

**SOCIAL DIMENSIONS OF
HEALTH CARE PRACTICES
IN URBAN SLUMS**

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PREFACE

The process of urbanisation is an interesting, yet complex phenomenon. While technological sophistications and employment opportunities progress, a new set of cultural and social interactions are initiated. Job seekers from rural areas and migrants from smaller peri urban areas and neighbourhood areas approach the urban metropolis looking for a new future. In this process, while acknowledging attachments to their origin, the migrants struggle to adapt to the changed environment. This has happened largely in Kolkata, the capital of the state of West Bengal. This city has long been a pre-eminent seat of culture as well as a commercial and industrial center attracting huge multi ethnic population from all parts of India. These pockets of slum population being highly volatile, the challenge for providing such slum dwellers with minimal and decent reproductive and child health care in such a milieu indeed becomes a significant challenge to policy makers, planners and implementers. It is against this background that the present study has been taken up to look at reproductive and child health behaviour of multi-ethnic population of the urban slums in the Kolkata metropolitan area. The objective is to ascertain the influence of social and cultural attributes in such health seeking behaviour and also to ascertain whether health programmes have changed the influence of such social attributes overtime.

In this context this is to acknowledge with thanks the guidance and advice received from my research guide Professor RK Bhadra. I would also like to thank the faculty, the staff and other researchers of the Sociology Department of the North Bengal University for their support to this work. I acknowledge with gratitude the support that I had received from my colleagues and friends in Kolkata Metropolitan Development Authority, the World Bank, the Department of International Development and the World Health Organization. I would like to record my appreciation towards the residents of the slums where this study was conducted. I am extremely grateful to my spouse, Shri D.K Chakraborty, for his untiring support and patience while I worked for my assignment. I would also thank Shri Abhijit Roy for assisting me in finalizing the document in its typewriting.

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CHAPTER I

INTRODUCTION

The present study intends to investigate the social dimensions of the health practices prevailing among the urban slum dwellers in the areas of reproductive behaviour, immunisation, malnutrition and diarrhoea. It also intends to locate the nature of the impact of health interventions in certain slums as compared to slums where no such interventions have been so introduced.

There are two aspects of the present study. Firstly, health behaviour of individuals is influenced by the social and cultural factors as well as traditional health practices. This is particularly so in the contexts of varied economic backgrounds where the individuals hail from, literacy levels, religious backgrounds, gender, place of original domicile, the views of society as well as traditional and cultural practices that are adhered to by the social groups to which the individuals belong. Such social and cultural influences affect the general health status and the attitude to acceptance of health practices. It also leads to developments in the demographic profiles and health indicators, which may have interesting implications for policy makers. This study, through a primary survey of households, has looked into the health practices of slum dwellers that have not been exposed to preventive health interventions and has tried to analyse as to what extent the health behaviour of these slum dwellers have been influenced by the social and cultural factors. The specific areas of the study are reproductive health behaviour, immunisation, diarrhoea and malnutrition.

Secondly, this study has examined the health profile of slum dwellers that have received various preventive health services from projects and health interventions. There have been from time to time certain programmes and projects to improve the health status in the areas of reproductive health, immunisation, malnutrition and diarrhoea. Most of these programmes have looked at the health of women and children and have tried to influence changes in the behaviour pattern of the slum families with respect to accepting the scientific rationale for adhering to standards of preventive health. This study has tried to analyse with the help of primary data collected from such slum households whether such programmes have led to changed behaviour patterns and acceptance. It also examines whether the social and cultural factors continue to influence the health behaviour of the slum households and if so, what is the extent of such influence.

Background of the study

Human (resource) development is usually defined to include initiatives in nutrition, health, family planning and basic education. Human development, as a complementary aspect of broader economic development programmes, has become an important feature of anti-poverty policy and practice throughout the developing world. The success of such programmes is often predicted on behavioral changes. Consequently, the consideration of social and cultural factors and of their implications for influencing the outcome of programmes plays a central role in the design and implementation of such planned behavioral changes.

Two opposing views have dominated the thinking about development over recent decades. On the one hand, theorists in the 1960s explained the failures of development programmes as a result of the interference of social and psychological variables. The poor, for example, were blamed for being fatalistic, which allegedly explained why they did not adopt technological innovations in fields of health, family planning, nutrition etc. These theorists perceived social values as being very difficult, even impossible to change, at least in the short run. On the other hand, a school of development specialists in the 1970s attributed the failure of certain programmes to structural socio-economic constraints; values were viewed as the result, rather than the cause, of the changes in individual behaviour, which facilitated socio-economic development.

In 1980s, however, the dichotomous thinking of the past two decades has given way to a more comprehensive view of how behaviour determines socio-economic transformation. This broader view is rooted in cultural ecology, development sociology and economic anthropology. Values are seen in a historical context. The perceived sequence of events is that the environmental conditions lead to certain adoptive modes of subsistence to maximize group survival. These, over time, become "valued behaviours" which form the underlying ideology of a cultural system. The values are passed on to the next generation. In essence, "one generation's practical necessities become the next generation's exalted ideals" (Levine: 1969). If values are changed without any corresponding change in structural conditions, the result may be value conflict expressed in cultural aberration. Conversely, this implies ignoring the power of intergenerational cultural conditioning to undertake to transform structural conditions, e.g. through Land Reforms without initiating complementary changes in residual values deeply rooted in religious and supernatural belief systems.

The implications of this theory are that cultural ideology can serve to reduce or to enhance such potential conflict between values. The net result is that behavioural change underlying broader socio-economic change cannot be viewed as a short-term phenomenon. Strategies of revolutionary change, though often faster, may require re-socialization or an intervening process of de-socialization in which interpersonal relations are changed and the efficacy of old values erased (McHugh: 1966).

