. Hence the important criterion that ‘participants are of the same status’ (Krueger, 1994) was satisfied for the group.

Table 2.8: Characteristics of the mothers participating in the focus group

Characteristics of participants	M1	M2	M3	M4	M5	M6
Age	26.5	19.5	35.5	23.5	26	20
Country of birth	Bangladesh	Bangladesh	Bangladesh	Bangladesh	Bangladesh	UK
Education	Left school at 16 years	Left school at 18 years	Left school at 16 years	Left school at 18 years	Left school at 16 years	Left school at 16 years
English knowledge	Excellent	Excellent	Poor	Excellent	Understand but cannot read or write	Excellent
Weekly family income	200-300	200-300	>300	>300	>300	>300
Car owner	No	Yes	No	No	Yes	No
House type and ownership	Terraced Not owner	Terraced Not owner	Terraced Owner	Terraced Owner	Terraced Owner	Terraced Owner
Husband's occupation	Employed manual	Employed Non-skilled	Unemployed	Employed Non-manual	Employed Professional	Employed Manual
Presence of adult relative	Yes	No	No	No	No	Yes
No. of children	5	1	5	1	2	1
Age of MRC (months)	1	5	7	10	1	12
Health status	Excellent	Good	Good	Good	Excellent	Good

Information about the objective of the project along with their roles as participants was explained to the mothers in writing as well as verbally. The questioning route for the

discussion was also posted to them. The researcher herself conducted the group and acted as the moderator^f.

The discussion continued for about one and a half hours. After obtaining written consent from the participants, the discussion was tape-recorded and later transcribed. During the analysis, the major themes and topics were identified and notable quotes highlighted.

2.5.3 The questioning route

The key questions for discussion were made available to the participants well ahead of the focus group. These were:

- Differences between having baby and raising them in the early years in England and Bangladesh.
- How did you make a decision about feeding your baby? Any problems or concerns with bottle or breastfeeding.
- Importance of adult relatives and friends in getting advice about infant feeding including weaning. Weaning celebrations and traditions.
- Why do you think the people in your community do not attend antenatal classes, whereas they are very particular about doing the antenatal check up? What are the problems?
- If it is a boy or a girl, would you feed him/her differently?
- Views about overall health care provision from health services and professionals.

^f She has previous experience of conducting interview with South Asian women during another community based project (Noor, 1996) and also acted as a coordinator for a focus group for SA women under a Nuffield Centre project at Leicester University.

2.5.4 Differences in having baby and raising them in the early years in England and Bangladesh

On this issue, various comments were made by the mothers. All of them agreed that it is a lot different. When it comes to medical facilities, everybody agreed that here the hospitals are good and it is easy to get help from health professionals, for example, easy to get pain killers when needed, but sometimes it is difficult to make them understand their needs. One mother mentioned that here everything is so open –

'.. husbands even accompany you to the labour room. This is, of course, good that you get support from the husband even at labour. But in Bangladesh men do not usually go to the labour room.'

Another mother pointed out that here, there is more responsibility on the mother herself. She has to continue with her normal daily activities, such as taking children to school, maintain the household and care for the elders. There is limited help from other people even in families where there are adult relatives. In Bangladesh, there is a lot of help from relatives, friends and servants.

Having baby in Bangladesh is 'big news'. Everybody would know, would talk and would visit you. Whereas here everyone is busy. So the mothers don't feel themselves to be so much important.

Here in the UK, the health visitors encourage mother to follow a regular feeding pattern. Whereas, in Bangladesh mothers usually do not follow any fixed routine. At night the mother gets up to feed the child.

2.5.5 Decision to breast or bottle-feeding

Most mothers combine both breastfeeding and bottle-feeding. Mothers were all aware of the fact that breastfeeding is best for babies. Apart from health professionals, the other sources of information were quoted as:

'What else can be better than what is natural – breast milk is meant for babies, isn't it?'
'TV, leaflets are good sources.'

'My mum told me that I was a happy and healthy baby because she breastfed me'.

However, they mentioned that they thought about bottle-feeding as well. The general feeling was that they know breast milk is better for baby, but they are not convinced that it is enough. There is also pressure from older members of the family to give bottle milk. By encouraging bottle milk, the older female relatives such as mother-in-law can get more control of the baby – she does not always have to depend on the mother of the baby to feed.

One mother said that she exclusively breastfed her baby until about six months and commented that:

'To get enough breast milk, the mother needs to eat well and drink milk! You also got to try hard. After all this is best for your baby, mother's milk will give everything that a child needs'.

Regarding nutritional aspects of breast milk compared with cow's milk, there was a vague response. Only two mothers mentioned that it helps fight respiratory diseases and another mother said that breastfeeding reduces risk of breast cancer. Also none of them was aware of any specific nutritional value of colostrum.

Mothers were influenced by what their mothers used to do and what elders say, because

'..you know, they (adult relatives) know its better, they have experience!'

Most mothers felt that the babies are not adequately fed from breastfeeding only, because there is a clear perception of inadequate breast milk supply.

2.5.6 Weaning food – its introduction and choice

Weaning celebrations are quite well known to the mothers. However, they said that it is the tradition of Bangladeshi Hindus rather than Muslims⁶. They also acknowledged that some Muslims also celebrate weaning.

⁶ In Bengali, the weaning celebration is called '*mukhe bhat*' or '*annya prasan*' which literally means giving rice to mouth.

What usually happens in this country is that, between four to six months, there is a small celebration to start solid food for the babies. The food that is given by an elder member of the family to the baby is mostly dessert items bought from shops. Amongst home cooked food, the babies are given a tiny amount of rice cooked with fresh vegetables and lentils. The reason for choosing shop prepared food can be summarized by the following statement:

‘ Here you have a lot of stress – no help at all. So how can you manage extra time to prepare fresh foods? We just buy the stuff from shop – it’s not bad, but you know, it must have a lot of artificial stuff in it, isn’t it?’

Cultural factors are also important in mother’s choice of weaning food, as one mother quoted:

‘I always buy sweet/dessert baby food, because I am not sure if other foods (savory) is halal or not’.

2.5.7 Antenatal classes

None of the mothers who participated in the focus group attended antenatal classes. However, four of them had heard of them, but none of them thought that they were important. Few of the notable remarks made by the mothers are as follows:

‘.. because I didn’t need it. My mum gave me advice.’
‘I just didn’t go. Whatever came up, just came up and I found a solution from health visitor, mother’.
‘I just didn’t go to antenatal classes. Didn’t think it is important’.

2.5.8 Differences between advice of health professionals and relatives

There was a general feeling that the advice between health professionals and relatives did vary on some occasions – mothers were initially unsure about which specific points they would raise. But as soon as one mother raised a point, the discussion became lively and the participants seemed to have found their words.

One mother remarked:

'Health visitors would give their opinions and more advice – about medicine – about pain relief. Health visitor would give advice about pain killer and that will take the pain away. Whereas mum's advice is good- if I forget, mother would keep on reminding me. To be honest I follow my own way'.

Another mother said that the health professionals advised her to feed at regular intervals, but the relatives advised that the babies should be fed more frequently – *'whenever they cry'*.

Another difference quoted by two mothers is about the how the baby is breastfed. While the relatives say that the child be given one breast for only few minutes and then switched to the next, the health visitors encourage to breast feed for longer duration from each breast.

The other difference is about which weaning food to give. According to the mothers, health visitors are not so serious about which food the baby is given. It is probably best described by the following statement:

'... they (health visitors) would only ask how he (the baby) is doing, you tell them and that's it. No encouragement to give fresh food here. You are left to continue with whatever you're feeding. But relatives keep on hammering you about giving fresh food'.

About breastfeeding, mothers (meaning grandmother of the baby) would insist on breast feeding. Mothers say *'keep on trying'*, but the health visitors would say, just try and if it doesn't work, go for bottle-feeding.

2.5.9 Gender effect on feeding

Four out of six mothers thought the boys eat more food. But none of them said that they would differentiate in feeding if it is a boy or a girl.

'You feed them as much as they need.'

So it appears that the misconception that boys are preferentially fed does not appear to be true for babies, at least for the present study. There is, however, overwhelming evidence

(for example, Baden *et al*, 1994) that gender preference is very common among these communities when they get older.

2.5.10 Comments about health service

Generally the mothers seemed to be happy with health services. However, several points were raised, some of which are mentioned below.

'.. sometimes getting an interpreter is very difficult. Interpreter cannot convey my feelings to the doctor. I was in so severe pain, but the doctor didn't give me the pain killer. Because I could not express it properly to him'.

'You see ambulances never come straight. You need to ring them twice before they come'.

'Too long waiting in the hospital. It is so stressful.'

There was a general feeling that some hospital staff have racist attitude and do not want to understand their culture. For example, one mother said that a health visitor almost laughed when she saw the '*tabiz*^h' on her baby's arm. The mother was very upset and her comment is worth noting

'.. this keeps my son safe from all the diseases – my 'peer shahib'ⁱ gave it. It's very powerful.'

She then continued with another example of a baby who became very ill and almost died and said '*.. he didn't have a tabiz!*'. Interestingly almost all mothers seemed to have supported her view.

2.6 Summary

In this section, the findings from the quantitative data, qualitative answers and focus group discussion are combined together to highlight the main outcomes from this work.

^h '*tabiz*' means a talisman – a type of locket with holy verses/scriptures usually hidden inside. The locket is worn by a black lace around the leg, neck or arm.

ⁱ '*peer shahib*' means a religious leader.

Socio-economic background

- The community represents a disadvantaged group characterised by low income and high unemployment.
- More mothers are born in the UK than the fathers. Except the husband of one participant, all the fathers were born in Bangladesh.
- The level of education and knowledge of English are poor among the sample.
- Parents are either 'happy' or 'very happy' about where they live.
- 50% of the households have at least one relative staying with them.

Infant feeding

- Breastfeeding is very common among this community. Women consider this to be the natural method of feeding for their newborns. However, 43% of mothers did not start breastfeeding until they went home from the hospital due to various reasons.
- About a third of all the mothers started breastfeeding within 1 hour of baby's birth and another 10% between 1 to 3 hours.
- Most mothers are found to supplement breast milk with formula milk at a very early age. The main reason as mentioned by the mothers is the inadequate amount of breast milk.
- Most mothers do not follow any fixed routine regarding either breastfeeding or bottle-feeding.
- Among the infants who were introduced solid food, about 43% did so at or earlier than the currently recommended age of 16 weeks.
- Mothers prefer shop prepared food to home cooked food mainly due to convenience. The cultural and social conflicts between the parents' country of birth and the UK seem to have a profound effect on how and what the babies are fed.
- Apart from breast and bottle milk, 50% mothers give additional drinks. Baby juice (fruit juice labelled for babies) available in the market is the most popular drink.
- 40% of mothers give fresh fruit to their babies. Banana is the most popular followed by apple.

Sources of advice

- Female relatives play an important role in the mother's decision about what, when and how to feed their babies. They are also influential in the decision about daily food menu.
- Media, leaflets and practice within the community are important sources from which mothers get their advice. There is evidence that the advice given by health professionals and relatives varied in some cases. Whether to follow the health professionals' advice was more of a choice for the mother, whereas female relatives' advice was kind of obligatory.

Experience of health service and support

- Language barrier is a major problem for SA mothers. A significant percentage found it difficult to communicate.
- Regarding hospital stay, about half of the mothers were not happy. Various reasons were mentioned such as racism, poor quality of food, lack of culturally appropriate food etc.
- Social conflicts seem to influence the mothers' perception of raising children in this country. Most mothers are happy with the material facilities that are available within the health service, but they are not happy about the social consequences.

Other issues

- Smoking is relatively high among this group. The male members of the family, particularly the husbands, smoke regularly. The importance of passive smoking as a health hazard is not understood by a significant percentage of households.
- Antenatal classes are very unpopular among the sample. Many of them haven't even heard about these classes. Most mothers do not attend because they do not consider this to be a useful.
- Religious beliefs are very strong. The influence of religious leaders is also deeply rooted among the members of the community.

Statistical analysis

- Results obtained from cross-tabulations show statistically significant association between introduction of solid food and family income and also between mother's level of education and addition of extra drink. Perhaps more importantly, the statistical data acted as additional justification for the qualitative information obtained from questionnaire survey and/or focus group discussion.

Chapter 3

Study 2: Newcastle Study

The aim of this second study is to conduct a survey of South Asian mothers living in the Sure Start Westgate area of Newcastle upon Tyne focused on mental health in relation to pregnancy and childbirth. When a mother suffers from postnatal depression or other mental health problems, her capacity to react to child's need may be reduced. As a result there is a risk of broken bond and child attachment will be hindered.

This study has been conducted during the author's job in Sure Start Westgate as a Maternal Mental Health project worker for SA women. In addition to the questionnaire survey there were several other aspects of the project such as awareness raising events, formation of Asian Women's group, publicity etc. This chapter presents only the results and analysis from the questionnaire survey. Some relevant information gathered during home visits are also included.

3.1 Aims and Objectives

The specific objectives of the study are as follows:

- To gain a better understanding of the factors that influence maternal mental health of South Asian community in the Sure Start Westgate area.
- To find out the perception of maternal mental health of South Asian women.
- To explore the prevalence and extent of some of the religious, cultural and social traditions and practices that may influence maternal mental health.
- To identify inequalities in health and social care and gaps in actual service delivery.

3.2 The Community Profile

The health status of the North East as measured by 'all cause' mortality, is the worst of the nine Government Office regions. Key health issues which are either responsible for a large proportion of poor health experiences by the population or have long term

consequences for population health are circulatory disease, cancers, mental health and infant mortality. Economic circumstances, level of education, life style, access to services are some of the factors responsible for this.

This study concentrates in the West End of Newcastle, which is one of the most socially and economically deprived areas in the country. Sure Start Westgate area comprises Elswick and parts of West City, Moorside and Wingrove wards. Total population of the area is approximately 13,000. The area has a high percentage of ethnic minority population from South Asia, the Middle East and the Eastern Europe. While the majority of the South Asian people are settled in this country, those from the Middle East and the Eastern Europe are mostly asylum seekers and have come to Newcastle due to Home Office's dispersal policy. Hence the population represents a diverse group of social, economic and cultural backgrounds. Table 3.1 shows some statistics of the Elswick ward, and it shows that 25% of the population are Asian compared with 6% nationally. Among other factors, the unemployment level is high and children particularly are in a disadvantaged position.

Table 3.1: Comparison between Elswick and Newcastle City

	Ward %	Newcastle City %
Asian population	25	4
Owner occupied housing	45	53
Households with the use of at least one car	34	50
Proportion of families with 3 or more children %	7	4
Male unemployment %	34	21
Female unemployment %	15	6
Children in no earner households %	56	33

Table 3.2 shows the national ranking of the Elswick ward according to the Index of Multiple Deprivation (IMD 2000). The ranking varies from 1 (most deprived) to 8414 (least deprived). For the sake of comparison, an affluent ward of Newcastle (usually Jesmond) is also included in the adjacent column. It may be relevant to mention that the West End and Jesmond are only a few miles (two/three miles) apart geographically, but IMD difference is huge and is a characteristic feature of this city.

Table 3.2: Ranking of Elswick ward according to IMD2000

	Ranking of Elswick	Ranking of Jesmond
Income	84	6483
Child poverty index	96	8117
Employment deprivation	45	4159
Health deprivation	77 (West City)	5857
Education deprivation	203	8166
Housing deprivation	242	7815 (South Gosforth)
Overall ranking	36	6941

3.3 Methodology

The bulk of the study was conducted through a semi-structured questionnaire (Appendix B) and the methodology is essentially the same as that described in the previous chapter for Loughborough study (section 2.2 and 2.4). In order to avoid duplication, only the points that are different for this study are mentioned below.

The sample

The sample consisted of South Asian women within the childbearing age who had a baby up to the age of two years at the time of interview and living in the Sure Start Westgate area of Newcastle upon Tyne. Information about the participants were obtained from Sure Start records and/or routine attendance of antenatal clinic held in relevant general practice surgeries. Also, Sure Start registers each and every mother living in the area within two months of baby's birth. Sure Start Westgate has got Caldicott Guardian permission, which enabled the author to look into the information required for sample identification.

At the beginning of the interview, in September 2003, the total number of eligible SA women in the area was 207, of which 121 were Bangladeshi, 8 Indian and 78 were of Pakistani origin. Given the time constraint, the original target was to interview 100 South Asian mothers representing 48.3% of the eligible population. Mothers' names were selected randomly. However, due to missed appointments and lengthy visits, 86 interviews were finally conducted.

Ethical permission and other legality issues

Unlike the Loughborough sample, this study was designed to focus on the maternal mental health, in particular, to postnatal depression. It was also known from health visitors and midwives that some of the mothers could be suffering from PND and could be vulnerable to sensitive questions. Hence, formal ethical permission was obtained from the Northumberland and Tyne and Wear Local Research Ethics Committee.

In this case, a large proportion of women were of Pakistani origin and the consent form, outlining the aims and objectives of the study, was translated into Urdu and Hindi. These were given to them one week prior to the interview. No interview was conducted without the written consent. Both verbal and written assurances of confidentiality were given to the participants and all responses, both quantitative and qualitative, were made completely anonymous by random coding as described in the previous chapter.

Prior to the interview, the participants were informed (by letter and/or telephone) and, subject to their permission, interviews were mostly conducted at the mothers' homes. As a precaution, a support pathway^a was also prepared in case the mothers needed help. Fortunately, no such event took place in any of the interviews. For Bengali/Sylheti speaking women, the author herself conducted the interviews without needing any interpreter. However, for women who cannot speak English or Bengali, interviews were either conducted by interpreters or by other members of the Sure Start health team who could understand their language. In order to avoid misunderstanding, all the interviewers were earlier briefed about the questionnaire and overall objectives of the project. The interviews were conducted in a period of four months from September to December, 2003.

Each interview lasted between one to one and a half hours. Due to the sensitive nature of some questions, the participants were allowed enough time to answer. This is another reason that the actual number of interviews is slightly less than the original target.

^a Support pathway is a systematic procedure followed by health professionals in order to support the vulnerable clients.

However, these lengthy interactions provided some useful and striking information regarding these women. The section on qualitative data (section 3.5) highlights the noteworthy experiences.

3.4 Findings from the survey (Quantitative)

The questionnaire was divided under five sections (Appendix B), and the results are also presented in the same order.

3.4.1 Overall socio-economic status of the participants

The average age of the women in the sample was 28 years and 1 month, while the average age of their partners was 32 years and 2 months. In terms of country of origin, about two-thirds of the women were born in Bangladesh, roughly a fifth were from Pakistan and the rest were born in the UK. More women were born in the UK than men and hence the percentage of fathers born in the sub-continent is slightly higher. This is typical of the trend among this community and was also observed for the Loughborough study. The data are shown in Tables 3.3-4.

Table 3.3: Age of parents (in years)

	Minimum	Maximum	Mean±SD
Mother's age	20.2	39.3	28.1±4.93
Father's age	24.2	42.8	32.2±5.21
Age difference	3.3	13.0	5.1±5.1

Table 3.4: Place of birth of parents

	Bangladesh % (n)	India % (n)	Pakistan % (n)	UK % (n)
Mother	62.8 (54)	0	18.6 (16)	18.6 (16)
Father	65.1 (56)	2.3 (2)	22.1 (19)	10.5 (9)

Occupations of the parents are shown in Table 3.5. The sample clearly shows that the women are mostly (90.7%) housewives and few of them are working in paid jobs. Among the fathers, the level of unemployment is very high (27.9%) and majority of the

employed men are unskilled workers (45.3%). The effect of this occupational distribution is also reflected in the net family income shown in Fig. 3.1. The findings are generally in line with the overall picture of the Elswick ward (Table 3.1-2). It should be mentioned here that this question appeared to be very sensitive for the participants and some of them became suspicious. Hence these data should be treated with caution.

Table 3.5: Occupations of parents

Mother		Father	
Occupation	%(n)	Occupation	%(n)
Housewife	90.7(78)	Unskilled work	45.3(39)
Professional	4.7(4)	Unemployed	27.9(24)
Unskilled work	2.3(2)	Skilled work/own business	12.8(11)
Skilled work	2.3(2)	Professional	8.1(7)
		Student	5.8(5)

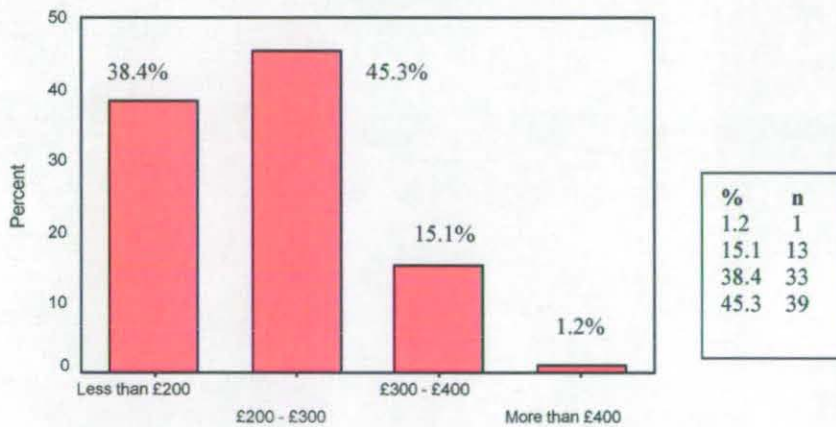


Fig. 3.1: Net family income per week

The data for property ownership, property type and size are shown in Table 3.6. More than half of the families (55.8%) live in either council owned or privately rented accommodation and 59.3% live in flats. About two-thirds (65.1%) reported that they were happy about the area they live in, as opposed to only 40.7% about the property itself (Fig. 3.2). This probably reflects the poor housing conditions in the area and more can be done to improve the situation.

Table 3.6: Property related data

Ownership		Property description		Size of property	
Type of ownership	%(n)	Type	%(n)	No. of bedrooms	%(n)
Owned by council	38.4(33)	Flat	59.3(51)	2 bedrooms	36(31)
Owned by parents	30.2(26)	Terraced house	38.4(33)	3 bedrooms	32.6(28)
Privately rented	17.4(15)	Semi-detached	2.3(2)	4 bedrooms	19.8(17)
Other	14(12)			5 bedrooms	9.3(8)
				6 bedrooms	2.3(2)

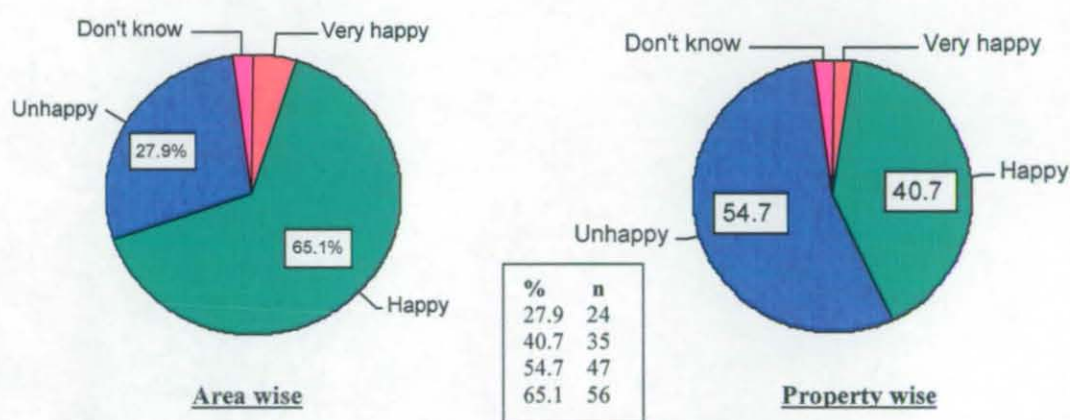


Fig. 3.2: Parents' satisfaction about where they live

Figure 3.3 shows the distribution of properties by percentage in terms of number of people living there including the parents. A common characteristic of South Asian families is the presence of adult relatives. For this sample, 44.2% (n=38) households have at least one adult relative living with them. Of them, 76.3% (n=29) have more than one adult relative and 23.7% (n=9) has either mother or father-in-law living in the same household (Fig. 3.4). Culturally, the adult relatives are held in great esteem and, in many instances, their opinions are taken for granted without any question. This is particularly critical in the context of childbirth and pregnancy.

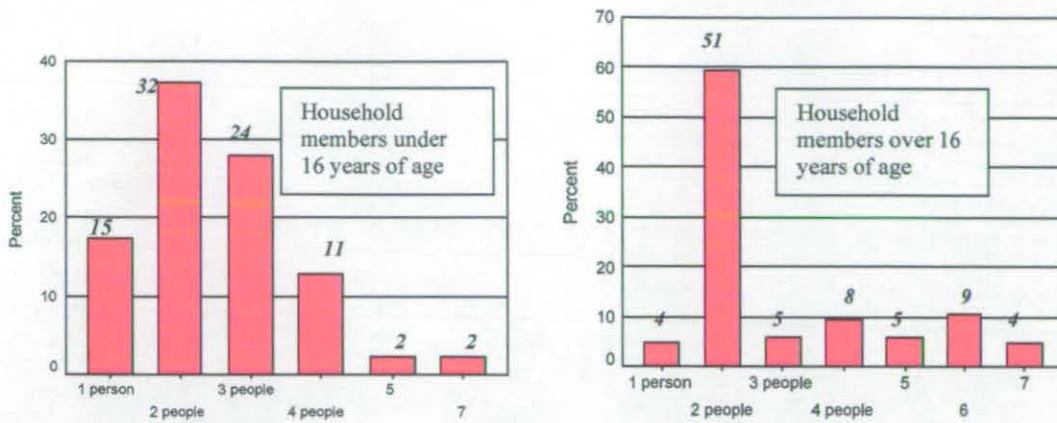


Fig. 3.3: Number of people living in property (percent household)
(Numbers in italics are actual counts)

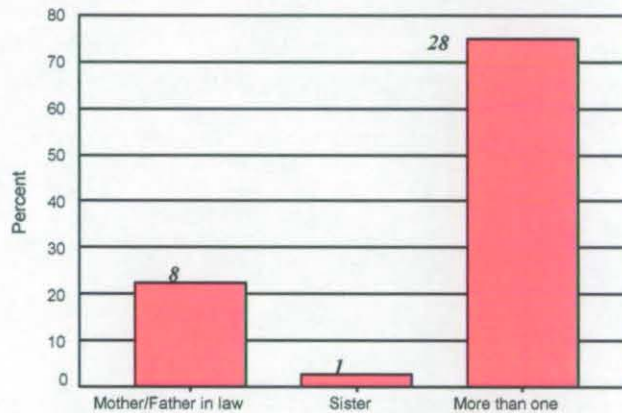


Fig. 3.4: Distribution of households with adult relatives
(Numbers in italics are actual counts)

The literacy level among the mothers is low and 29.1% of the women have never been to a school. Also, 36% of mothers and 22.1% of fathers cannot understand English, about one-third can only understand but can not read or write as shown in Table 3.7. This is a very serious hindrance towards service delivery, diagnosis of PND as well as communicating with this group for advice and help.

Table 3.7: Literacy level of mother and knowledge of English of parents

Mother's level of education		Knowledge of English		
	%(n)		Mother %(n)	Father %(n)
No schooling	29.1(25)	Excellent	33.7(29)	41.9(36)
Left school after 16 years	40.7(35)	Can understand but can not read or write	30.2(26)	33.7(29)
Left school after 18 years	11.6(10)	Can not understand	36(31)	22.1(19)
Higher level	18.6(16)			

Almost all (97.7%) of the participants identified themselves as Muslims. However, just under half of them (47.7%) said that they practise religion very strictly and the rest said that they '*try to follow but not so strict*'.

Fig. 3.5 shows the ethnic distribution of the sample (65.1% Bangladeshi, 32.6% Pakistani and 2.3% Indian^b) as identified by the participants themselves and the languages spoken at home. It is interesting to note that, almost all of the Bangladeshi mothers (61.6%) speak Bengali at home, but the Pakistani mothers are split because only 12.8% speak Urdu/Punjabi as against a population of 32.6%. Hence, the issue of language barrier towards service delivery appears to be more severe for Bangladeshi mothers compared to Pakistanis.

^b In the population, the proportion of Bangladeshi, Pakistani and Indian were 58.4%, 37.7% and 3.9% respectively.

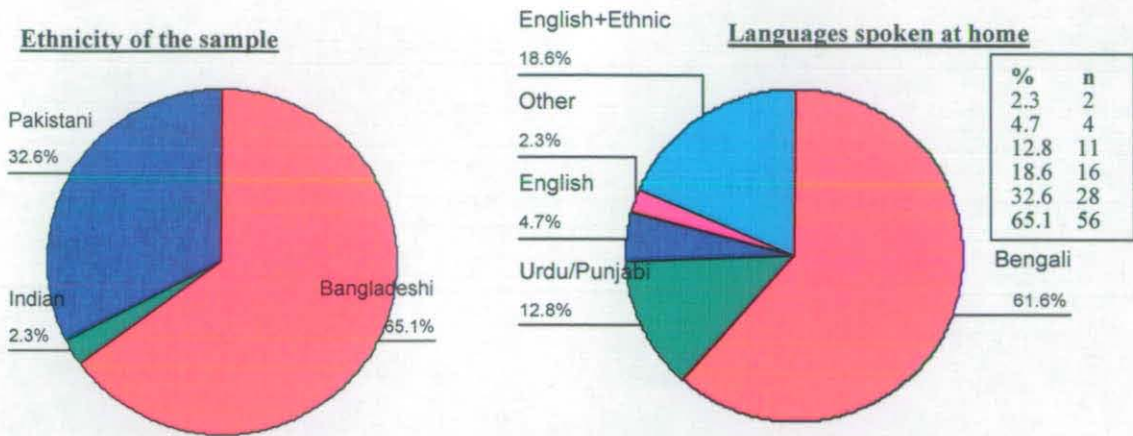


Fig. 3.5: Ethnic distribution and languages spoken at home

Smoking is very high among the sample. At least one person smokes in 59.3% (n=51) households. Interestingly, all of the smokers are men, of which about 80% (n=41) are husbands; also about 10% (n=5) of the families had more than one smoker. These data are shown in Fig. 3.6. Compared with the national average of 25% smokers, this represents a very high percentage. It was also observed in several households that the men were smoking inside the house even in the same room where the baby was staying with the mother. This clearly shows that the message about dangers of passive smoking is not getting into the members of the community and more needs to be done in this context.

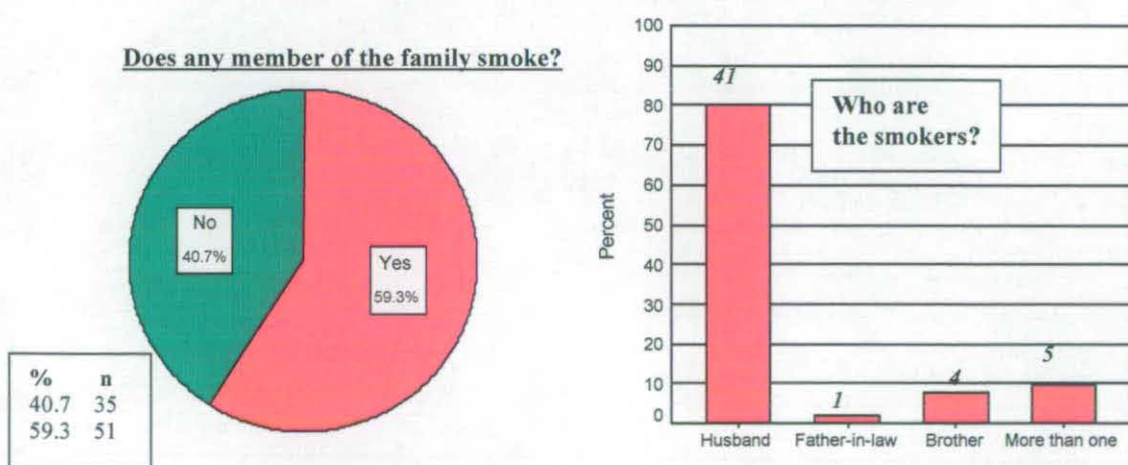


Fig. 3.6: Smoking habit of the households
(Numbers in italics are actual counts)

Since the sample represents an essentially Muslim population, it was also found that almost all of them (97.7%) eat only 'halal' food. Only 19.8% of the mothers said that they have changed their dietary habit after having the baby.

3.4.2 Health, pregnancy and childbirth related

The health status of mothers and their children are shown in figure 3.7. Most mothers were happy about their children's health, except 10% who assessed their children's health to be 'bad' and 'not so good'. However, they themselves were not happy with their own health – about 35% of the mothers classified their health as 'not so good'. How much of it is due to mental health problem and how much is due to physical problems or a combination of both cannot be known from this survey. It would need a more rigorous and focused approach in order to identify what caused this 35% of women to be unhappy about their own health.