What does the actual experience of development tell us with respect to the theoretical considerations just outlined? The evidence that social values are often very difficult to change, even over years, is provided by largely unsuccessful attempts of many national family planning programmes to change the parental value of an ideal family size. By making contraceptive methods widely acceptable to eligible couples, several nations have been able to achieve an adoption rate of family planning procedures from 25% to 35%; the adopters are mainly couples that use contraception to avoid surpassing their ideal family size of 3 or 4 children. To achieve the rate of adoption (60% to 70%), which would be necessary to reach the national demographic goal of only 2 or 3 children, however, involves changing a strongly held value; the achievement of this goal has proven difficult in many nations. The investigation by Mamdani (1972) in the Indian village of Manpur, for example, showed that despite more than a decade of Government efforts at changing the ideal family size to 2 to 3 children, most village couples still felt that at least 3 or 4 children (including at least 2 living sons) were necessary to ensure their security at old age and provide

agricultural labour. Exceptional couples, which had accepted the norm of a smaller family size, were high class Brahmins for whom the formal education of their children was perceived as a route to security.

Similarly, nutritional and preventive health measures are typically the most strongly resisted programmes in human development primarily because of the difficulties presented, not only by the lack of immediate visible benefits, but also by the existing cultural beliefs and etiology. In India, in order to counter the supernatural belief of Hindu villagers that the anger of a local deity caused dysentery, the change agents of the anti-dysentery campaign not only showed movies on the cause of the disease, but also, more significantly, participated in a village prayer meeting to obtain the sanction of the deity before distributing the medicine. This example illustrates that even where traditional beliefs and etiology appear to strengthen resistance to an intervention, successful change can result immediately from a policy of adaptation or association with them, rather than one of confrontation. At the same time, the longer-term educational process of changing values can be contrived (Link and Mehta: 1964).

Analysis of the process whereby change is introduced into social systems or settings has, however, demonstrated that ignoring the influence of or failing to use indigenous cultural patterns and local environmental settings may lead to failure or rejection of development programmes. Niehoff and Anderson (1964), in conducting a content analysis of over 200 case studies of programmes of human development, found that many such programmes had failed because planners and implementers had not become aware of indigenous factors until they acted as barriers to the acceptance of an introduced innovation.

An indigenous socio-cultural element may be classified as positive, neutral or negative vis-à-vis development programmes. Some indigenous forms offer a means by which technological innovations may be introduced to a user system with greater success because the traditional element aids people in their process of fitting the new idea into old socio-cultural content. For example, several national family planning programmes in the 1960s in such Asian nations as India and Pakistan at first ignored the roles of traditional birth attendants. These midwives resisted family planning and started contrary rumours. In 1970s, however, national family planning programmes in Thailand, Malaysia, the Philippines and Indonesia began work through the traditional system of birth attendants, who contributed significantly to utilize traditional leaders in development programmes than to ignore them and risk their active resistance.

In many cases a particular socio-cultural form does not affect the performance of a development programme one way or another. Research and development programme experience shows that, in most cases, the hot cold complex in an indigenous culture does not affect the acceptance or rejection of nutritional food supplements.

Certain types of indigenous socio-cultural forms are clearly harmful and have negative consequences. An example is provided by the food taboos for pregnant women found in many cultures. In Malawi, it has been found that this taboo prohibits pregnant women from eating meat, sugar or milk because it is feared that consuming these food will transfer animal traits to the child. These affect the health of pregnant women who need these protein

rich food the most. Another illustration of negative indigenous cultural form in family welfare is unsanitary method of birth delivery used by the traditional midwives.

Indigenous etiology has an impact on almost every type of human development programme. Luschinsky (1963) established the village midwives' association of tetanus with mollification of Jam (a flying insect). The relation of "moon phase" with oral contraceptives in Pakistan was a similar example of cultural causal analysis. Indigenous socio-cultural forms may be more firmly adhered to by and therefore more particularly important for the absolute poor. Less educated and lower income members of system of users often give greater credence to indigenous socio-cultural leadership roles, communication forms, organisational forms, knowledge systems and etiologies. It is in this context, that the problem dealt with in this paper, is now presented.

Growth of slums in Kolkata Metropolitan area and the consequent health problems

The state of West Bengal is situated in the east of India. The capital of this state is Kolkata, which was the capital of India until 1911. The river Hoogly runs through most of the southeast districts of the State. An intense growth of slums had taken place in and around both banks of the river Hoogly. The reasons for such growth are not far to seek. The river Hoogly offered excellent navigational facilities and strategic advantages for setting up business and industrial ventures in and around Kolkata. In the subsequent centuries, introduction of Railway lines running almost parallel to the river, construction of two major highways - G.T.Road and the B.T.Road and the discovery of coal and iron in the eastern part of India encouraged setting up of engineering, jute and manufacturing industries in and around Kolkata. This in turn lured hundreds of working class people from all over eastern and northern India to Kolkata in search of a livelihood.

The low paid working populace was housed in mud and bamboo hutments with roofs made of tiles and iron sheets, constructed by middlemen, popularly known as "thika" tenants on land leased by the landlords. In physical terms the slums consisted of clusters of hutment having several rooms constructed with low cost building materials such as mud, bamboo, straw tiles and iron sheets. Each room was occupied by a family sharing a common latrine without adequate arrangement for water supply, drainage and disposal of solid waste. Needless to mention their condition was abominable. The slum dwellers and their descendants being migratory in nature were solely occupied with earning of their livelihood and hardly made any effort to improve their living conditions. The spurt in the industrial activities in the thirties of this century in and around Kolkata to support the war effort encouraged further migration of the working people to Kolkata, thereby accelerating the proliferation of slums in and around Kolkata with more deteriorating living conditions. The influx of refugees due to the partition of Bengal in 1947 further worsened the situation. The city of Kolkata and its suburbs gradually grew into a city of slums with degrading living conditions, characterized by the absence of any kind of recreational and educational facilities hindering and moral development of the young. With rapid urbanization as well as sharp rise in land prices in the post World War period, landlords were encouraged to evict "thika" tenants as well as slum dwellers. As income from tenancy was low, and landowners were unable to evict the tenants, landlords became less interested to maintain the minimum sanitary facilities in the slum areas. Over a period of time, due to lack of maintenance, the already overburdened minimum sanitary facilities broke down making the slum inhabitants

more vulnerable to all sorts of diseases including diarrhoea, malaria, acute respiratory illness, Measles and viral infections. These along with malnutrition effected mostly among the mothers and children, they being the most vulnerable group of population in this regard. Burdened with a higher population, smaller residential area, higher population density and a higher rate of population growth, slum dwellers lived in an unhygienic environment, infested with disease bearing flies and mosquitoes and troubled with social vices such as alcoholism and drug abuse.