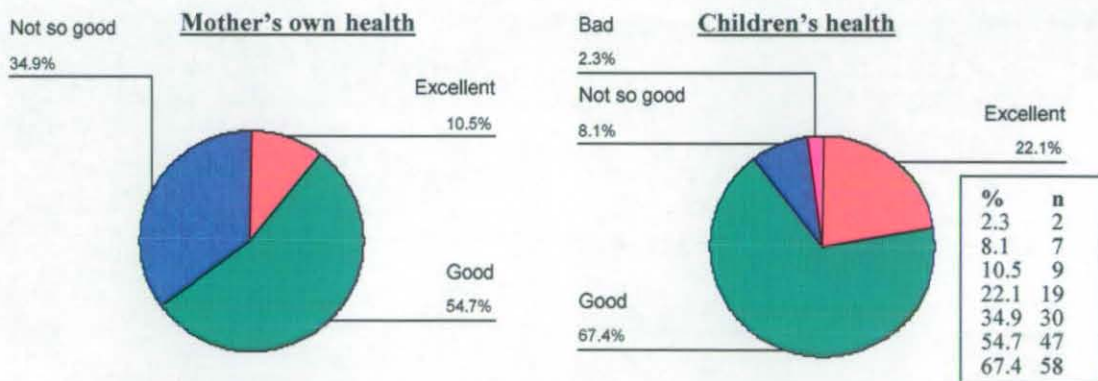


Fig. 3.7: Health status of mother and children (assessed by mother herself)

The feeding pattern of recent baby is shown in Table 3.8. The data demonstrate that the proportion of Pakistani mothers exclusively breastfeeding their babies are much higher than that of the Bangladeshi mothers.

Table 3.8: Feeding pattern of recent child

		Combined sample* % (n)	% within ethnic group**
Breastfeed only	Bangladeshi	11.6(10)	17.8
	Pakistani	16.3(14)	50
Breast + Bottle feed	Bangladeshi	20.9(18)	32.1
	Pakistani	7(6)	21.4
Bottle feed only	Bangladeshi	32.6(28)	50
	Pakistani	9.3(8)	28.6

* Total does not add up to 100% because 2 Indian samples are not included.
 ** n=56 for Bangladeshi; n=28 for Pakistani

Although 92% of the women had an antenatal check-up, only 15.1% ever attended the antenatal classes – the reasons for this are shown in Fig. 3.8. The lack of motivation (*Don't know such classes exist, or Did not think they are important*), active discouragement by friend/relatives etc. are the main causes. The national average for the White population for attendance at antenatal classes is 77%, which is more than five times than that observed in this study.

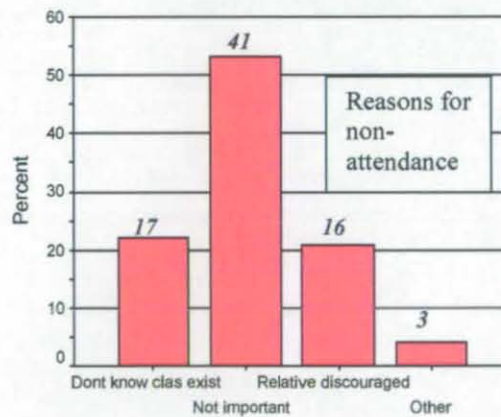


Fig. 3.8: Attendance rate and reasons for non-attendance of antenatal classes
 (Numbers in italics are actual counts)

On the emotional side, nearly half of the women (3.5% *'bad'*; 43% *'not so good'*) were uncomfortable about their hospital stay, whereas 12.8% felt that their hospital stay was excellent and 40% felt it was good. An overwhelming majority (80.2%) of women felt *'left out at least once'* during the whole period of pregnancy. Asked if the situation would be different in their country of origin, 65% said *'yes'*, while others said *'no'*.

3.4.3 Mood detection

Five questions (Appendix B, part III), adapted from the picture booklet published by the CPHVA (Adams and Sobowale, 2003) for the identification of women with postnatal depression, were asked of the participants in an attempt to get some idea of the maternal mental health condition of the mothers. These questions, referred to as PND indicators in this thesis, were selected because they are simple, unambiguous and quick to answer. Also, the options were kept between ‘yes’ or ‘no’ instead of four options – again the objective was to get a quick overall picture of the participant’s mind. Due to the limited number of questions, it is fully recognised that the results (for mood detection) from this survey can only be taken as indicative of the mental health condition of the sample. It is also acknowledged that the current study did not really consider or identify any possible background levels of depression (as opposed to postnatal depression).

The answers (yes/no) to the questions are summarised in Table 3.9. The answers are given in percentages and the numbers in italic (red) represent a typical answer that a depressed mother would likely to give. It can be seen that these numbers are always higher (ranging from 62% to 75%) than the corresponding percentage in the same row. It can be said that the chosen indicators of PND are all high among the sample surveyed in the study and hence the likelihood of women suffering from PND may also be high.

Table 3.9: Summary of answers related to mood detection

	Yes %(n)	No %(n)
Have you enjoyed the day-to-day activities?	26.8(23)	73.3(63)
Have you felt sad or been crying during pregnancy or after baby’s birth?	66.3(57)	33.7(29)
Have you been able to sleep well after the baby’s birth	38.4(33)	61.6(53)
Do you ever feel everything is too much for you?	75.6(65)	24.4((21)
Have you had aches or pain anywhere such as stomach, back or head?	68.6(59)	31.4(27)

Answering to the follow-up question on *where the aches or pain occurred*, such as stomach, back, head or a combination of these, of those who answered ‘yes’, 19% of the mothers replied that it occurred in head, 48% said in two places and 19% said that it occurred in three places. Only a very small number mentioned that the pain occurred anywhere other than the stomach, head or back. The answers are presented in Fig. 3.9.

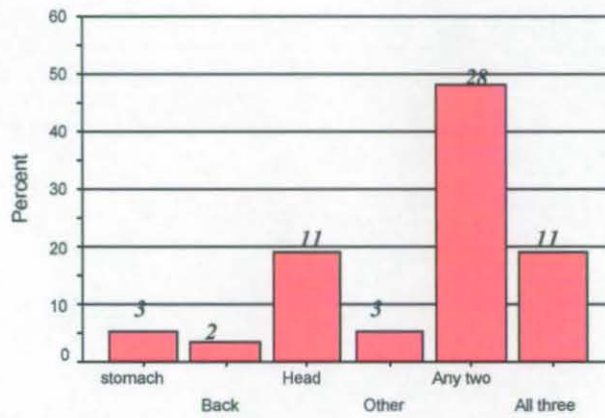


Fig. 3.9: Location of pain as experienced by the mothers
(Numbers in italics are actual counts)

Further analysis was carried out on the answers, using the cross tabulation feature in SPSS package, in the following manner. If the answer corresponded to the red/italic answer of Table 3.9, then the score is 1, otherwise the score is zero. For example, if the answer to ‘*Have you enjoyed the day to day activities*’ were ‘yes’, it scored zero and if the answer were ‘no’, it scored 1. The scores for individual mother were added up, so the scores ranged from 0-5. Score 0 means the mother is in sound mental health condition and score 5 means the mother could be depressed according to this small set of key indicators of PND. The scores are presented in Table 3.10. According to these scores, 24.4% of the mothers are in highly depressed state of mind, while another 34.9% are also likely to be depressed.

Table 3.10 Distribution of total PND scores for mothers

Total score*	0	1	2	3	4	5
% (n)	7 (6)	4.7 (4)	9.3 (8)	19.8 (17)	34.9 (30)	24.4 (21)
* Score 0 means the mother is in sound mental health Score 5 means the mother is likely to be depressed						

3.4.4 Mother's perception about PND

The terminology, Postnatal Depression or PND, was not known to most women participated in the study - 65% said that *they haven't heard this term*. However, when the interviewer explained the sign and symptoms, many women who have not heard the term PND, could recognise it. A follow up question of *who told them about it*, revealed the following as shown in Fig. 3.10. The figure shows that nearly 70% came to know about this situation from health professionals and only about 10% from friends and relatives.

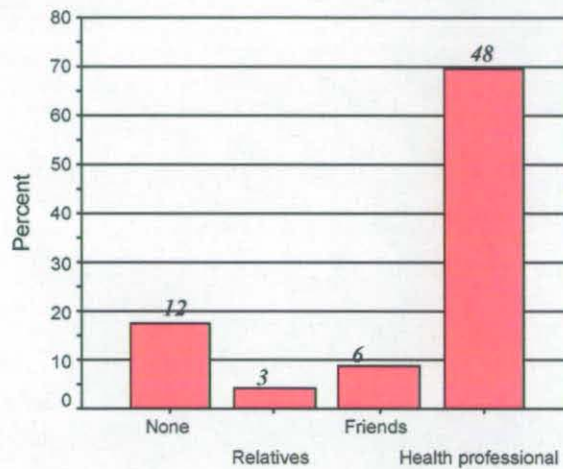


Fig. 3.10: Sources of information about PND
(Numbers in italics are actual counts)

To find out women's perception of PND, four choices were given to the participants and were asked to answer each question separately; the findings are shown in Table 3.11. The table clearly shows that a lot of superstition is attached in relation to the causes of PND and only 52.3% knew that it is a mental health condition. More than one-third of the mothers believe that the situation of PND is due to black magic or it is an act of God. In another question, it was revealed that 68.6% women thought that jinn or black magic had some kind of influence on maternal health in general.

Table 3.11: Perception of PND (why it happens)

	Yes %(n)	No %(n)	Don't know %(n)
It is a mental health condition	52.3(45)	47.4(41)	-
It is an act of God	40.7(35)	57(49)	2.3(2)
Bad luck	38.4(33)	55.8(48)	5.8(5)
Act of black magic or <i>jadu</i> * or <i>jinn</i> **	34.9(30)	62.8(54)	2.3(2)
* <i>jadu</i> is the synonym for black magic in most SA languages ** <i>jinn</i> means the 'evil angel'			

Similar to the above, mother's own idea about how people within the community deal with PND, revealed some interesting data as shown in Table 3.12. The large majority of women (72%) believe that people 'seek help from religious leaders' and highlights the influence of religious leaders within the community.

Table 3.12: How people deal with PND

	Yes %(n)	No %(n)
Go to health professionals	66.3(57)	33.7(29)
Seek help from friends and relatives	26.7(23)	73.3(63)
Take help from religious leaders	72.1(62)	27.9(24)
Take help from alternative medicine	31.4(27)	68.6(59)

Childbirth among the South Asian community is associated with various types of traditional practices, such as *Akika*, *Azan*, Shaving babies' head etc. Table 3.13 summarises the findings. Almost everyone shaved their babies' head and about half of the women did not go out of the house for 40 days. It may be an easy-to-follow practice in South Asia, but clearly this is a stressful event for women in this country.

Table 3.13: Incidence of traditional practices

	Yes %(n)	No %(n)
Did you do <i>Akika</i> *	82.6(71)	17.4(15)
Did you give <i>Azan</i> ** to the baby	39.5(34)	60.5(52)
Did you shave babies' head	91.9(79)	8.1(7)
Did you stay at home for 40 days	46.5(40)	53.5(46)
Did you avoid sleeping with husband for 40 days	17.4(15)	82.6(71)
* <i>Akika</i> means 'naming' the child and is an Islamic practice ** <i>Azan</i> means 'calling for prayer' – again an Islamic practice. Usually, an older male member of the family will recite short verses, when the baby is born		

Asked whether these traditional practices have any influence on the mental and physical health of the mother, 75.6% said 'yes'. This data probably justifies why women take the trouble of following some of the traditional practices as mentioned above, such as *not going out for 40 days*.

The South Asian women are known to be more introvert and they do not usually speak out. In response to the question *whether they discuss it with anyone if they are unhappy*, only 28%(n=24) said 'yes' and the rest (72%, n=62) said that they do not discuss with anybody. Of those who discuss their happiness, 54%(n=13) discuss it with husbands and 46%(n=11) with female relatives. This is a particularly difficult situation for mental health service providers, because these women tend to 'hide' their problems and are very reluctant to speak about their own problems.

The gender of the baby is also an important matter for this community. To what degree the mother was upset because it is a boy or a girl, 25.6% said that they were very upset, 29% were a little bit upset and 45% were not at all upset. However, when tested to see whether there was an association between sex of the child and PND indicators, this was non-significant (see Table 3.18). There is also pressure from relatives and friends, as 55% of the women said that some one made remark about the gender of the baby. Good comments are usually made when the baby was a boy and unwelcoming comments are common when it was a girl. Some of these comments are included in section 3.6, in qualitative data analysis.

3.4.5 Support and help related

Help and support are very important when it comes to the overall well being of mothers with small children. It is more critical for South Asian mothers due to language barrier, low socio-economic status and cultural factors. In the context of maternal mental health, women were twice more likely to follow the advice of female relatives than that of the health professionals (54.7% against 24.4%) as shown in Fig. 3.11. So, the influence of

female relatives is again highlighted. The sector representing 'other' includes none, books/magazines and neighbours etc. Also, it is again the female relatives from whom women found out the availability of various services (38.4% from female relatives as against 31.4% from health professionals). It is probably the fact that 48% of women did not know where to go when they needed help, and since the adult relatives stay with them, women tend to ask them more than anybody else.

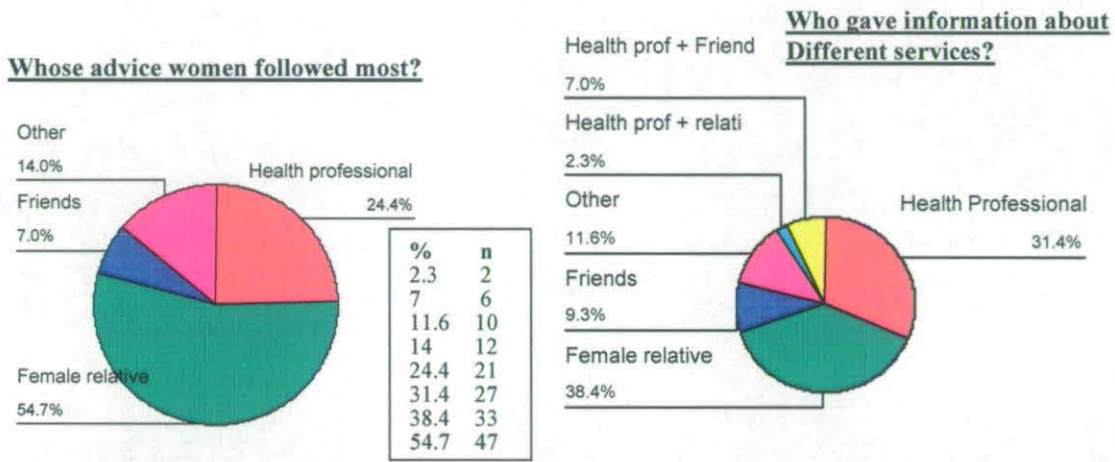


Fig. 3.11 Dependence of mothers for advice and services information

Language is a big barrier in terms of service uptake and delivery. This is revealed in Figs. 3.12-13. The first figure is women's own evaluation about how much they understood what staff told them and the second, Fig. 3.13, shows how much staff had understood what women told them. There is an interesting similarity in the answers i.e., 57% (40.7+16.3) of women partially understood what the staff told them and 58.2% (41.9 + 16.3) women thought that the staff had only partially understood what they had told them. Clearly there is a gap in service delivery directly as a result of communication gap.

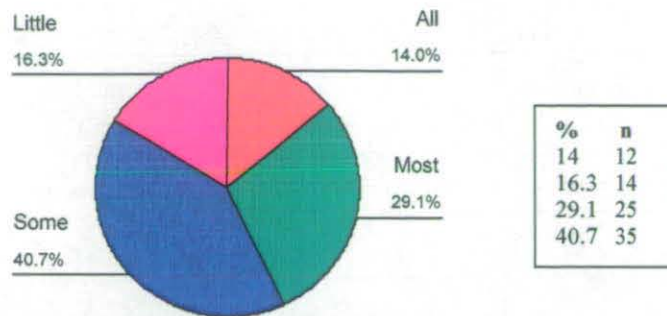


Fig. 3.12: Mother's understanding of what staff told them

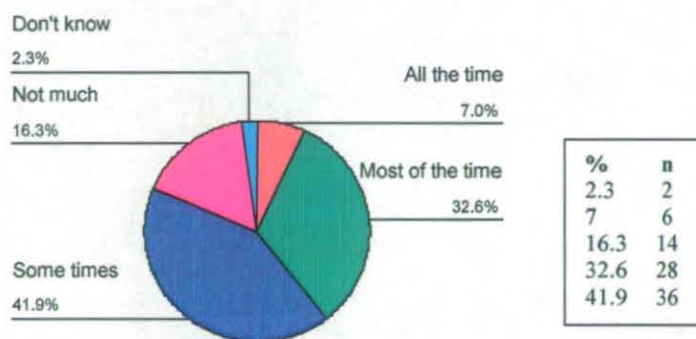


Fig. 3.13: How often staff understood what mothers told them (mothers' evaluation)

There is also some evidence of a lapse in the interpreting service (Fig. 3.14), when 7% of the mothers said that no interpreter was available when needed. Only 14% of mothers said that there was any health professional who could speak in her language as against 70.9% of the mothers said that they would prefer to speak to someone who could understand their language. Also 14% of mothers said that there was any health professional who could understand the culture and religion of the mother as against 84.9% of the mothers would prefer to speak to someone who could understand her culture and religion.