Earning of the slum dwellers being meager, very little money, if any, is spent on health and nutrition of family members. Health problems affecting the women and children in the slums are even more acute. Infectious diseases, malnutrition, maternal and peri natal causes account for most of the disease burden. Because the nutritional status of girls and women is compromised by an unequal access to food, by heavy work demands and special nutritional needs, females are particularly susceptible to illness, especially anemia. Poor women of the slums are often trapped in a cycle of ill health exacerbated by child bearing and hard physical labour. Maternal mortality results primarily from infection, hemorrhage, eclampsia, obstructed labour, abortion and anemia. Lack of appropriate care at pregnancy and childbirth, especially inadequacy of services for detecting and managing complications, explains most of the maternal deaths. Prevalence of reproductive tract infections is high and spread of HIV/AIDS is a concern. Childbirth closely follows marriage, which tends to occur at young ages. About 80% deliveries occur at home, in unhygienic conditions leading to infections in mothers and newborn. Women often turn to traditional practitioners for abortions leading to consequent complications. Permanent methods of sterilisation are often, if not always, gender specific, with women having to undergo the sterilisation.

Lack of education and awareness as well as heterogeneity of slum population leads the slum dwellers to adopt several faiths, beliefs and taboos. These affect the health behaviour of the slum population significantly. Social and cultural practices also induce primary immunisation to take a back seat in slum areas, leading to persistence of vaccine preventable diseases such as tuberculosis, diphtheria, Measles etc.

Under this health situation, the following questions come to our mind

- Which health issues affect society in the urban slums especially in the context of women and children?
- To what extent is the existing health behaviour in the urban slums relating to women and children based on tradition and beliefs?
- Whether health interventions have been introduced in selected slums, and, if so, what have been the sociological impacts in such urban slums in terms of changed behavioural patterns and acceptance of improved health practices among the slum dwellers. ?

Review of Literature.

It is well recognized that the health status of a population is shaped by a variety of factors such as food, water, sanitation, housing, income, education and availability and accessibility of health care facilities.

Several scholars have discussed the relationship between the environment, social and economic factors, health and health care. Social philosophers like Engels(1973), Waitzin(1981), Dubos(1968) and Snow(1954) looked into the relationship between health

and society and had focused attention on the influence of social factors on the health status of the people. More recent works as that of Colletta, Clammer(1975) and Chambers(1979), Rosen (1971) and Mackinlay(1984), along with that of others, have also looked into the dynamics of the impact of socioeconomic and political factors on health and health services development. These studies have dealt primarily with Western societies.

There is substantial amount of literature in the area of Health Sociology. These writings, however, are mostly in the area of rural households or tribal settlements and the social and cultural factors, which influence the health behaviour of the various social and ethnic groups. There is little work in the area of health sociology in the area of urban slum settlements and the urban poor households. Hence, the literature reviewed in this section examines mostly the works attempted in the urban poor settlements and briefly on the literature available in the background of rural and tribal areas.

In India, several scholars like Banerji(1985),Panikar(1976), Qadeer(1985), Zurbrigg(1984), Djurfeldt and Lindberg(1980) have looked into the relationship between society, health status and health services development.

Ahluwalia (1972), while writing in the Indian context has commented that the study of sociology of medicine is a comparatively new development in India. Some sociologists and social anthropologists may have collected materials on social medicine during their work in the villages or while working with the tribes; otherwise, there is very little work in the urban areas. Even today, whatever research work and studies have been conducted in the area of social health has, with a few exceptions, mostly been conducted in the rural areas. Following Ahluwalia, health care may be sociologically viewed either as a cultural complex or as a part of social structure and organization. In the former category, studies have been made on traditional health systems, traditional systems of medicine, beliefs and practices concerning causes of illness, fertility, maternal and infant mortality, reproductive and child health behaviour. In the latter category, studies have concentrated on public health, the institutional structure of modern medicine and organisational structure of public health.

As early as in 1955, Marriott observed that the members of the same village or family in India hold highly varied medical beliefs. Lewis (1952) and Dube(1956) has confirmed that traditional views on disease coexist with various germ theories. Khare (1963), while studying health practices in Gopalpur (Uttar Pradesh), discovered that the higher castes related diseases more with ideas based on high tradition while the lower castes sought explanations in spirits, impersonal forces and tribal God's. Fuchs (1964), describes two kinds of medical men, "Jankas" who work through divination and Barwas who call to their aid a supernatural force. Harper (1966) describes a similar practice by "Shamans" in Mysore. Carstairs (1955) describes how traditional practitioners establish "faith" and "assurance" in the patient. Opler (1955) has listed immoderate behaviour and lack of harmony with the supernatural world to be commonly believed to be the causes of various diseases.

In the more recent literature in this field, we come across the work of Hasan (1979) who has studied the health behaviour of the multi-caste villagers of Chinwara in Uttar Pradesh. He has surveyed all the 215 families comprising 1190 persons. The two major religious groups are Hindus and Muslims with only 1 family of Brahmins. There are 621 males as compared

to 569 females and the age group of 15-54 made up 48% of the total population. There is no primary school in the village; only 111 males and 17 females were literate. Hasan has found that there are two kinds of social and cultural factors which have affected the health of community: direct factors such as custom and practices, beliefs, values, religious taboos etc. Indirect factors were those, which related to the sick and disabled including supernatural and physical causes. Hasan has found that the villagers had developed their preference for certain methods of diagnosis and treatment, while seeking medical aid from the modern physicians. Hasan, however, has advised that, to be effective, the medical practitioner, who belongs to a higher caste and intellectual level, can reduce the fear, suspicion and confusion of villagers considerably, if he tries to understand the rural life and culture and the health needs of the villagers. Through his case study, Hasan has taken a big step in pioneering an effective collaboration between health workers and social scientists. His method of anthropologically participant observation while actually living in the village for protracted periods is possibly the best way to reach an understanding of how village people cope with the health problems which beset them, and why they do what they do. This case study has collected quite a wealth of data and the author has ably analyzed the same. There are, however, certain limitations with this study. Firstly, the limited data generated through study of only one village is too inadequate for generalizations. Secondly, although an exhaustive study has been made of the village and its people, the village environment, sanitary habits of the people, personal hygiene, food habits and food taboos, drinks and drugs and the doctor patient relationship, greater emphasis could be laid on the impact of health interventions. Further, it needs to be examined as to whether the socio-cultural factors continued to play a dominant role in the health behaviour of the villagers after such interventions took place. This is absent in his work.

Gurumurthy (1990) has made another study on the causal relationship between culture and fertility in his documentation of the "Socio-cultural determinants of fertility among the Yanadis" tribal community in South India. The Yanadis, who are mostly hunters and fishermen nomads, are socially backward and economically poor and constitute a major tribal group in Andhra Pradesh. The work of Gurumurthy is a pioneering one in the field of tribal demography in South India. It has covered a wider area of socio-economic, demographic and cultural aspects besides the fertility behaviour, the perception of infant mortality and neglect of children among the Yanadis. The study has brought out well the need for population education, health education and residential schools in tribal communities to bring them into the mainstream of life.

A pioneering medico-anthropological research reported in India has been conducted by Bang and Bang (1995). The study has reported that in a backward tribal district in the Central part of India, 92% of the women suffered from gynaecological diseases. Though each woman had an average of 3.6 diseases, only a negligible 7% has ever sought medical care. Singh, Jaiswal and Chowdhury(1996), have pointed out how in traditional Indian societies, the woman was considered as a fertility incubator, which was subsequently attempted to be changed by recognizing her as a human person.

Piet Pelon and Rob (1996), in their study of Bangladesh, found that there are an alarmingly high number of women with confirmed reproductive and sexual tract infections; the authors have concluded that social conditions and traditional health practices for women favoured a continued high prevalence of reproductive tract infections in Bangladesh.

Nagi and Singh (1996) have studied a sample of scheduled caste and scheduled tribe women in connection with reproductive health behaviour in 7 states and 15 districts of India and observed that poor literacy levels and socio economic status as well as low Mean age of marriage of such women contributed to more number of children in the reproductive age.

Khan, Bhange and Phillip (1996), have pointed out that at societal level, sensitivity about abortion and lack of awareness on legal status on medical termination of pregnancy contribute to unsafe abortions in the country. A similar conclusion has been drawn by Tamang(1996) who has studied the level of induced abortions and subsequent reproductive behaviour among women in the urban areas of Nepal, where he has found that there exists a positive association between levels of education attained by a woman and her husband and that of safe abortion practices.

Ray (1989) has studied health care in some West Bengal villages and has stated that the social factors responsible for child marriage, large number of children, inadequate health care and dependence on folk or magico religious treatment were dominant in the daily lives of the people. The author further stated that majority of the health problems were rooted in malnutrition, conditions of public sanitation, non-availability of safe drinking water and working conditions in the field.

Jayasawal and Singh (1989), based on a stratified random sample of 800 rural tribal males and females have wanted to administer a health modernity scale to measure scientifically correct information, attitudes and behaviour in relation to physical and mental health, diet and nutrition, family planning, child care, breast feeding and health habits. The extent of health modernity on these dimensions has varied from 0 to 2 percent. The authors have summarised that near absence of health modernity was due to poverty and illiteracy and it was reflected in unhygienic living conditions, faulty food habits, high prevalence of diseases, disabilities and malnutrition in children under the age of five years.

Jayashree (1989) has made a study in a similar area. Her study on religion, social change and fertility behaviour is based on a study carried out in the Travancore region of Kerala. Kerala holds a unique position in the world of demographic literature. Although demographic studies have very rarely considered religion and caste as major social stratification variables, it is highly realistic and relevant to consider these factors along with the study of fertility and other demographic parameters. The methodology applied in this study is both unique and appropriate because it shows how various independent variables influence fertility among different cultural groups, both the younger and the older population. The application of path analysis for ascertaining the relative influence of each major independent variable provides scope for appropriate generalizations leading to theoretical developments. The comprehensive coverage and comparative basis depicts a fairly comprehensive coverage of social change in the society of Kerala as a backdrop to the understanding of this problem on a cross-cultural basis.

Another work, which attempts at a qualitative appraisal of some relevant aspects of reproductive health behaviour in the background of socio-economic characteristic, is that of Kar (1993). In his study, Kar looks at the social structure, culture, food habit, morbidity and traditional health seeking behaviour of the Nocte tribe of Arunachal Pradesh. Kar has found

that the health behaviour in general and reproductive health behaviour in particular of the Nocte women is intimately related to and are deeply influenced by their value systems and cultural traditions. Hence, Kar prescribes that any attempt to improve the health status of the Noctes should be integrated with a wider effort to bring about an overall transformation of the Nocte Society.