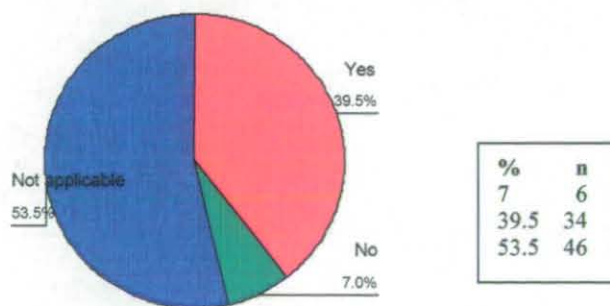


Fig. 3.14: Availability of interpreter when needed

3.5 Statistical analysis of data

Some interesting results and associations emerged from the statistical analysis of this set of data. Chi-square tests were conducted to find out the statistically significant associations between variables. However, Fisher's exact test was applied when the 'expected' cell values were less than 5. The results presented in this section are mostly those for which either $p < 0.05$ or those which are interesting in the context of the research objectives.

3.5.1 Association between PND indicators and method of feeding

There are five mood detecting questions (Appendix B, part III) which are considered as PND indicators. The cross-tabulation results between PND indicators and the method of feeding are shown in Table 3.14.

Table 3.14: Cross-tabulation of PND indicators vs. method of feeding

PND indicator question	Mothers' response	Method of feeding				Statistical significance
		Breast n (%) [*]	Bottle n (%)	Both n (%)	Total n (%)	
IND1: Did you enjoy the day-to-day activities?	Yes (-ve PND)	11(47.8)	9(39.1)	3 (13)	23 (100)	$\chi^2 = 7.131$; df = 2; p = 0.028
	No (+ve PND)	13(20.6)	29(46)	21(33.3)	63(100)	
	Total	24	38	24	86	
IND2: Have you felt sad or been crying during pregnancy or after baby's birth?	Yes (+ve PND)	10(17.5)	31(54.4)	16(28.1)	57(100)	$\chi^2 = 10.487$; df = 2; p = 0.005
	No (-ve PND)	14(48.3)	7(24.1)	8(27.6)	29(100)	
	Total	24	38	24	86	
IND3: Have you been able to sleep well after your baby's birth?	Yes (-ve PND)	16(48.5)	10(30.3)	7(21.2)	33(100)	$\chi^2 = 11.321$; df = 2; p = 0.003
	No (+ve PND)	8(15.1)	28(52.8)	17(32.1)	53(100)	
	Total	24	38	24	86	
IND4: Do you ever feel everything is too much for you?	Yes (+ve PND)	14(21.5)	33(50.8)	18(27.7)	65(100)	$\chi^2 = 6.484$; df = 2; p = 0.039
	No (-ve PND)	10(47.6)	5(23.8)	6(28.6)	21(100)	
	Total	24	38	24	86	
IND5: Have you had aches and pain anywhere such as stomach, back or head?	Yes (+ve PND)	15(25)	30(50)	15(25)	60(100)	$\chi^2 = 2.72$; df = 2; p = 0.257
	No (-ve PND)	9(34.6)	8(30.8)	9(34.6)	26(100)	
	Total	24	38	24	86	

* (%) represents the percentage within the PND response i.e., -ve or +ve PND.

The above data for the five indicators of PND are shown in cluster plots in Fig. 3.15.

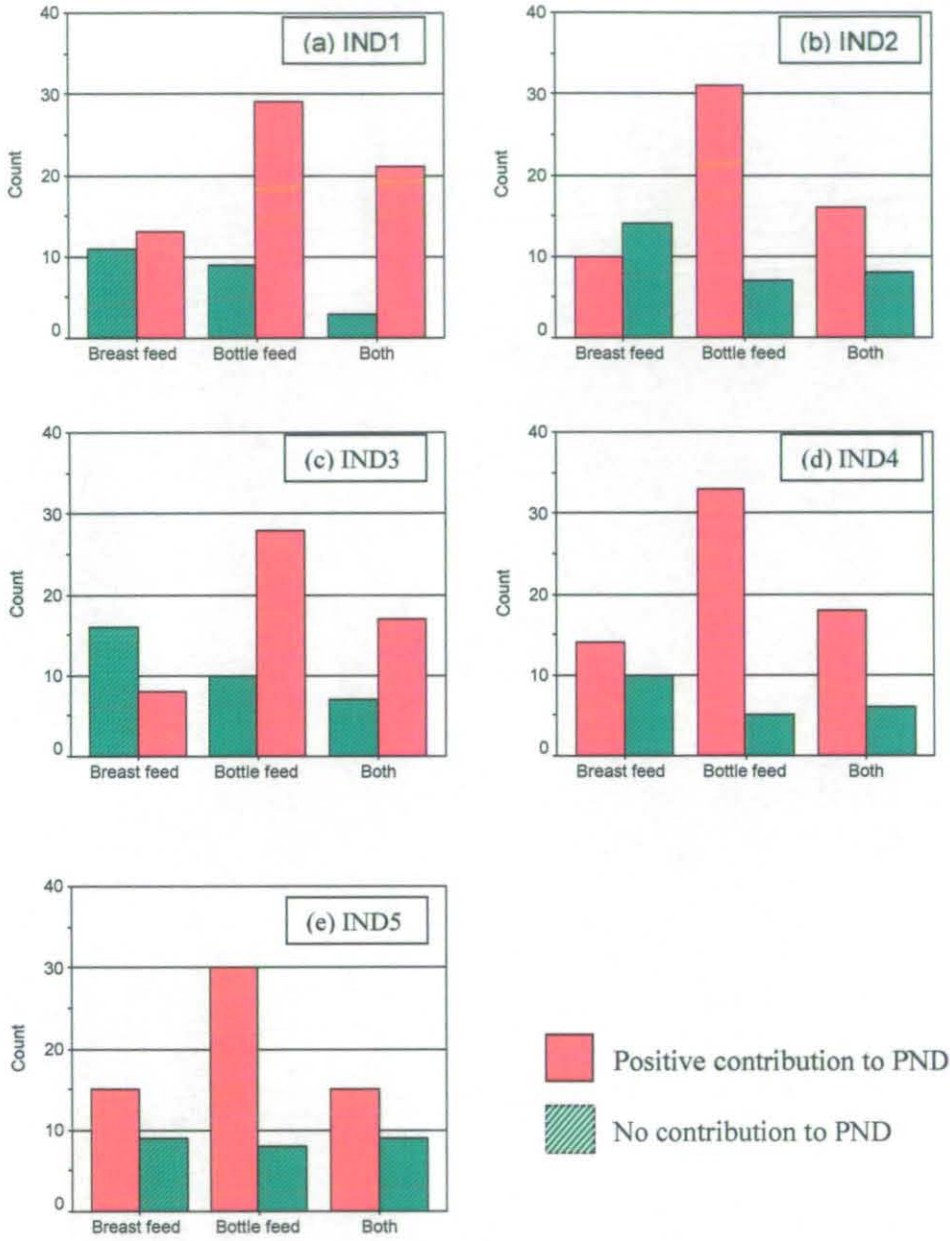


Fig. 3.15a-e: PND indicator vs. method of feeding

It can be seen from the above table and cluster plots that a positive indication of PND means that the mothers are more likely to feed their babies by bottle or a combination of bottle and breast. This also highlights that the feeding method is significantly influenced by mothers' mood or vice versa.

Further analyses were made with regards to the above association for babies of varying age. When tested between method of feeding and age of the baby (categorized as 0-4 months, 4-12 months, more than twelve months; and 0-4 months, more than 4 months), the results did not show any statistically significant association ($p=0.199$, $df=4$ and $p=0.178$, $df=2$ respectively).

3.5.2 Method of feeding vs. sex of the child

The association between method of feeding and sex of the child is shown in Table 3.15.

Table 3.15: Method of feeding vs. other variables

		Method of feeding				Statistical significance
		Breast n (%)*	Bottle n (%)	Both n (%)	Total n	
Sex of the child	Male	17(70.8)	18(47.4)	9 (37.5)	44	$\chi^2 = 5.729$; $df = 2$; $p = 0.057$
	Female	7(29.2)	20(52.6)	15(62.5)	42	
	Total	24(100)	38(100)	24(100)	86	

* (%) represents the percentage within each feeding method.

Although the above association does not show statistically significant result, the data suggest that boys are more likely to be breastfed exclusively than girls. This is confirmed by regrouping the feeding variables into two categories 'breast feeding' and 'bottle or both' resulting in $\chi^2 = 5.155$, $df=1$ and $p=0.023$. When split into ethnic categories the results were $p=0.032$ for Bangladeshi and $p=0.127$ for Pakistani samples.

3.5.3 Method feeding vs. health status of the mother

The findings are shown in Table 3.16 below.

Table 3.16: Method of feeding vs. health status of the mother

		Method of feeding				Statistical significance
		Breast n (n _{ex})*	Bottle n (n _{ex})	Both n (n _{ex})	Total n (n _{ex})	
Health status of mother	Excellent or good	14(15.6)	31(24.7)	11(15.6)	56 (56)	$\chi^2 = 8.949$; df = 2; p = 0.011
	Not so good	10(8.4)	7(13.3)	13(8.4)	30(30)	
	Total	24(24)	38(38)	24(24)	86(86)	

* n_{ex} means the expected count for the particular cell.

The above data imply that bottle-feeding mothers are more likely to say that that they were in good/excellent health.

3.5.4 Method of feeding vs. ethnicity

The test results for this case include only the Pakistani and Bangladeshi women because there are only 2 Indian mothers and hence excluded. The Chi-square test results are shown in Table. 3.17.

Table 3.17: Method of feeding vs. ethnicity of mother

		Method of feeding				Statistical significance
		Breast n (%)*	Bottle n (%)	Both n (%)	Total n	
Ethnicity of the mother	Bangladeshi	10(41.7)	28(77.8)	18(32.1)	56	$\chi^2 = 9.5$; df = 2; p = 0.009
	Pakistani	14(58.3)	8(22.2)	6(21.4)	28	
	Total	24(100)	36(100)	24(100)	84	

* (%) represents the percentage within each feeding method.

The Pakistani women have a much higher proportion of exclusive breastfeeding than Bangladeshi women. On the other hand, the Bangladeshi women are more likely to bottle feed or use mixed feeding method. This particular association shows that ethnicity is a confounding factor for almost all other analyses or associations presented in this chapter. This issue along with other criticisms of the study are dealt with in section 4.7.

3.5.5 Sex of the child vs. PND

Cross-tabulation results for sex of the child vs. PND indicators are shown in Table 3.18.

Table 3.18: Sex of the child vs. PND indicators

PND indicator question	Mothers' response	Sex of the child			Statistical significance
		Male n (%) [*]	Female n (%)	Total n (%)	
IND1: Did you enjoy the day-to-day activities?	Yes (-ve PND)	12(52.2)	11(47.8)	23 (100)	$\chi^2 = 0.013$; df = 1; p = 0.91
	No (+ve PND)	32(50.8)	31(49.2)	63(100)	
	Total	44	42	86	
IND2: Have you felt sad or been crying during pregnancy or after baby's birth?	Yes (+ve PND)	26(45.6)	31(54.4)	57(100)	$\chi^2 = 2.083$; df = 1; p = 0.149
	No (-ve PND)	18(62.1)	11(37.9)	29(100)	
	Total	44	42	86	
IND3: Have you been able to sleep well after your baby's birth?	Yes (-ve PND)	17(51.5)	16(48.5)	33(100)	$\chi^2 = 0.003$; df = 1; p = 0.959
	No (+ve PND)	27(50.9)	26(49.1)	53(100)	
	Total	44	42	86	
IND4: Do you ever feel everything is too much for you?	Yes (+ve PND)	32(49.2)	33(50.8)	65(100)	$\chi^2 = 0.398$; df = 1; p = 0.528
	No (-ve PND)	12(57.1)	9(42.9)	21(100)	
	Total	44	42	86	
IND5: Have you had aches and pain anywhere such as stomach, back or head?	Yes (+ve PND)	30(50)	30(50)	60(100)	$\chi^2 = 0.107$; df = 1; p = 0.743
	No (-ve PND)	14(53.8)	12(46.2)	26(100)	
	Total	44	42	86	

^{*}(%) represents the percentage within the PND response i.e., -ve or +ve PND.

None of the above associations yielded any statistically significant value. This highlights the fact that, for this sample, gender of the child (son preference) is not a predisposing factor for PND. When the sample was split into ethnic categories, it was observed that $p > 0.05$ (chi-squared test) for IND2-IND5 for the Bangladeshi and IND3 only for the Pakistani samples. However, the chi-squared test became less meaningful (expected cell values being less than 5) for the remaining associations. Fisher's exact test was hence applied. The p-values based on Fisher's exact test (2-sided) were $p = 0.319$ for IND1 for Bangladeshi and $p = 0.705, 0.231, 0.6$ and 0.4 for IND1, IND2, IND3 and IND5 respectively for Pakistani sample. It is hence confirmed that sex of the child is not significantly associated with PND indicators for either of the ethnic groups.

3.5.6 Age of mother vs. PND

Age of the mother and age differences between spouses were analysed against the five PND indicator questions and the results are shown in Tables 3.19-20.

Table 3.19: Association between age of mother and PND indicators

PND indicator question	Mothers' response	Age of the mother			Statistical significance
		20-29 n (%)*	>30 n (%)	Total n (%)	
IND1: Did you enjoy the day-to-day activities?	Yes (-ve PND)	12(52.2)	11(47.8)	23 (100)	$\chi^2 = 2.315$; df = 1; p = 0.128
	No (+ve PND)	44(69.8)	19(30.2)	63(100)	
	Total	56	30	86	
IND2: Have you felt sad or been crying during pregnancy or after baby's birth?	Yes (+ve PND)	38(66.7)	19(33.3)	57(100)	$\chi^2 = 0.179$; df = 1; p = 0.672
	No (-ve PND)	18(62.1)	11(37.9)	29(100)	
	Total	56	30	86	
IND3: Have you been able to sleep well after your baby's birth?	Yes (-ve PND)	17(51.5)	16(48.5)	33(100)	$\chi^2 = 4.361$; df = 1; p = 0.037
	No (+ve PND)	39(73.6)	14(26.4)	53(100)	
	Total	56	30	86	
IND4: Do you ever feel everything is too much for you?	Yes (+ve PND)	50(76.9)	15(23.1)	65(100)	$\chi^2 = 16.336$; df = 1; p = 0.000
	No (-ve PND)	6(28.6)	15(71.4)	21(100)	
	Total	56	30	86	
IND5: Have you had aches and pain anywhere such as stomach, back or head?	Yes (+ve PND)	40(66.7)	20(33.3)	60(100)	$\chi^2 = 0.21$; df = 1; p = 0.647
	No (-ve PND)	16(61.5)	10(38.5)	26(100)	
	Total	56	30	86	

*(%) represents the percentage within the PND response i.e., -ve or +ve PND.