Another social factor influencing health behaviour is caste. Kopperty(1991) has made a contributory study in this area. Kopperty found in his study of Andhra Pradesh that caste stratifications influence life, occupation, income, education, values, norms and beliefs of the community. He has studied the Brahmin, Vyasya, Kamma and Kappus from the high castes and Malas and Madigas from lower caste groups. It is established that such differences in castes are strongly reflected in health practices, especially morbidity, maternal mortality, ante and postnatal care, nutrition and actual delivery. Similar to Kar (1993) Kopperty has advocated that any change in the health practices should aim at awareness and social change.

Patel and Capoor(1996), have reviewed human history in India and have observed that women have died young in child birth or ill health, often as victims of abuse, torture, violence, neglect and other forms of social discrimination. The authors have further observed that even in today's scientific world, the same situation still prevails due to the dominance of a complex socio cultural web, which has conditioned women not to complain but to cope silently with their diversified health problems.

Pachauri(1996), has described India as being in the middle of an epidemiological and health transition wherein diseases of affluence and new environmental and behavioral threats are being added to the already heavy burden of morbidity and the contributory factors are India's health transition, the ageing of the population, urbanisation and migration, changing lifestyles and the impact of health interventions.

Ringheim (1996) has emphasized on the important social factor that without fully engaging the male partner in family planning, potential acceptability of modern contraceptive methods for men will fail.

Referring to a few more studies in the area of relationships between socio-cultural practices and health behaviour, one can briefly refer to Arnold's (1989) study on smallpox and worship of the deity of the Sitala in Bengal.

Amartya Sen (1996), in his treatise on objective assessment of health, has observed that in terms of various directly observed criteria of mortality rates, literacy rates, nutrition related diseases, use of hospital and medical services, women appear as being systematically underprivileged vis a vis men in rural India. Papers by Banerji, Jeffery, Guha, Kabir and Krishnan, Dasgupta and Chen (1996), have discussed the social, economic and political factors linking health status with the process of development. Banerji has discussed the socio cultural and political forces that have shaped the public health practices in India. According to Banerji, the anti colonial struggle involves a struggle for immediate democratization of India's social and democratic life: the colonial government, was compelled to expand health services, though mostly for the benefit of the privileged classes and major urban populations—a trend which has been carried over to independent India.

The Kabir Krishnan paper (1996), contrasting health development in Travancore and Malabar, has shown that the political will to provide health care has to be sensitive to social conditions in order to succeed in its objectives. This paper has shown how education has proved to be an effective catalyst in initiating an interactive process between political and social processes through democratic mobilization of population. Meera Chatterjee(1996),has addressed some of the important issues revolving around nutritional levels, poverty, health and development. Ms Chatterjee analyses much of the data available on these issues and looks at policy changes, which have a bearing on them.

Visaria and Gumber (1996), have presented the results of the National Sample Survey on maternity and child care, focusing in particular on the question of how utilization of health services differ among income strata and groups stratified by caste and tribe. Such systematic analysis of differentials in health care by socio economic strata is very valuable. Ravindran(1996) has illustrated the health problems of a vulnerable group of population, namely the scheduled castes. This group constitutes a sizeable proportion of the total population and in her paper. The author has probed some important issues relating to differentials in health status between sub groups of the same population. The author has explored the causes, which inhibit use of health care facilities by these sub groups, and the extent to which the same is influenced by cultural, political and social factors. Another aspect of the poverty, social status and health nexus is the question of gender. Tim Dyson (1996), has shown that when census coverage deteriorates, women are disproportionately left out in the enumeration. Crook (1996) has given a systematic analysis of the specific problems of urban health and the advantages and disadvantages that living in urban areas confers as compared to that in the rural areas.

A few studies have been made in the area of health culture in the urban slums.

Gupta and Gupta (1989) have studied the primary health care needs in urban areas (especially slums) in cities with urban population more than 2 lakhs (.2 million). A workshop approach has been adopted for the study along with certain case studies conducted in the cities of Baroda, Kanpur and Hyderabad with a sample of 250 of the slum population. The study has found that most cities have different sets of medical practitioners who provide health services to the people to whom facilities are not easily available; there is an urgent need to provide basic health services to the slum dwellers; service delivery should be strengthened towards mothers and children; community based health centers should be set up to provide promotive and preventive health services. This study is not without its weaknesses: the data collected through the case studies and the output of the workshops conducted do not substantiate the conceptualization of the problem; there is no proper sampling procedure adopted to select representative slum populations and findings are based on case studies while most efforts went into workshops only.

Panda, Benjamin and Zachariah (1993) have made a study on the health status of under five children in a Ludhiana slum in a cross sectional study comprising 237 under 5 children, and concluded that 61.6% of diarrhoea diseases are found to be the major cause of morbidity and 19% suffered from malnutrition, demonstrating thereby that slum children are more vulnerable to illnesses. This study is based more on comparison of data rather than on its quality and conclusions drawn there from could not form part of generalisations. Guha

(1990), after a study, has presented the results of a study of urban slum dwellers in Kolkata and found as follows: While an urban bias did exist in the provision of health services, the urban bias discriminated against the urban poor; social, political and epidemiological parameters of the urban poor tend to be substantially different from that of the rural counterparts; the universally applied rural model of primary health care centers in India did not incorporate the differences in health and nutritional profiles of the rural and urban communities. Bhargava (1984) has conducted a research among the slum dwellers of Mumbai and established that variations occurred in fertility levels due to changes in age of marriage among the female slum dwellers. Reddy and Mahadevan (1984) have conducted a comparative study of the effect of infant and child mortality on slum and non slum dwellers in the city of Hyderabad and concluded that there is high fertility among slum dwellers due to high mortality, suggesting thereby that a significant reduction in fertility may be achieved by assuming greater survival of infants and children. This work, however, has failed to be a comparative study as the two study populations were totally different in nature. Vandana Desai (1995) while studying the slum population in Bombay, recommended community participation while providing basic services to the urban poor. Bala's (1991) study also establishes the influence of the socio-cultural factors. Chakraborty (1990) has studied the behaviour of slum dwellers of Kolkata and found that socio-economic factors such as age, sex, role of family occupations, ethnic background, religion, urbanization and industrialization led to mental disorders among the slum dwellers especially women. Hubley (1992) has made another study in the slums of Indore. It is found that the slum women related Measles to the anger of the Gods' and diarrhoea was associated with insect bites.

Certain studies have also been made in the slums and the resettlement colonies of Delhi. Basu (1990) has reported that in the resettlement slums of Delhi, chicken pox was attributed to the divine visitation and outside help was rejected. Bhatnagar(1990) has studied the conditions in the New Seemapuri resettlement colony of Delhi and recommended that social and economic conditions of the slum dwellers required a change in order to improve the health status. Ganguly (1990) has studied the conditions in Delhi's Jahagirpuri resettlement colony and established that health factors of the slum dwellers are associated with the larger cultural milieu of the people. Bhatnagar, Dosajh and Kapoor (1986) tried to develop health care delivery model in the urban slums of Delhi by selecting 1200 households through a stratified multi stage sampling technique. They, however, have only resulted in describing the quantum of problems of slum dwellers in Delhi. In another study undertaken in the Delhi slums in 1985, Bhatnagar and Dosajh have established that the incidence of diarrhoea was higher in the younger age group, the peak age of incidence being 7-12 months. Diarrhoea death rate of 4.9 per thousand children in the Delhi slums is higher than 3.6 per thousand children in the urban areas as established by the office of the Registrar general of survey on infant and child mortality. The authors have found that the incidence of diarrhoea is directly related to poor social and economic status, female illiteracy and unsanitary living conditions as well as lack of proper drinking water. Mullick, Bardhan and Shivadasani (1978), have selected the Kalkaji field practice area of New Delhi of the National Institute of Health and Family Welfare to create a local voluntary movement of women to encourage health and family welfare practices and form women's action groups. Being solely in the nature of motivational efforts, their findings on the survey of 1248 tenements has failed to be sustainable without external support. In another study conducted in urban slums of South Delhi, Rakesh Kumar et al (1991), have wished to understand the factors influencing the health seeking behaviour of the slum dwellers of Delhi. Their

recommendation on provision of mobile health services to the slum population fails to convince, as this is not a proper research study, not based on any research design or any authentic data and also lacked scientific conceptualization of problems to be studied.

Saikia and Aggarwal (1991) have studied the MCH (Mother and Child Services) services in ICDS (Integrated Child Development Scheme) and non ICDS areas in two resettlements colonies of Delhi and concluded that mothers in ICDS areas are more knowledgeable than their counterparts in the non ICDS area. This study is limited by the factor that the study is based on some systematic efforts and that there are no research problems as such for conceptualization of the problem.

Mulgaonkar (1996), studied the profile of reproductive health in the urban agglomeration of greater Bombay and identified the following socio cultural and behavioral factors: initiation of young males into sexual intercourse with experienced females; arranged marriages, seduction or sexual abuse of young women and girls by older and sexually active men; early sexual debut of young men and women combined with multiple sexual partners; divorce and remarriage resulting from STD (Sexually transmitted diseases) induced infertility of either partner; prolonged sexual abstinence following childbirth when accompanied by husband's casual extramarital sexual activity; labour migration leading to casual sexual indulgences by men; single, separated or divorced women seeking sexual contacts in exchange for money, gifts, favour or pleasure; infrequent use of condoms or spermicides in sexual intercourse; heterosexual practices. The author further established that women's social status and gender disparities influence the prevalence of reproductive tract diseases and that often socio cultural emphasis of premarital chastity, sexual fidelity and monogamy makes women reluctant to bring reproductive tract infections and sexually transmitted diseases to the attention of family members and medical practitioners.

Guha-Sapir(1996),has made a study of Kolkata slums based on data from a household survey of 2603 families with at least one child under 5 years of age living in 37 randomly selected slums recognized as such by the Kolkata Metropolitan Development Authorities. The main findings of the paper pertain to maternal and nutritional aspects of urban poor women and health specificities of the urban environment. The principal findings of the survey are as follows: the significance of the traditional sector in health care; the high cost of medical care and the high proportion of medical expenditure on medicines, the severe caloric and fat deficits among younger women and lactating mothers; the tendency to spend less on medical care for women; and the penury of space and consequent exposure to pollutants.

In the field of sociological studies on organizational and institutional issues, Preyer (1990) has made a study of the slums of Khulna in Bangladesh. Preyer established some implications for women and children on account of the incapacitating ill health of principal household earners. Oomen(1978) has studied the social structure and the system of health professionals. The author has studied the social and economic backgrounds of professionals including religion, caste, regional linguistic rural urban linkages and the family background of the professionals and has concluded on some interesting sociological issues concerned with occupational role structure of professionals.

It is seen therefore, that of the number of studies conducted in the area of health Sociology and Anthropology, most of the work has been done with reference to rural areas or among the tribes. Work in the urban slum areas have been mostly in the area of health systems and marginally in the area of urban health Sociology and Anthropology. Such limited studies