Table 3.20: Association between age difference between spouse and PND indicators

PND indicator question	Mothers' response	Age difference between spouse			Statistical significance
		0-5 n (%)*	>6 years n (%)	Total n (%)	
IND1: Did you enjoy the day-to-day activities?	Yes (-ve PND)	13(56.5)	10(43.5)	23 (100)	$\chi^2 = 0.528$; df = 1; p = 0.467
	No (+ve PND)	41(65.1)	22(31.7)	63(100)	
	Total	54	32	86	
IND2: Have you felt sad or been crying during pregnancy or after baby's birth?	Yes (+ve PND)	40(70.2)	17(29.8)	57(100)	$\chi^2 = 3.945$; df = 1; p = 0.047
	No (-ve PND)	14(48.3)	15(51.7)	29(100)	
	Total	56	30	86	
IND3: Have you been able to sleep well after your baby's birth?	Yes (-ve PND)	20(61.6)	13(39.4)	33(100)	$\chi^2 = 0.109$; df = 1; p = 0.741
	No (+ve PND)	34(64.2)	19(73.1)	53(100)	
	Total	54	32	86	
IND4: Do you ever feel everything is too much for you?	Yes (+ve PND)	45(69.2)	20(30.8)	65(100)	$\chi^2 = 4.725$; df = 1; p = 0.03
	No (-ve PND)	9(42.9)	12(57.1)	21(100)	
	Total	56	32	86	
IND5: Have you had aches and pain anywhere such as stomach, back or head?	Yes (+ve PND)	37(66.7)	23(33.3)	60(100)	$\chi^2 = 0.107$; df = 1; p = 0.743
	No (-ve PND)	17(61.5)	9(38.5)	26(100)	
	Total	54	32	86	

*(%) represents the percentage within the PND response i.e., -ve or +ve PND.

The above tables show that younger mothers are more likely to complain about sleeping difficulty and also are very likely to feel that everything is too much for them. Also the spouses with smaller age difference are more likely to say that everything is too much for them and also are more likely to complain that they felt sad or been crying during pregnancy or childbirth.

3.5.7 Perception of PND and mother's place of birth

To find out any association between perception of PND and birth place, mothers were categorised as either born in the UK or overseas. The findings are shown in Table 3.21.

Table 3.21: Perception of PND vs. place of birth

	Mother's response	Mother's place of birth			Statistical significance
		UK n(%)*	Overseas n(%)	Total n(%)	
It is an act of God	Yes	3(8.6)	32(91.4)	35(100)	$\chi^2 = 4.271$; df = 1; p = 0.0039
	No	13(26.5)	36(73.5)	49(100)	
	Total	16	68	84	
Bad luck	Yes	1(3)	32(97)	33(100)	$\chi^2 = 8.853$; df = 1; p = 0.003
	No	14(29.2)	34(70.8)	48(100)	
	Total	15	66	81	
Act of black magic	Yes	9(30)	21(70)	30(100)	$\chi^2 = 3.63$; df = 1; p = 0.057
	No	7(13)	47(87)	54(100)	
	Total	16	68	84	

* (%) represents the percentage within either believing or not believing i.e., y/n category.

The results demonstrate that mothers born overseas are more likely to relate PND to various supernatural forces. It also highlights that a large proportion of the UK born mothers also believe that PND is an act of black magic.

3.5.8 Incidence of traditional practices

It was shown in section 3.4.4 that SA people follow various traditional practices after childbirth. Chi-square tests reveal strong association between ethnicity and mother's place birth as shown in Table 3.22.

Table 3.22: Incidence of traditional practice and ethnicity and place of birth

Did you follow any traditional practice after childbirth?	Mother's response	Ethnicity of mother			Statistical significance
		Bangladeshi n(%)*	Pakistani n(%)	Total n(%)	
Akika	Yes	51(71.8)	20(28.2)	71(100)	$\chi^2 = 5.506$; df = 1; p = 0.019
	No	5(38.5)	8(73.561.5)	13(100)	
	Total	56	28	84	
Shave baby's head	Yes	55(69.6)	24(30.4)	79(100)	$\chi^2 = 5.21$; df = 1; p = 0.022
	No	1(20)	4(80)	5(100)	
	Total	56	28	84	
		Mother's place of birth			
		UK n(%)*	Overseas n(%)	Total n(%)	
Akika	Yes	8(11.3)	63(88.7)	71(100)	$\chi^2 = 14.471$; df = 1; p = 0.000
	No	8(53.3)	7(46.7)	15(100)	
	Total	16	70	86	

* (%) represents the percentage within either believing or not believing i.e., y/n category.

The results suggest that Bangladeshi and overseas born mothers are very likely to be following Akika compared with Pakistani and UK born mothers respectively. Again, Bangladeshi mothers are more likely to shave their baby's head compared with Pakistani mothers.

3.5.9 Number of children vs. PND indicators

The total number of children for the sample is 2.01 ± 0.89 . Association between the effect of number of children and PND indicators are shown in Table 3.23.

Table 3.23: Number of children vs. PND indicators

PND indicator question	Mothers' response	Total number of children			Statistical significance
		1 child n (%)*	2 or more n (%)	Total n (%)	
IND1: Did you enjoy the day-to-day activities?	Yes (-ve PND)	3(13)	20(87)	23(100)	$\chi^2 = 3.911$; df = 1; p = 0.048
	No (+ve PND)	22(34.9)	41(65.1)	63(100)	
	Total	25	61	86	
IND2: Have you felt sad or been crying during pregnancy or after baby's birth?	Yes (+ve PND)	16(28.1)	41(71.9)	57(100)	$\chi^2 = 0.082$; df = 1; p = 0.775
	No (-ve PND)	9(31)	20(69)	29(100)	
	Total	25	61	86	
IND3: Have you been able to sleep well after your baby's birth?	Yes (-ve PND)	6(18.2)	27(81.8)	33(100)	$\chi^2 = 3.079$; df = 1; p = 0.079
	No (+ve PND)	19(35.8)	34(64.2)	53(100)	
	Total	25	61	86	
IND4: Do you ever feel everything is too much for you?	Yes (+ve PND)	21(32.3)	44(67.7)	65(100)	$\chi^2 = 1.353$; df = 1; p = 0.245
	No (-ve PND)	4(19)	17(81)	21(100)	
	Total	25	61	86	
IND5: Have you had aches and pain anywhere such as stomach, back or head?	Yes (+ve PND)	18(30)	42(70)	60(100)	$\chi^2 = 0.083$; df = 1; p = 0.773
	No (-ve PND)	7(26.9)	19(73.1)	26(100)	
	Total	25	61	86	

*(%) represents the percentage within the PND response i.e., -ve or +ve PND.

The above table suggests that more children will affect the enjoyment of day-to-day activities significantly as well as will affect sleep of mothers.

3.5.10 Association between smoker in family and other factors

Several tests were carried out to find any association between the presence of smoker in a household with a number of factors such as ethnicity, mother's level of understanding of English, presence of adult relatives, parent's level of education etc. Only for the first two cases, the results showed statistically significant association (Table 3.24).

Table 3.24: Factors associated with presence of smoker in household

		Number of households			Statistical significance
		Smoker present n(%)*	No smoker n(%)	Total n(%)	
Ethnicity	Bangladeshi	40(80)	16(47.1)	56(66.7)	$\chi^2 = 9.882$; df = 1; p = 0.002
	Pakistani	10(20)	18(52.9)	28(33.3)	
	Total	50(100)	34(100)	84(100)	
Mother's level of English	Excellent	10(19.6)	19(54.3)	29(33.7)	$\chi^2 = 9.882$; df = 1; p = 0.002
	Can understand but cannot read or write	18(35.3)	8(22.9)	26(30.2)	
	Poor	23(45.1)	8(22.9)	31(36)	
	Total	51(100)	35(100)	86(100)	

*(%) represents the percentage within each smoking category i.e., smoker/non-smoker.

The results indicate that Bangladeshi households are more likely to have smokers than Pakistani households. Also, if the mother's level of English is excellent it is less likely that such households will have a smoker in the house.

3.6 Qualitative information and case studies

The qualitative data and information gathered during the course of the study are documented here. Some of these were mentioned specifically in the questionnaire and the others emerged during the interview. As a matter of interest, four case studies are included here to highlight the importance of religious leaders, gaps in help and support systems of the health service and extent of social pressure. The comments/observations mentioned here emphasize the data presented earlier and document the severity of the topic.

3.6.1 Importance of religious leaders

Many women among the South Asian community strongly believe that the cause of PND is due to black magic, act of God etc. So the main cure lies in treating it the supernatural way. The religious leaders provide talisman (*tabiz*), holy water (*pora pani*) etc. This practice must be very popular because, one woman showed the researcher an advertisement of a *peer shahib* (a religious leader) published in a local Bengali newspaper who claims that he can cure any victim of *jadu* or *black magic* in a matter of days! The treatment would necessarily incur some cost – which may be substantial for a woman from this socio-economic background.

Case Study 1: Story of a mother

We visited a 25-year old mother who has recently given birth and was under stress. Once the interview was over, we asked her to make any final comments including if there is anything that we could do. To our surprise, she said that,

“.. I am so unhappy, I do not enjoy anything, I don't believe in any medicine. If you want to do something for me, then give me £300, I will go to Mia Sab (a local religious mullah) – he will give me a tabiz and pora pani and insha allah that will cure me.”

The stigma attached to the causes of PND and other childbirth related problems, such as eclampsia, is so severe among the South Asian community that, the NHS has recently advertised in Asian newspapers, published from the UK, explaining the facts – especially emphasizing the fact that it is a medical condition – not something caused by *jadu, black magic, or jinn (ghost)*.

3.6.2 Gaps in help and support

There is a clear need to provide culturally appropriate services and help to a number of women suffering from depression. It is not uncommon to find women in the ethnic community to be in desperate state and not knowing what to do. Some women have very little or no knowledge about how the NHS and other public/voluntary service providers work. This is also a great source of anxiety. Two such examples are mentioned below.

Case Study 2: A helpless mother

This is the story of a 30 year old Bangladeshi Mother with eight children. She is known to be suffering from depression after the birth of her recent child. Health professionals are also aware of her situation. But she feels desperately helpless, always saying that

‘ don't know what to do. You see I can't go to surgery so often, I have so many children, have no car, my husband does not care – does not want to listen.’

It appears that she is from a low socio economic background, neither she nor her husband is educated and does not feel comfortable going to surgery. The only way they can communicate is via an interpreter.

So, finally she said ‘.. *please, please, send me home* (meaning country of origin), *at least I have people to help me.*’

Case Study 3: A helpless mother

This 24-year old Pakistani mother of two children has identified herself as ‘*dispressed*’. She has been diagnosed as depressed by the health professionals. But, for some reason, follow up care and treatment have not been very effective. She cannot take care of her children or of herself, and was feeling ‘.. *entirely left out. Nobody, nobody cares if I live, .. see how sad I am!*’.

3.6.3 Influence of female relatives

It has been shown that the number of female relatives is high in SA households. In reality the influence of relatives is even greater because of the fact that these communities live in localized areas and may be even within a few streets. So the female relatives, who are often the in-laws, visit their daughter-in-law’s homes everyday and possibly more than once everyday. They keep on giving advice on their own, which are usually mandatory to follow. It is considered to be a gross disobedience to ignore even the unsolicited advice. Needless to say that the suggestions and advice are often useful and there may be good reasons to follow what they say; however, when it comes to depression and PND, the underlying stigma and cultural beliefs and practices (which they have acquired in the remote villages of their country of origin) become an extra burden on the women. It is likely that this is when such advice does more harm than help the mother to alleviate her depression.

To address the issue of depression, education of the whole community is needed, in addition to the women and their husbands.

3.6.4 Most vulnerable group

Very young mothers in a big joint family are vulnerable to postnatal stress. These are young brides recently migrated to the UK through marriage. They are under extreme pressure of taking care of the new born baby, behaving properly with their in-law's family members and other members of the community and adapting to the Western society. These young brides can hardly speak English and may have come to the country recently. They have almost no knowledge of the NHS or of health professionals. They are fully dependent on other people and often very afraid to speak out.

Women who are not articulate enough to express their own needs are also vulnerable to depression. Some cannot even express how they feel or what kind of service they require. In the end they just suffer silently and indefinitely! Health professionals need to be more careful and sympathetic towards these groups of women.

3.6.5 Lone parent

A lot of stigma is attached to married woman living alone. Although their husbands have left them, they don't want to disclose the fact to other people. Probably, the woman is living alone for a number of years. Her husband does not care about her or her children. But officially she is married to the man. She also has to pretend that her husband is taking good care of her! She has to show to her neighbour that she has a good married life – otherwise her family status will be downgraded and she would be isolated from other members of her community. This is an extreme pressure on women – both emotionally and financially.

Case Study 4: A helpless woman

After a long interview with a woman (i.e., when the woman felt confident about the author), she disclosed the fact that her husband had left her and she has to look after herself, her three children and also her mother-in-law, but officially and socially she is still a wife and happily married!

3.6.6 Effect of unskilled job of husband

The husbands, who are employed, are mostly engaged in unskilled work. They have to work unsociable and long hours in order to earn a decent income. They come home very late and also wake up very late. This puts a huge pressure on their wives who have young children. On the one hand, she has to remain awakened until her husband returns home, serve him a hot dinner at 2 O' clock in the morning and, on the other, she has to wake up early in the morning to prepare her other children for school. This is extremely stressful which is visible in the ladies' faces in the local primary schools. The number of households having this pattern is quite common in the Sure Start Westgate area.

3.6.7 Passive smoking

As mentioned previously, the level of smoking among the sample is very high. What is more worrying is that the adults are not fully aware of the dangers of 'passive smoking'. The general perception of some women was '*.. why should it matter, it's him (husband) who is smoking, the smoke is going inside his lungs.*' When asked about the smoke that comes out, some women thought that '*.. it is not very harmful any more! So why bother!*'. Clearly, these women did not show any clear awareness of 'passive smoking', how dangerous it is and how it might affect the health of young children and other non-smokers.

3.6.8 Gender preference of the baby

As mentioned earlier (section 3.4.4) that usually the friends and relatives make some kind of comments about the sex of the baby. The comments noted by the mothers are as follows:

'Good, boy again!';

'Happy, boy again!';

'It's a boy!';

'Oh, it's not a boy, never mind!';

'You are lucky, two boys!';

'Should have been a boy!';

'Boy, happy!'.

It is interesting to observe that all these comments take it for granted that ‘It should be a boy and one is only happy when it is a boy.’ However, the mothers themselves are divided in their opinion. Although the neighbours, friends and relatives make various comments as above, many mothers were happy by having a girl. In this study, two mothers replied that their husbands preferred girls to boys and since the babies were girls, they were very happy – although the comments from the other members of the family and friends were very similar to the ones mentioned above.

3.7 Summary

In this section, the findings from the questionnaire survey and information gathered during home visits are combined together to highlight the main outcomes from the study.

Socio-economic background

- The community represents a low social group. For example, 28% of the fathers are unemployed and 45% are engaged in unskilled work. Percentage of home ownership is only 30% which is lower than the national average.
- Majority of the people (69%) are either happy or very happy about the area where they live, but only 43% are either happy or very happy about the property itself.
- Smoking is very common among the male family members of the sample, with about 60% of the household having at least one man who is a smoker. Usually the husbands are the smokers.
- The level of education and knowledge of English is very low in the sample. The percentage of women who are in need of interpreters is significantly higher among the Bangladeshi mothers than the Pakistanis.
- Religion is very important to the South Asian mothers, with 47.7% saying that they practice religion very seriously, while others ‘try but not so strictly’.
- 44.2% households have adult relative staying with the participants’ families.

- In terms of dietary habit, almost all of the respondents eat 'halal' only food. Only about 20% of the mothers said that they have changed their dietary habit after the baby's birth.

Health, pregnancy and childbirth related

- More than a third of the women assessed the status of their health to be bad or not so good.
- There is high incidence of bottle-feeding (42%) among the respondents.
- The attendance in antenatal classes is very low, only 15% ever attended the classes. The adult relatives and friends play a major role in the mother's decision for non-attendance in antenatal classes.
- Over 46% of women were unhappy about their hospital stay, 80% felt left out at least on one occasion during the whole period of pregnancy and 65% thought that the situation of pregnancy and childbirth would have been different in their country of origin.
- The number of smokers within this community is very high and all of the smokers are men. A significant fraction of the members of the community are not aware of the dangers of 'passive smoking'.

Mood detection

- The response to the questions related to mood detection revealed a high percentage of mothers showing some kind of depression.
- On a scale of 0 to 5 (0 means, all the answers are positive, i.e., showing no depression and 5 means all of the answers are negative i.e., showing signs of depression), 24.4% of the mothers scored 5 and 34.9% of the mothers scored 4. This indicates that a high percentage of Asian mothers could be experiencing some degree of PND.

Mother's perception of PND

- Although the symptoms of PND are fairly well known to women, the term PND is not. It is mainly from the health professionals that the women become aware of this mental health problem.
- A lot of superstition and misunderstanding is still there, when it comes to the cause of PND. Only 52.3% are aware that it is a mental health condition. Evidence of beliefs in black magic, ghost etc. is overwhelming.
- Mothers' perceptions about how the sufferers in the community tackle PND are very mixed. The overall finding shows that percentage of people going to health professionals and percentage of those going to religious leaders (for cure) are nearly the same. A significant fraction of people seek help from friends or relatives and also take alternative medicine.
- Traditional practices are very popular among the South Asian community. *Akika*, the naming ceremony, and shaving babies' head are the most common practices. 46.5% of women did not go out and 17.5% did not sleep with husband for the first 40 days after the childbirth.
- The secretive nature of the South Asian women's mind is clearly revealed in this study. Only 28% of the women said that they would discuss it with someone if they were unhappy, while the majority said that they would keep it to themselves. Those who would speak would discuss the problem with husband or female relatives but not with anyone outside of the family.
- The gender of the baby is also important and 55% of the mothers were upset because of the gender of the baby. It is also common that other members of the family and friends would make comment about the sex of the baby.

Support and help related

- Female relatives play an important role in respect of help and support for mothers with young children. About 55% of women said they would follow the female

relatives' advice. Also, 38.4% of the mothers obtained information about different services from female relatives as against 31.4% from health professionals.

- The communication gap between health professionals and mothers is due to lack of understanding of both the parties. About 57% of the mothers partially understood what the staff told them and (in mothers' view) 58.2% of the staff partially understood what the mothers told them.
- Language is probably the biggest barrier in communication. 71% of the mothers would have preferred to speak to someone who could understand their language. Also, 85% of the mothers would have preferred to speak to a health professional who could understand their culture and religion.
- The study shows that there is a lapse in the interpreting service as 7% of the mothers said that no interpreter was available when needed.

Findings from the statistical analysis

- There is significant association between the indicators of PND and method of feeding. Mothers whose answers contribute to positive score of PND are more likely to feed their babies by bottle or a combination of bottle and breast.
- In contrast to popular belief that SA mothers have preference for sons, the present analysis does not show any statistically significant association.
- Association between method of feeding with health status of the mother and sex of the child reveal that boys are more likely to be breastfeed and that bottle feeding mothers are more likely to say that that they were in good/excellent health. Strong association with ethnicity implies that Pakistani women have a much higher proportion of exclusive breastfeeding than Bangladeshi women.
- A lot of stigma is attached with the perception of PND. Mothers born overseas are more likely to say that PND is due to an act of God, bad luck or act of black magic.
- Incidence of traditional practices such as *Akika*, shaving baby's head are strongly associated with ethnicity of the mother and place of mother's birth. Bangladeshi women are more likely to follow traditional practices than Pakistani mothers.

- Bangladeshi households are more likely to have smokers than Pakistani households. Also, if the mother's level of English is excellent it is less likely that such households will have a smoker in the house.

Chapter 4

Discussion

Detailed findings from the study samples of Loughborough and Newcastle were presented and analysed in the previous two chapters in isolation. In this chapter, the major observations and trends that emerged from these results are combined together and discussed in more detail. For the sake of convenience, discussions are grouped under various broad categories. The chapter ends with a critical assessment of the overall study methodology and few specific findings such that the results can be interpreted at the intended level of reliability.

4.1 Comparison of the two studies

To further facilitate the analysis, a comparison of the socio-economic and other relevant factors from both the studies are presented in Tables 4.1-2. This comparison reveals the trends for some variables more clearly.

Table 4.1: Comparison of socio-economic status

Item	Short description	Lboro (Bangladeshi) n=28	NCL (combined) n=86	NCL (Bangladeshi) n=56	NCL (Pakistani) n=28	Comments/ Observations
1	Mother's age Father's age	26 31.4	28.1 32.2	27.4 32.2	29.1 32.3	NCL parents slightly older
2	POB of Mother (%)	UK 14.3 Overseas 85.7	UK 18.6 Overseas 81.4	UK 3.6 Overseas 96.4	UK 42.9 Overseas 57.1	More Pak mothers UK born
3	POB of Father (%)	UK 3.6 Overseas 96.4	UK 9 Other 91	UK 3.6 Other 96.4	UK 25 Other 75	More Pak fathers UK born
4	Mother's occupation	96.4% housewives	90.7% housewives	96.4 Housewife	85.7% housewives	Mostly housewives
5	Unemployed father	17.9%	27.9%	23.2%	39.3%	NCL more unemployment
6	Net family income	32.1% betn £200-£300; 3.6% <200	45.3% betn £200-£300; 38.4% <200	44.6% betn £200-£300; 39.3% <200	50% betn £200-£300; 39.3% <200	NCL less well off
7	Property ownership	71.4% own; 10.7% council	30.2% own; 38.4% council	23.2% own; 42.9% council	39.3% own; 32.1% council	NCL sample less well off

... Table 4.1 cont'd

Table 4.1(cont'd): Comparison of socio-economic status

Item	Short description	Lboro (Bangladeshi) n=28	NCL (Combined) n=86	NCL (Bangladeshi) n=56	NCL (Pakistani) n=28	Comments/ Observations
8	% families owning a car	42.9	50	39.3	71.4	Car ownership not a good indicator; Lboro small place, so they may not need.
9	Feeling about property	100% happy	43% happy 54.7% unhappy	39.3% happy 57.1% unhappy	50% happy; 50% unhappy	A large proportion are unhappy for NCL
10	Mother's education	0% no school 71.4% up to 16 yrs	29.1 no school; 40.7% up to 16	41.1% no school; 41.1% up to 16	7.1% no school; 42.9% up to 16	NCL sample less educated
11	Mother's English knowledge	10.7% poor	36% poor	42.9% poor	25% poor	NCL more language problem
12	Father's English knowledge	7.1% poor	22.1% poor	25% poor	18.5% poor	NCL has more language problem
13	Religion	100% Muslim	97.7% Muslim	100% Muslim	100% Muslim	Same religion
14	Presence of at least 1 adult relative	50%	44.2%	39.3%	57.1%	Comparable
15	Language spoken at home	90% Bengali 10% mixed	74.4% ethnic 18.6% mixed 7% other	91.1% Bengali	39.2% Urdu/Punjabi	Shows degree of westernisation
16	Mother's assessment of hospital staff who could speak her language	14%	14%	16.1%	10.7%	Comparable

Table 4.2: Comparison of other information (percent)

Item	Short description	Lboro (Bangladeshi) n=28	NCL (Combined) n=86	NCL (Bangladeshi) n=56	NCL (Pakistani) n=28	Observation
1	Households with smokers	57.1	59.3	71.4	35.7	Comparable overall. More for Bang.
2	Mothers changed diet	17.9	19.8	17.9	21.4	Comparable
3	Mother's own health	Good or exce: 92.8 Not so good: 7.1	Good or exce: 65.2 Not so good: 34.9	Good or exce 60.7 Not so good 39.3	Good or exce: 71.4 Not so good: 28.6	NCL complaining more about health.
4	Feeling during hospital stay	Exec: 17.9 Good: 25 Not good: 57.1	Exec: 12.8 Good: 40.7 Not good: 46.5	Exec: 14.3 Good 33.9 Not good 46.4	Exec 10.7 Good 50 Not good 39.3	NCL more satisfied
5	Attendance of antenatal classes	7	15.1	8.9	25	Comparable
6	Felt left out during pregnancy	28.6	80.2	83.9	75	NCL more likely to feel left out
7	Proportion of male to female baby	M 39.3 F 60.7	M 51 F 49	M 57.1 F 42.9	M 42.9 F 57.1	Balanced ratio for NCL for bigger n
8	Health status of most recent child	Excellent 85.7 Good 10.7 Not good 2.3	Excellent 22.1 Good 67.4 Not good 10.4	Ex 19.6 Good 64.3 Not good 12.5	Ex 28.6 Good 71.4 Not good 0	NCL Bangladeshi less positive about child health status
9	Opinion about whether situation would be different in country of origin	Yes: 75	Yes: 65	Yes: 69.9	Yes: 60.7	Emotional similarity

It shows that the (combined) Newcastle sample is more disadvantaged than the Loughborough sample in terms of employment, family income, property ownership, education and knowledge of English. There are also variations between the Bangladeshi and Pakistani samples of Newcastle study. The Pakistani sample shows a larger

proportion of second generation parents and are better educated and more well off than the Bangladeshi sample.

Interestingly, there are also similarities in respect of percentage of smokers in the households (with the Bangladeshi sample of Newcastle showing the highest proportion), attendance in antenatal classes, presence of adult relatives, changing of diet during pregnancy etc.

It may also be noticed in Table 4.2 that the mothers of the Newcastle sample are not happy about their own health, almost four fifths felt left out during pregnancy and a significant fraction are not happy about the health status of their child. Assuming that mothers' reports are reliable (Rousham *et al*, 1998), this points in the direction of health inequality for the socially disadvantaged groups. This may be interpreted in the light of the Black report (Townsend *et al*, 1986) that although the NHS makes available the best of medical care to people of all income groups, does not mean that there will not be any health inequality. Some of the causes of health inequality may lie in factors that are neither materialistic nor medical. These factors, often interconnected (Nazroo, 1997), may have an indirect effect on the mother's perceived health status as evidenced in this study.

4.2 Feeding related

Delayed initiation of breast-feeding

Mothers are all aware about the positive aspects of breastfeeding, which is evidenced in the Loughborough sample where all mothers except one representing 96.4% of the sample, initiated breastfeeding for their babies. This compares well with Thomas and Avery (1997) data that the incidence of breastfeeding among the Bangladeshi mothers was 90%. However, as shown in Fig. 2.10, nearly half of the mothers did not start breastfeeding until they returned home from hospital. This is in contrast with the national survey where 67% of White mothers (Thomas and Avery, 1997) are found to have started breastfeeding in hospital immediately after the baby's birth. It is also interesting to note from the qualitative information (section 2.4.1) that none of the respondents mentioned the tradition of not giving colostrum to the baby (Rogers, 1997). In fact, at least half of

the mothers did give colostrums to their babies (Fig. 2.10). This change in attitude may be related to gradual disappearance of traditional practice in the UK combined with active advice by health professionals. However, no conclusive comments can be made without conducting further study on bigger samples.

Age of introduction of solid food

As shown in Fig. 2.13, about 40% of the mothers started solid food earlier than the recommended four months. The COMA (Committee on Medical Aspects) Working Group on Weaning Diet (COMA report, 1994) recommends that ‘the majority of infants should not be given solid foods before the age of four months’. In 2001, the WHO issued a revised global recommendation that mothers should breastfeed exclusively for six months. It appears that, either the mothers are unaware of this information or they simply ignore these recommendations. The Infant Feeding 2000 national survey (Hamlyn *et al*, 2002) reveals that 24% of all mothers surveyed (which included White and ethnic minority population) had introduced solid food by the age of three months. Compared with the 1995 survey, this represents less than half the proportion recorded (56%). So the observation in this study shows a higher percentage than the national data, although for both cases, there appear to be deviation from the recommended age of introduction of solid food.

Weaning celebration

Loughborough study shows that there is a preference for shop prepared food compared to home cooked food (Fig. 2.14 and section 2.5.6). Reasons for this preference may be convenience, tele advertising etc. This is contrary to the practice of weaning celebration in Bangladesh. The present finding is in line with that of Condon *et al* (2003) who comment that

“..Bangladeshi weaning practice which the participants did not practise in the UK, is an example of how a nutritionally superior indigenous practice has been eroded by the feeding practices of the adoptive country.”

Influence of female relatives

The presence of adult relatives is a common characteristic of South Asian families (Figs. 2.4 and 3.4). One reason for this is that the residence after marriage is strongly patrilocal (bride lives with groom's family) for rural Bangladeshi families and this also explains that the most common relative living in a household is the mother-in-law. It is revealed that female relatives play an important role in the mother's decision about what, how and when to feed her baby. They are also influential in the decision about daily food menu.

Influence of female relatives is also high in the context of maternal mental health (Fig. 3.11) that women were twice more likely to follow the advice of female relatives than that of the health professionals.

The implication of the above facts is that the female relatives should be involved in any mass education programme. They should also be invited to the antenatal classes.

Effect of sex of the child

The statistical tests between sex of the child and PND indicators, does not show any significant association (Table 3.18). This compares well with the focus group for Loughborough mothers which highlights that they (mothers) do not discriminate in feeding their babies based on the gender (section 2.5.9).

Contrary to the above observations, Table 3.15 shows a statistically significant association between sex of the child and method of feeding and that boys are more likely to be breastfed exclusively than girls. Also, the qualitative comments made by the members of the family and friends (section 3.6.8) support the generally accepted view that the South Asian people have preference for sons.

This is a dilemma which could not be completely removed from the collected data due to the fact ethnicity is a confounding factor. However, the results presented in section 3.5.5 reiterates the fact that irrespective of ethnic origin, there is no statistically significant association between sex of the child and PND indicators. It is also possible that the gender preference had actually reduced due to a change in culture because a large proportion of parents (mainly Pakistani) are born in this country.

4.3 Emotional aspects of feeding

PND indicators vs. feeding method

It is well known that PND affects mother in various ways. However, the extent to which it will affect the baby and his feeding is not known. The recent work by Patel *et al* (2004) clearly establishes an association between maternal mental health and infant growth among low income families in South Asia. The current study highlights that there is an association between PND indicators with feeding method (Table 3.14). To what extent the emotional state of the mother affects infant feeding is a matter for rigorous work on a larger sample. In fact this is a two-way association. On the one hand, mother's mental health can affect the feeding of her baby and, on the other, feeding method can also affect mother's mental state because it is established beyond doubt that breastfeeding increases the bonding between mother and infant. The following quotation from Spinks (2001) is one of the many that is worth noting in this context.

“As I watched and felt her feeding, I couldn't help but marvel at the design of it all, Ruby and I together, mother and daughter, the feeder and the fed. We were an architecture so intricate and complex. As she fed I noticed her lips and tongue working together to form a tight seal around my breast, never spilling a drop of precious milk. I marvelled at her arms, always free and exactly the right length to reach up so that her tiny hands could play with my lips or face. My own arms, just the right length to cradle her head in the crook of my elbow while she drank. One of my own hands always free to stroke her head, tickle her foot or hold her hand. As far as I could see, there was nothing left to chance in this miraculous design.”

As already discussed in the previous section, there is evidence that a large proportion of Bangladeshi women delay the initiation of breastfeeding for various reasons and wait until they return home. This practice may affect the mother-infant bonding in the initial stage and might put the mother at an increased risk of having depression.

4.4 Cultural belief, religious influence and traditional practice

There is overwhelming evidence from the present work that religion, culture and traditions are the three very important factors for maternal mental health (sections 2.5.6, 2.5.10, 3.4.1 and Tables 3.11-13) as well as infant feeding practices. Tables 3.21-22 show that traditional practices are strongly associated with mother's ethnicity and place of birth. Considerable superstitions are linked to the causes of PND and mothers born overseas are more likely to relate this syndrome to an act of God, bad luck or act of black magic. It has also been shown in the study that PND indicators are significantly associated with feeding method.

Although many health professionals are aware of the cultural and social aspects of the South Asian community, a number of them have very limited knowledge. This is a big obstacle towards service delivery. The expertise and knowledge of the more experienced ones should be shared. It is also important to consider the religious leaders very seriously as they have tremendous influence on the members of the community. They should be given sufficient information about positive mental health and should be involved in awareness building initiatives.

4.5 Service delivery and uptake

Antenatal class

Antenatal classes are very unpopular among the mothers. This has been confirmed by both of the studies as well as supported by Thomas and Avery (1997). The main reason for non-attendance is that the mothers did not think it was important (sections 2.3.3.1, 2.5.7 and Fig. 3.8). The recent survey on infant feeding 2000 shows that the attendance rate at antenatal classes have reduced from 70% in 1995 to 64% in 2000 for the White population. This may be attributed to an exponential growth of information availability through internet, TV channels etc. The reasons mentioned by the mothers (in this study) for such non-attendance raise serious questions about the validity of continuing the antenatal classes in the present format at least for this community. This issue needs careful scrutiny by the health service providers.

Communication difficulty

It is quite common among the South Asian mothers that they face problem communicating with health professionals (Gerrish *et al*, 2004; Nazroo, 1997). This is also revealed in both of the studies. The communication barrier is made up of linguistic and cultural factors. It has been observed that a significant proportion of women has very little or no knowledge of English (Tables 2.3 and 3.7). As a result they are dependent on interpreters and, due to lapse in the system, they are not always available (Fig.3.14). That the cultural factors are very important to these women are revealed in the data that about 85% of the mothers would prefer to speak to someone who could understand her culture and religion (section 3.4.5). To overcome these barriers, health professionals must show increased awareness, sympathy and respect for South Asian mothers and at the same time the mothers should be more pro-active in adopting to the systems in Britain.