the year 1986-87. Among others, it sought to look at the health issues of women and children in the urban slums. The strategy of this approach was unique. A strategy for out reach health delivery services was designed to be brought to the doorstep of the beneficiaries through a cadre of honorary health workers. Arrangement for advocacy of permanent and temporary methods as well as distribution of contraceptives from door to door was made. Apart from this, antenatal check ups were to be arranged in sub centres. Regular advice was to be meted out to pregnant mothers. Tetanus Toxoid injections and iron folic acid tablets as well as guiding mothers in safe institutional deliveries were some of the other objectives in this approach. Immunisation of infants, control of diarrhoea and malnutrition were some other issues taken up by this project. This was followed by another health intervention during 1991-1997 addressed to the non intervened urban slum areas: the Kolkata Slum Improvement Project assisted by the British government funded by Overseas Development Authority (now Department for International Development). The principle was to follow a similar strategy of community participation and outreach method. In the Kolkata Slum improvement project, health services envisaged coverage of 2.75 lakh(.275 million) slum population in 15 wards of the Kolkata Municipal corporation area. The health care services included were as follows: outreach services focusing on health education, environmental sanitation, personal hygiene, nutrition, mother and child health, universal immunisation Programme, family planning as well as preventive services with basic thrust on immunisation and infant care and back up services including setting up of Extended Specialist Out Patients Department, Maternity Hospital/Homes for Family Welfare. Thereafter in 1994-95, the World Bank assisted India Population Project 8 was launched covering 38 lakhs(3.8 million) mothers and children of urban slums in the entire Metropolitan area. The strategy was to provide health services to the poor through community participation, provision of quality services relating to maternal and child health at the doorstep of the beneficiaries. It further ensured that women have access to accurate information on reproductive health as well as high quality care. It further proposed to change men's attitude towards sharing of responsibility relating to sexual relations, contraception, pregnancy and childcare. It also wished to encourage family and community support for delayed marriage and child bearing. It sought to provide opportunities to adolescent girls to protect their own health, to provide basic education to women in improved awareness of sexual life. It also sought to establish and strengthen the referral system through a network of health infrastructures. The End of project report of the Kolkata Slum Improvement Project (1998) and the mid term evaluation survey of the India Population project (1998) has led to further insights into the efficacy of these projects. The Kolkata Slum Improvement Project was also evaluated with the tool of Participatory Impact assessment (1997).

It would therefore be of interest to assess the impacts of these interventions in a sample of selected slums and to compare the results with the characteristics of slums not so selected for introduction of health facilities.

The present study looks at two categories of the slums:

- (i) Those slums which have received inputs on health interventions; and
- (ii) Those slums, which have not received such inputs on health interventions.

The study intends to ascertain the social dimensions of health care practices as are prevailing in such slums as well as the indigenous socio-cultural forms adhered to by the urban poor. The study also purports to test the hypothesis as to whether the lower income

- Influence of literacy of mothers in the analysis of children with incomplete immunisation ;
- Influence of media and translation of the knowledge created by media into actual receipt of immunisation ;
- Religion based differentials, on the incidence of children receiving immunisation;
- Social and cultural influences vis-à-vis conviction in the rationale of immunisation;
- Practice of social and cultural prescriptions in the context of vaccine preventable diseases of children.

In the area of **Malnutrition:**

To enquire about the

- Level of knowledge of mothers on the concept of malnutrition;
- Extent to which mothers believe that malnutrition is the result of cultural taboos/superstition;
- Knowledge of preservation of nutrition in cooking; influence of economic factors and social influences such as dictates of mothers in law in cooking;
- Gender preference in serving nutritious food to children of both sexes;
- Extent of underreporting of malnutrition in their children by mothers who fail to recognize symptoms of malnutrition;
- Actual incidence of malnutrition derived from growth monitoring reports.

In the area of **Diarrhoea:**

To enquire about the

- Level of knowledge of the conception of diarrhoea;
- Correlation with scientific causes vis-à-vis cultural taboos and superstitions;
- Level of belief in the process of lactation during diarrhoea;
- Association between religion and the incidence of diarrhoea;
- Degree of belief in exorcism to cure diarrhoea;
- Level of knowledge of home treatment of diarrhoea;
- Influence of media and actual conceptualization of the cause and the treatment of diarrhoea as a result of media influence.

While comparing the findings in the intervened slums as compared to that of the non intervened slums, the analysis would specifically look at the following:

- Demographic attributes of social and economic characteristics of the households of the non intervened and intervened slums;
- Analysis of the comparative practices of the sample households of intervened slums as compared to that in non intervened slums with respect to marriage, pregnancy, childbirth, reproductive behaviour and family planning; an analysis of whether the sample households in the intervened slums have adopted the scientific and rational approaches to these parameters.

- Analysis of the comparative practices of the households of the intervened slums as compared to that of the households of the non intervened slums with respect to immunisation of their children under 5 years of age; analysis of whether the sample households of the intervened slums have adopted scientific and rationale approaches with respect to immunisation of their children.
- Comparative analysis of the practices of the sample households as compared to households in the non intervened slums with respect to concept, incidence and control of malnutrition in general and that of children under 5 years in particular. Analysis of whether the sample households of intervened slums have adopted scientific and rationale behaviour with respect to malnutrition of their children.
- Comparative analysis of the practices of sample households in the intervened slums as compared to those in the non intervened areas with respect to concept, incidence and control of diarrhoea in children below 5 years of age. Analysis of whether slum households of the intervened areas has adopted scientific approach towards diarrhoea of their children below 5 years of age.

The final objective of this study, based on the results derived from the analysis of non intervened and intervened slums, would be to arrive at certain strategic policy options for reaching the urban poor through health development programmes.

Methodology

Selection of the Slums

At the very outset, slums of two different categories have been selected: those slums, which have not been, covered with any health programmes; the other category comprises slums, which have received inputs on health programmes. Slum dwellers of Titagarh areas of the district of North 24 Parganas of West Bengal had not yet experienced the facilities of modern medical and health technologies disseminated either by governmental or non-governmental institutions until the period of this study. Hence, the slums belonging to the Titagarh area, namely the Muchipara slums were selected. In Titagarh, the slums are not discrete settlements confined to specific wards. Rather, these are continuous barrack like structures associated with different landlords. The Muchipara slums comprise a multitude of such barracks and each barrack is a slum settlement in itself. Settlements were selected comprising the entire Muchipara slum area. The inmates are mostly from Bihar and Uttar Pradesh who had come to work in the local jute mills as labourers. On the other hand, all the families living in 12 slums spread within 15 Wards of the Kolkata Municipal Corporation have been enjoying health facilities rendered through certain government interventions. Of these four distinct slums were selected, three slums are from the settlements along the Kasba Jadavpur area of South Kolkata where the inmates are mostly from Bangladesh; the fourth slum was from the Garden Reach Metiabruz area frequented mostly by Muslims whose ancestors came from Uttar Pradesh with Wajid Ali Shah, the erstwhile Nawab of Lucknow. The purpose behind the selection of slums with populace from different religious, social and ethnic backgrounds was to assess the social and cultural attributes of slum dwellers of varied background and religion and to analyse the same in respect of their health behaviour.