Mothers' lack of articulation

This is a serious matter in the context of PND identification. Apart from a lack of English proficiency, many mothers are unaware of the 'jargon' used by health professionals. Even using an interpreter does not always solve these problems (section 2.5.10). This has also been confirmed by personal communication with the health professionals working in the Sure Start Westgate area of Newcastle. As a result, the South Asian mothers often express their unhappy state of mind or depressed mood by saying that they have pains rather than they are suffering from depression. Interviewers need to gain the confidence of the mothers by being sympathetic and attentive. They should also allow 'longer than expected' time for such interviews.

It is this particular characteristic of women that led to the pictorial PND identification tool (Adams and Sobowale, 2003). One of the PND indicators in this study '*Have you had aches and pain anywhere such as stomach, back or head?*' does take this characteristic into account.

Difficult to reach community

South Asian community represents a 'difficult to reach' community (McAvoy, 1989; Nazroo, 1997). The present study shows that the attitude of women in this ethnic minority group is very different from the mainstream population. Women are usually introvert and

the data of Newcastle study shows that 72% (section 3.4.4) of women will not discuss whether they are happy or not with anybody else. This has proved to be a challenging task in conducting the interviews. Women will speak out only after the interviewer gets the confidence of the mother. As a result, the interviews took longer than expected.

4.6 Health concerns and consciousness

Smoking

The number of smokers among the community is high and interestingly all of the smokers are male (Figs. 2.5 and 3.6). On the other hand, the number of smokers among the female members is nil compared with 35% of White mothers (Hamlyn *et al*, 2002), which is indeed a very positive message for the community. Table 3.24 shows that the likelihood of the presence of a smoker in a household is associated with ethnicity and level of English of mother. The differences in the socio-economic status of Bangladeshi and Pakistani samples, shown in Table 4.1, support these observations. It is worrying to notice that a significant fraction of the community (again the Bangladeshis) in general lacks awareness about the harmful effects of passive smoking (Fig. 2.6 and section 3.6.7).

One contributing factor to such a high percentage of smokers is that a large proportion of the male members of the family are born overseas (Table 4.1), and possibly came to this country as husbands, had no education in this country and also not fully aware of the dangers of smoking. Since the process of 'marriage migrants' is ongoing, any campaign of 'quit smoking' directed towards this community must be on an ongoing basis.

Dietary matters

It is very common among the White population to change dietary habit during pregnancy (Hamlyn *et al*, 2002). Health professionals also advise mothers to change to more healthy options during this period to avoid complications. However, the message does not go far into the community as is evidenced that only about a fifth of the mothers did actually change their diet during pregnancy (Table 4.2). It shows that either the mothers are not fully convinced about the health professionals' advice, or they do not understand such advice due to communication barrier. It is also interesting to note that the Pakistani mothers who are more UK born and better educated are also insensitive to this issue.

Perception and prevalence of PND

The participants in this study reported a high incidence of the individual signs and symptoms of postnatal depression (section 3.4.4), but are not familiar with the term PND. The perception of postnatal depression is commonly associated with various socio-cultural traditions and rituals and a large percentage of the population do not consider it clinically treatable. To some extent, this is a hidden problem and both mothers and family members are reluctant to speak about the situation.

Since PND is a mental health syndrome, it is greatly influenced by the cultural and religious practices of the person. The identification of symptoms among South Asian women is also much more difficult due to the unavailability of a proven tool, language barrier, lack of understanding of the culture and practices and lack of trust between a health professional and the client. The current study shows that the likelihood of women suffering from PND is higher for this community than the accepted norm of about 10-15% (Kumar, 1994). Some idea about the prevalence of the syndrome can be made by reference to the overall PND score presented in Table 3.10.

4.7 Criticism of the work

Conduct of interview and data collection

The most prominent source of bias in this work is possibly the 'personal bias' of the author because she conducted the interviews by herself, except for the Pakistani sample of Newcastle where other people in the health team were involved. The author was fully aware of the situation and did her best (for example, not ticking any answer before the mother spoke) to avoid any stereotyping of the mothers' responses. Also, data were made anonymous during entry to the SPSS program.

An alternative to the present methodology would be to collect data by postal survey, which would have been a more convenient approach, and in theory at least, a postal survey would avoid any interviewer bias. Unfortunately, it has some serious shortcomings for a community where the literacy level is low and mothers are under various stresses. As a result, it is likely that the number of completed questionnaire would

have been smaller. At the same time, there was the possibility that the questionnaire would have been completed by another person such as the husband or sister and may be subject to 'personal bias' again! In the current approach, there was no such possibility, except for a few unavoidable cases where husbands were present during part of the interview. It was only due to this methodology that a number of useful qualitative data and information did emerge. In several instances, these qualitative data helped significantly as a further verification of the quantitative data.

Sample size

Due to the time and resource constraints, both of the samples were of moderate size with the Loughborough sample rendering only a few associations of significant meaning (judged on the basis of $p < 0,05$). However, a careful analysis reveals that given the constraints it may not be possible to obtain a larger sample so easily.

The Loughborough sample includes (nearly) all eligible Bangladeshi women who had a child up to the age of twelve months at the time of interview and the data were collected over a six-month period. It has been shown that the Bangladeshi population of Loughborough represents 80.7% of the total Bangladeshi population of Leicestershire. Hence the sample considered in the study is representative of the Bangladeshi population in the county. The situation could be improved by extending the data collection period or by including other ethnic groups (such as the Gujarati population) in the study. Both of these would have incurred extra resources and it was not intended to include the Gujarati population which has an entirely different composition in terms of social class, religion and migration history (section 1.1.2).

The Newcastle sample consists of nearly 42% of the eligible population. The ethnic mix of the sample (65.1% Bangladeshi, 32.6% Pakistani and 2.3% Indian) corresponds roughly to that of the resident population (58.4% Bangladeshi, 37.7% Pakistani and 3.9% Indian). The variations were due to missed appointments of mostly Pakistani women^a.

^a It was interesting to see that most of the missed appointments (4 for Bangladeshi and 10 for Pakistani) were from Pakistani families and incidentally these are the only interviews NOT conducted by the author herself. This is probably a matter of chance, but is a further vindication

The study would have benefited if the whole eligible population were included but the resource constraints limited any such attempt^b. However, this may be considered as a future extension to the present work.

PND indicators

As mentioned before, the mood detecting questions (the PND indicators) were kept simple. This was done for three reasons. Firstly, the objective of the work was to reveal an overall picture of the mental state of mothers in the Sure Start Westgate area instead of 'clinical' identification of the extent of PND. To do this, one needs to be properly qualified to assess the mental health of the mother. The author was neither qualified nor allowed to ask sensitive questions. Secondly, having too many options, instead of yes or no, would not help from statistical point of view because the sample sizes are not very big. Thirdly, there is no established and calibrated variant of EPDS that is accepted as a 'gold standard' for the identification of PND amongst South Asian mothers and is an ongoing research topic (Sobowale, 2002). These five indicators were hence selected after thorough consultation with members of the health team of Sure Start Westgate that included health professionals experienced in the field and the particular community.

Some of these PND indicators were shown to be significantly associated (individually) with a number of other factors (section 3.5). Further multivariate statistical analyses (e.g., logistic regression) would have been appropriate to establish which factors were most strongly associated with the PND indicators. However, this was not attempted due to the fact that the questions are of simplified form as mentioned in the previous paragraph.

for the adopted methodology that the data collection was through face-to-face interviews without needing a third party and is clearly a more successful approach - although it is difficult to rule out the personal bias factor.

^b In fact, the Northumberland and Tyne and Wear Local Ethical Research Committee did raise the question whether the interviewing of 100 proposed mothers were at all feasible during the allocated time for the project. The author justified their query by mentioning that local knowledge of health visitors, midwives and other health professionals would greatly minimize the total time required for conducting the interviews.

Ethnicity: a difficult to define confounding factor

Ethnicity of the mothers is strongly associated with the method of feeding, incidence of traditional practices and presence of smoker in household (Tables 3.17, 3.22 and 3.24). It is hence a confounding factor for almost all of the data presented in the Newcastle study, because as can be seen clearly from Tables 4.1-2, the two ethnic samples of the Newcastle study differed on few aspects. It is hence a justifiable argument to raise questions about the validity of the results. A critical analysis of the matter will however reveal that the very definition of ethnicity may be difficult in the current context and hence eliminating such confounding error may not be very practical.

Ethnicity is somewhat multidimensional and includes aspects such as race, origin or ancestry, identity, language and religion. It is also dynamic and will change as a result of blending and intermarriage. The other difficulty is that ethnicity means the way the respondents perceive themselves as belonging to a particular race. The ONS classifies ethnicity at two different levels. Level 1 is a broader identity such as 'Asian or Asian British' and level 2 comprises subdivisions such as Indian, Bangladeshi, Pakistani etc. It may be argued that this classification is based more on the citizenship of the country of origin rather than on the ethnic identity^c. The best illustration may be made with respect to ethnic populations of the provinces of the Punjab and West Bengal of India. The Punjab of India is the eastern part of the undivided Punjab during the British colonial period while the western part is now a province of Pakistan. Similarly the western part of the undivided Bengal is now the state of West Bengal, which is part of India while the eastern part is now Bangladesh. People from the Punjab and those from West Bengal are different in respect of language, physical appearances, food, culture and religious practices. The main similarities between these two ethnic groups are the common citizenship and the imposed state language of Hindi. So, in the truest sense, the fundamental reason for such classification is based more on political identity rather than 'ethnicity'. However, the people migrated to this country (UK) from these two provinces

^c Bangladesh is more ethnically homogeneous compared with Pakistan which has five provinces and more than one ethnic population such as Sindhi, Punjabi, Baluchi etc. India is a vast country with a few dozen distinctly different ethnic populations such as Punjabi, Gujarati, Marathi, Bangalees, Bihari, Tamils, Assamese etc.

share some common characteristics in their lifestyles, such as marital and family values that are 'typical' of South Asians living in the UK.

In the context of the present work, combination of races from the sub-continent are loosely termed as South Asians and is a common practice in literature (Katbamna *et al*, 2004; Adams and Sobowale, 2003), although it is fully recognised that each of these racial groups has different ethnic identity. Such regroupings are common from the viewpoint of service providers such as the NHS or Social Services Department. Otherwise there would be too many service options, leading to poorer and more inefficient service delivery. Also, since ethnicity is dynamic, the gaps between the first generation of Bangladeshi and Pakistani and those between the second generations are likely to be much less. To obtain truly ethnic data, one needs to be extremely selective in choosing the samples. It is unquestionable that such data will have better academic merit, but from the viewpoint of service providers it may create difficulty and may prove to be of little additional significance. The data presented in this work, especially for the Newcastle study should be interpreted in the light of the above discussion.

Chapter 5

Conclusions

The work presented in this thesis deals with the infant feeding practices and postnatal depression of South Asian women living in the UK. Various characteristics of feeding and other information related to the health and lifestyles of mothers and their families have been reported and analysed. In this chapter, the main achievements and limitations of the study are briefly summarised. Finally, based on the current work, a number of possible further studies are also outlined.

5.1 Achievements

- A large number of data have been obtained with respect to the infant feeding practices of the Bangladeshi group of women. This is a hard to reach community and the information gathered may be useful to health practitioners dealing with SA women.
- The study has revealed that the method of feeding is significantly associated with the mental state of a mother. This is a new finding based on this work which may have far reaching consequences and may give clues for further investigation.
- The extent of traditional practices and beliefs in supernatural forces of South Asian mothers in the context of perinatal period are quantified. The tremendous influence that the religious leaders and adult female relatives exercise on the mothers are also highlighted.
- The study shows that there are a number of shortcomings in terms delivery and uptake of health services. Communication problem appears to be the biggest hindrance for service delivery. Lack of understanding of each other's culture, between health professionals and SA women, is a major source of misgiving and must be addressed.

- The members of the SA community are still partially unaware of the dangers of passive smoking. The high proportion of smokers within the community is a cause for concern and must be dealt with as early as possible.

5.2 Limitations

- The sample sizes for the studies were not very big. In order to have increased confidence on the results, similar studies should be conducted on bigger samples. This means that such studies would require more time and resources.
- Form filling alone does not reveal the true extent of the mental health status of a SA mother. The interviewer must be a good listener, must allow sufficient time and should have an attentive and sympathetic attitude towards the interviewees. Due to time constraints, this was not always possible.
- PND indicators are few in number and are simplified. The association with PND indicators with feeding method, ethnicity etc. can only be taken as 'indicative only'. Without further study the comments made in this context cannot be generalised.
- The Indian community is under represented. This is not a shortcoming of sampling but is a reflection of the small proportion of Indian people living in the Sure Start Westgate area.
- During interviews, relatives and husbands were present in few cases. Hence, it is difficult to assess whether the women revealed the true information or not. The difficulty is that these women are reluctant to fill forms and a significant proportion cannot read or write.

5.3 Scope for further work

- Female relatives and religious leaders are the two very influential groups who have profound effect on the feeding practices and maternal mental health and should be educated properly. Rigorous studies should be conducted such that the different options towards educating these two groups of people can be formulated.
- A thorough evaluation of the interpreting services is a necessity. The accuracy and reliability of mood detection through interpreters need careful analysis and monitoring.
- The awareness of each other's culture between the health professionals and South Asian women need careful evaluation. The findings from such studies would determine the true extent of ignorance and hence would allow the service providers to take appropriate actions in this regard.
- The actual level of postnatal depression within the SA community and its effect on children and family should be found out. A project with clear and focused objectives may be initiated in this regard.
- A culturally sensitive mood detection tool should be devised and adopted for this community. A pilot study using a variant of the EPDS may be conducted on a sample of the population. However, before the modified tool is followed, it should be calibrated against a control sample of South Asian women who are known to be suffering from postnatal depression.
- The association between PND indicators and feeding practices is very elementary and may be treated as indicative only. This issue may be resolved by doing a case control study with an appropriate variant of EPDS calibrated against South Asian women.

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Appendix A: Questionnaire for Loughborough Study

Date _____
Serial No. _____

I. Questions related to parents

1. Mother's date of birth:

2. Place of mother's birth
 - (a) UK
 - (b) India
 - (c) Bangladesh
 - (d) Pakistan
 - (e) Others(specify) _____
3. If NOT UK, when did you come to the UK
(Month & Year): ____ / ____
4. Father's date of birth:

5. Place of father's birth
 - (a) UK
 - (b) India
 - (c) Bangladesh
 - (d) Pakistan
 - (e) Others (specify) _____
6. If NOT UK, when did you come to the UK
(Month & Year): ____ / ____
7. Father's occupation:

Is it full-time/ part-time _____
If part-time, then how many hours per week
_____ hours
8. Mother's occupation:

If you have worked in the last 2 years, what
was your occupation _____
Did you work full-time/part-time _____
If part-time, then how many hours per week
_____ hours
9. Total family income per week
 - (a) < £200
 - (b) £200 - £300
 - (c) >£300

10. Is the property you live in
 - (a) Council owned
 - (b) Privately rented
 - (c) Owned by you
 - (d) Other (specify) _____
11. What kind of property it is:
 - (a) Flat
 - (b) Semi-detached house
 - (c) Detached house
 - (d) Terraced
 - (e) Other (specify) _____
12. How many bedrooms are there in the
property: _____
13. Number of people living in the property
 - (a) Below 16: _____
 - (b) Above 16: _____
14. How do you feel living in the property
 - (a) Very happy
 - (b) Happy
 - (c) Unhappy
 - (d) Other
15. Do you or your husband own a car?
 - (a) Yes
 - (b) No

II. Other questions related to parents/family members

1. Your level of understanding of English
 - (a) Excellent
 - (b) Can understand but cannot read or
write
 - (c) Poor
2. Your husband's level of understanding of
English
 - (a) Excellent
 - (b) Can understand but cannot read or
write
 - (c) Poor
3. What is your level of education
 - (a) No schooling
 - (b) Left school after 16 years
 - (c) Left school after 18 years
 - (d) Higher level

4. What is your husband's level of education
 (a) No schooling
 (b) Left school after 16 years
 (c) Left school after 18 years
 (d) Higher level
5. Mother's religion
 (a) Muslim
 (b) Hindu
 (c) Sikh
 (d) Christian
 (e) Other
6. Father's religion
 (a) Muslim
 (b) Hindu
 (c) Sikh
 (d) Christian
 (e) Other
7. How would you describe your ethnicity
 (a) Bangladeshi
 (b) Indian
 (c) Pakistani
 (d) British
8. Language spoken at home
 (a) English
 (b) Bengali
 (c) Hindi
9. Do you smoke?
 (a) Yes
 (b) No
10. Does your husband smoke?
 (a) Yes
 (b) No
11. Do any other members of the family smoke?
 (a) Yes
 (b) No
 If yes, then who _____
12. What is your/ your husband's/ family member's opinion about 'passive smoking'.
 (a) It is harmful for the baby
 (b) It has no effect on baby's health
13. Is there any adult relative in your household?
 (a) Yes
 (b) No
14. If yes, then who
 (a) Mother/ Mother-in-law
 (b) Father/ Father-in-law
 (c) Brother/ Brother-in-law
 (d) Sister/ Sister-in-law
 (e) Other
15. Number of adult relatives
 (a) 1-2
 (b) 3-4
 (c) 5 or more
16. Are you a
 (a) Vegetarian
 (b) Non-vegetarian
 (c) Other
17. If non-vegetarian, do you eat
 (a) only halal food
 (b) do not distinguish
18. Is your husband
 (a) Vegetarian
 (b) Non-vegetarian
 (c) Other
19. If non-vegetarian, does he take
 (a) only halal food
 (b) do not distinguish
20. Who takes decision about daily household menu (about what to cook)
 (a) You
 (b) Your husband
 (c) Other adult (specify) _____
21. Who prepares the meal
 (a) You
 (b) Your husband
 (c) Other adult (specify) _____
22. Did you change your dietary habit after you have had the baby
 (a) Yes
 (b) No
 If yes, then mention which way

23. Can you tell me how your mother used to feed you as a baby?

24. What is the status of your health (assessed by you)

- (a) Excellent
- (b) Good
- (c) Not so good
- (d) Bad

25. Do you have (or had in the past) any illness

26. Is anyone in your family suffering from any illness

27. Do you or your husband use any method of contraception

- (a) Yes
- (b) No

If yes, then specify:

III. Baby/ childbirth/feeding related

1. Date of birth of most recent child: d/m/y

____/____/____

2. Sex of the most recent child: M/F

3. Sex and date of birth of older children

1st child: M/F ____/____/____

2nd child: M/F ____/____/____

3rd child: M/F ____/____/____

4th child: M/F ____/____/____

Not applicable

4. Birth weight of most recent child

5. Is there any illness of your children (please specify)

6. Mode of delivery of most recent child

- (a) Normal
- (b) CS
- (c) Other (specify) _____

7. General health condition of most recent child at the time of birth

- (a) Excellent
- (b) Good
- (c) Not so good
- (d) Bad (specify) _____

8. Gestation age (weeks) most recent child

Name of hospital where baby was born

9. How many days did you stay in hospital during birth of most recent child

- (a) 0-2
- (b) 3-5
- (c) 6-8
- (d) more; any reason (specify)

10. How did you feel in hospital

- (a) Excellent
- (b) Good
- (c) Not so good
- (d) Bad (specify any reason)

11. Was there anyone who could speak your language?

- (a) Yes
- (b) No

12. How would describe the quality of food supplied in the hospital?

- (a) Excellent
- (b) Good
- (c) Not so good
- (d) Bad (specify any reason)

13. Who did you get the most help from in hospital?

(a) Members of the family: (specify who)

- (b) Friend
- (c) Health professionals (specify)

14. How did you travel to hospital

- (a) by car
- (b) public transport
- (c) Ambulance
- (d) Other

15. Did you ever feel left out or lonely during the whole period of pregnancy and child birth?

- (a) Yes
- (b) No

If yes, can you specify when and why

16. Do you think that situation would be different if you were in your country of birth?

- (a) Yes
- (b) No
- (c) Not applicable

17. Please mention anything in particular about hospital stay

18. Did you have any antenatal check up?

- (a) Yes
- (b) No

If yes, then how many times (specify)

If no, then why not (specify)

19. When did you start breastfeeding?

- (a) At the hospital; how many hours after the baby was born _____
- (b) Wait until you got home

If you answer (b), then why did you wait (specify) _____

20. Has anyone in the hospital show you how to breast feed effectively?

- (a) Yes
- (b) No

If yes, then who (specify)

21. Why did you choose to breast feed your baby?

- (a) Best for baby
- (b) More convenient
- (c) Best for you
- (d) Bond between mother and baby
- (e) Cheaper
- (f) Previous experience
- (g) No reason

(h) Other (please specify)

22. Did you get any message about the positive effect of breast feeding

- (a) Yes
- (b) No

If yes, what way:

23. Are you still breastfeeding your baby?

- (a) Yes
- (b) No

24. If the answer to above is 'yes', then how often?

- (a) On demand
- (b) Set times
- (c) No fixed routine

25. How often do you give

- (a) Bottle milk: _____ times a day
- (b) Fresh milk: _____ times a day
- (c) Powdered baby milk: _____ times a day

26. How old was the baby when you first started giving bottle milk to your child

_____ weeks/ _____ months

27. How do you decide which brand should you give

28. How often do you bottle-feed your baby?

- (a) On demand
- (b) Set times
- (c) No fixed routine

29. Do you get

- (a) Free milk
- (b) Milk token
- (c) Reduced price

30. Do you have to buy baby milk:

- (a) Yes
- (b) No

31. Do you think it is expensive:

- (a) Yes
- (b) No

32. Did you ever add any of the following to baby's milk

- (a) Honey
 - (b) Sugar
 - (c) Eggs
 - (d) Other, please specify
-

33. How old was your baby when he/she first had any food apart from milk

- (a) 12 weeks or earlier
- (b) 12-16 weeks
- (c) 16-20 weeks
- (d) 20 weeks or later

34. Which of the following food are you giving to your baby (tick all those apply)

- (a) Home cooked food (specially for the baby)
- (b) Some food which you are having
- (c) Cereal
- (d) Rusk
- (e) Prepared food from shop

35. How many times do you give solid food to your baby

- (a) Once a day
- (b) Twice a day
- (c) Three times a day
- (d) More than three times

36. Which of the following intervals do you give solid food to your baby (tick as many as necessary)

- (a) Between 6am to 10 am
- (b) Between 10am to 2pm
- (c) Between 2pm to 6pm
- (d) Between 6pm to 10pm
- (e) Between 10pm to 6am

37. How do you feed your baby

- (a) By hand
 - (b) By spoon
 - (c) Other (specify)
-

38. How much solid food do you give each time how many spoonful :

39. Did you give any fresh fruit to your baby?

- (a) Yes
- (b) No

If yes, please mention

40. Do you have any concern about your baby's feeding or eating?

- (a) Yes
- (b) No

If yes, please mention

41. Do you have any concern/ worries about your baby's weight?

- (a) Yes
- (b) No

If yes, please mention

41. Did you give any drink other than milk?

- (a) If yes, what drink (please specify)
-

(b) How often?

(c) How did you give the alternate drink ?
bottle/spoon/mug

42. Do you give your baby any extra vitamin?

- (a) If yes, can you mention the name?
-

(b) If not, then why not?

43. Who advised you about the vitamin?

GP/Midwife/Health visitor/friends and relatives

44. Did you have to buy the vitamin or got it free by prescription?

- (a) Yes
- (b) No

IV. Advice/information/service etc. related to childbirth and feeding practices

1. While you were pregnant did you have any antenatal check up?

- (a) Yes
- (b) No

If yes, when did you first go for your antenatal check up? _____

2. Did anyone tell you about antenatal classes? Yes/ No

(a) If yes, then who? (please specify)

(b) Did anybody accompany you to the antenatal classes? If yes, then who?
If no, then why not?

10. Did you face any difficulty in getting help and services from health professionals?

3. Did you attend any classes which included talks or discussion about baby feeding?

- (a) yes
- (b) no

4. If you received advice from both the health professionals and friends or relatives, did they vary? If so, can you explain how?

5. Did anybody give you advice to bottle feed: yes/no

If yes, then who?

6. Did anybody ever tell you not to buy baby milk : yes/no

If 'yes', then who and why?

7. Did any one give you advice about giving solid food to your baby: yes/no

If the answer is 'yes', then is this

- (a) a member of family
- (b) a friend
- (c) a health professional

8. Did anyone suggest you which food to give?

If so who? (Please specify)

9. During the whole period of pregnancy and childbirth, who did you get most help and support from?

- (a) husband
- (b) female relations
- (c) friends
- (d) GP
- (e) Midwife
- (f) health visitor
- (g) others (Please specify)

Appendix B: Questionnaire for Newcastle Study

Date _____
Serial No. _____

I. Questions related to parents

1. Mother's date of birth (m/y) _____
or Age _____
2. Place of mother's birth:
 - (a) UK
 - (b) India
 - (c) Bangladesh
 - (d) Pakistan
 - (e) Other (specify) _____
3. If not born in UK, when did you come to the UK (year) _____
4. Father's date of birth (m/y) _____
or Age _____
5. Place of father's birth:
 - (a) UK
 - (b) India
 - (c) Bangladesh
 - (d) Pakistan
 - (e) Other (specify) _____
6. If not born in UK, when did you come to the UK (year) _____
7. Mother's occupation
 - (a) Housewife
 - (b) Unskilled work: FT/PT
 - (c) Skilled work: FT/PT
 - (d) Professional: FT/PT
8. Father's occupation
 - (a) Housewife
 - (b) Unskilled work: FT/PT
 - (c) Skilled work: FT/PT
 - (d) Professional: FT/PT
9. Net family income per week
 - (a) Less than £200
 - (b) Less than £300 but more than £200
 - (c) Less than £400 but more than £300
 - (b) More than £400
10. Is the property you live in
 - (a) Owned by council
 - (b) Privately rented
 - (c) Owned by you

(d) Other (specify) _____

11. What kind of property is this?
 - (a) Flat
 - (b) Terraced house
 - (c) Semi-detached house
 - (d) Other (specify) _____
12. How many bedrooms are there in the property 1/ 2/ 3/ 4/ 5
13. How do you feel living here (area, property)
 - (a) Very happy
 - (b) Happy
 - (c) Unhappy
 - (d) Don't know
14. Number of people living in the property
 - (a) Below 16 (how many) 1/ 2/ 3/ 4
 - (b) Above 16 (how many) 1/ 2/ 3/ 4
15. Is there any other adult relatives in your house ?
 - (a) Yes
 - (b) No

If yes, then who? _____
16. Do you or your husband own a car?
 - (a) Yes
 - (b) No
17. Your level of understanding of English
 - (a) Excellent
 - (b) Can understand but cannot read or write
 - (c) Poor
18. Your husband's level of understanding of English
 - (a) Excellent
 - (b) Can understand but cannot read or write
 - (c) Poor
19. What is your level of education
 - (a) No schooling
 - (b) Left school after 16 years
 - (c) Left school after 18 years
 - (d) Higher level

20. Parents' religion
 (a) Muslim
 (b) Hindu
 (c) Mixed (specify) _____
 (d) Other (specify) _____

21. How seriously do you practise religion?
 (a) Very strictly
 (b) Try to follow but not very strict
 (c) Do not practise

22. How would you describe your ethnicity?
 (a) Bangladeshi
 (b) Indian
 (c) Pakistani
 (d) British
 (e) Asian British

23. Language spoken at home
 (a) Bengali
 (b) Urdu
 (c) English
 (d) Other (specify) _____

24. Do any members of your family smoke?
 (a) Yes
 (b) No

If yes, then who? _____

25. Do you eat
 (a) Only halal food
 (b) Do not distinguish

26. Did you change your dietary habit after having the baby
 (a) Yes
 (b) No

II. Mother's health, pregnancy and childbirth related

27. What is the status of your health (assessed by you)
 (a) Excellent
 (b) Good
 (c) Not so good
 (d) Bad

28. Sex and age of your children (M/F, y/m)
 (a) M/F; _____ years _____ months

- (b) M/F; _____ years _____ months
 (c) M/F; _____ years _____ months
 (d) M/F; _____ years _____ months
 (e) M/F; _____ years _____ months

29. What is the status of your children's health (assessed by you)

- (a) Excellent :(Q.28 a/b/c/d/e)
 (b) Good :(Q.28 a/b/c/d/e)
 (c) Not so good :(Q.28 a/b/c/d/e)
 (d) Bad :(Q.28 a/b/c/d/e)

30. How do you feed your recent baby?
 (a) Breast feed
 (b) Bottle feed
 (c) Both

31. Did you have ante-natal check-up?
 (a) Yes
 (b) No

32. Did you attend ante-natal classes?
 (a) Yes
 (b) No

33. If not then why not?
 (a) Did not know that such classes exist
 (b) Did not feel that this is important
 (c) Discouraged by relatives/friends
 (d) Other (specify) _____

34. How did you feel in the hospital?
 (a) Excellent
 (b) Good
 (c) Not so good
 (d) Bad

35. Did you ever feel left out or lonely during the period of pregnancy and childbirth?
 (a) Yes
 (b) No

36. Do you think the situation would be different if you were in your country of origin
 (a) Yes
 (b) No

III. Questions related to mood

37. Have you enjoyed day to day activities during or after your baby's birth such as cooking, talking, playing with children, watching tv etc?

- (a) Yes
- (b) No

38. Have you felt sad or been crying during pregnancy or after your baby's birth?

- (a) Yes
- (b) No

39. Have you been able to sleep well after your baby's birth?

- (a) Yes
- (b) No

40. Do you ever feel everything is too much for you?

- (a) Yes
- (b) No

If yes, then when _____

41. Have you had aches or pain anywhere such as stomach, back or head?

- (a) Yes
- (b) No

If yes, then where: stomach/back/head/other

IV. Understanding and perception of postnatal depression

42. Do you know about the condition postnatal depression?

- (a) Yes
- (b) No

43. If yes, who told you about it?

- (a) Relatives
- (b) Friends
- (c) Health professional

44. What do you think it is?

- (a) It is a mental health condition
- (b) Acts of God
- (c) Bad luck
- (d) Act of black magic or jadu or jinn

(e) Other

45. How do you think people deal with it?

- (a) Go to health professionals
- (b) Help from friends and relatives
- (c) Help from religious leader
- (d) Help from alternative medicine

46. Do you think Jinn or black magic have any affect on maternal health?

- (a) Yes
- (b) No

47. Do you discuss with anybody if you are unhappy?

- (a) Yes
- (b) No

49. If yes, then who?

- (a) Husband
- (b) Female relatives
- (c) Friends
- (d) Health professionals
- (e) Other _____

50. To what degree, has it upset you due to the fact that the most recent child is a boy/girl?

- (a) A lot
- (b) A little bit
- (c) Not at all

51. Did anyone else make any remark because it is a boy/girl?

- (a) Yes
- (b) No

If the answer is yes, who made the comment

Can you remember the comment?

52. Did you follow any traditional practice after childbirth? (tick as many as applicable)

- (a) Akika
- (b) Aзан
- (c) Shave baby's head
- (d) 40 day not going out
- (e) days not sleeping with husband
- (f) Others (specify) _____

53. Do you think any of this traditional practice has any effect on your mental or physical health?

- (a) Yes
- (b) No

V. Help and support

54. Who helped you most during pregnancy, child birth and afterwards? (specify) _____

55. Whose advice do you follow most?

- (a) Health professional
- (b) Female relative
- (c) Friends
- (d) Other _____

56. Did you know where to go when you needed help?

- (a) Yes
- (b) No

57. Who gave you information about different services?

- (a) Health professional
- (b) Female relative
- (c) Friends
- (d) Other _____

58. If you were given information, how much of it did you understand?

- (a) All
- (b) Most
- (c) Some
- (d) Little
- (e) None

59. How much did you understand what the staff told to you?

- (a) All
- (b) Most
- (c) Some
- (d) Little
- (e) None

60. When you speak to the health professionals, do they understand you?

- (a) All the time
- (b) Most of the time
- (c) Some times
- (d) Not much
- (e) Never

61. Was an interpreter available when you needed?

- (a) Yes
- (b) No

62. Was there any health professional who could speak your language?

- (a) Yes
- (b) No

63. Would you have preferred to speak to someone who understands your language, rather than an interpreter?

- (a) Yes
- (b) No

64. Was there any health professional who could understand your culture and religion?

- (a) Yes
- (b) No

65. Would you have preferred a health professional who could understand your culture and religion?

- (a) Yes
- (b) No

66. Do you know of any mental health service provided specifically for you as a South Asian mother?

- (a) Yes
- (b) No

67. If yes, do you use them?

- (a) Yes
- (b) No

68. If yes, are they appropriate for you?

- (a) Yes
- (b) No

69. Are there specific services/activities you would like that are just for you? (specify)

70. What kind of services you would like to see from Sure Start?

- (a) Child care provision
- (b) Home help
- (c) Other _____