Sampling procedure

The prime criterion of selection of a household as an ultimate sampling unit is that the household shall have an eligible couple with at least one child below 5 years of age.

In order to draw samples project of slums both from intervened and non intervened areas respectively, two separate lists of slums (sampling frame of the 1st stage) have been identified and numbered. The Department for International Development to assess the impact of the project had conducted a participatory impact assessment study of the health interventions in 12 slums of the Kolkata Municipal Area. To fit with the objectives of the present study, in the first stage sampling, 4 slums (that is, one third of the universe of 12 slums) have been randomly selected from the intervened slums under the administrative jurisdiction of the Kolkata Municipal Corporation. In these slums, for the last eight years, multi-faceted activities such as health promotional services, community development and augmentation of sanitary conditions have been offered to the slum dwellers.

For the selection of 4-sample slum size in the first stage, simple randomization sampling technique has been adopted. In a similar way (by adopting same sampling technique), the slums within Titagarh Municipality in the North 24 Parganas district, where health interventions have not taken place have been selected. Out of the 85 slums in these areas, 28 have been selected in first stage sampling to achieve the desired sample size. At the time of selection of the ultimate sampling unit (households) in the second stage sampling, all the households of each slum selected in the first stage were numbered independently. The only prejudicial judgment (may be called purposive) in selecting the household in the second stage sampling to fulfill the very objective of the present study is that the households having eligible couples with at least one child under 5 years of age has been taken into consideration.

In the process of selection of such specific households as the ultimate sampling unit, every third household has been selected from each of the slums by applying Systematic Sampling Technique. If by chance, during the time of selection of the next household, the preferential criterion of selection is not fulfilled (in this sampling design), the household following this, if agreed with, will be included in the sample size till in such process of selecting the household sample, the desired sample size that is $1/3^{\text{rd}}$ of the total households of each slum is attained.

In this study, we have selected 443 households within the slums, which have received health interventions, and 105 households within the non intervened slums. These households comprise a total of 1515 men and 1448 women in the intervened area and 268 men and 273 women in the non intervened slums. The selection of the households interviewed in this study has been drawn from varying backgrounds so as to have an assessment of social and cultural practices followed in diverse cultures and social backgrounds. For example, the inmates from the non intervened slums at Titagarh are mostly population who have migrated from the slums of Bihar and Uttar Pradesh and are of a seasonal nature depending on the scope of jobs available in the local jute mills. The slum dwellers of the intervened slums adjoining the Eastern Metropolitan Bypass on the other hand are mostly refugees from Bangladesh who have adopted these slums as their permanent residences. The slum dwellers from the Garden Reach Area are Muslims from Uttar Pradesh whose forefathers had migrated with Nawab Wajid Ali Shah.

The reproductive health behaviour, traditions and cultural practices differ from each of these varied social groups and this is reflected very much in their attitudes, beliefs and practices towards reproductive health, especially in the context of issues such as age at marriage, child bearing, attitudes to antenatal care, postnatal care, deliveries at home or hospitals, contraception and family planning.

The Interview Schedule

In order to undertake a comparative study on the health assessment of different activities such as Family Welfare Programme, Nutrition Programme, Immunisation and Diarrhoea Disease Control Programme in the intervened areas, and non intervened areas with relation to specific social, cultural and socio-economic parameters, a sample survey in both areas has been conducted independently. Only those households have been interviewed which have eligible couples with children below 5 year of age. The respondent is the woman in the household, that is, the wife and mother of the child under five years.

The interview schedule developed for this purpose has been divided into five sections: section A with questions on demographic, social and cultural characteristics, section B with questions on reproductive health, marriage, pregnancy, childbirth and family planning; section C with questions on immunisation, section D with questions on malnutrition and section E with questions on Diarrhoea. A growth-monitoring chart as developed by the India Population Project 8 is used for actually assessing growth of children below 5 years of age in the sample households for both non intervened and intervened slums. Section A contains questions on religion, place of origin, number of family members according to age, occupation of family members including child labour. Section B records details of eligible couples, levels of literacy of both husband and wife, age of marriage of the respondent female, details on children, pregnancy, and places of delivery, antenatal and postnatal care and use of family planning methods. Each issue has been supported with questions on the opinion of the respondent woman as against the opinion of the community on issues such as age of marriage, choice of the number of children, family planning as well as their beliefs in social, cultural taboos and practices. Section C contains questions on status of immunisation of the children, vaccination of children, reasons to why mothers believed in immunisation *vis-a-vis* beliefs in cultural taboos and practices to cure children's illnesses. Section D has questions on concept of mothers on the symptoms and the treatment of malnutrition of children under 5 years and social and cultural taboos related with the same. The growth-monitoring chart has been used to record the weight of each under 5-year child in the households interviewed. Section E poses questions on respondent mother's concept of the occurrence and treatment of diarrhoea and social and cultural taboos associated with the same.

Total time taken in the fieldwork has been about eighteen months. Preparing the Interview Schedule and field-testing the same took about two months. This was followed by actual household interviews that lasted for about ten months. Tabulation of data and subsequent analysis took another six months. The actual writing, rewriting and revision of this thesis have taken another eighteen months.

CHAPTER II

PROFILE OF THE SLUMS

NON INTERVENED SLUMS

In Titagarh, slums are generally identified with “*baries*”(houses) having a cluster of hutments. Slums at Muchipara are situated in Ward No. 21 of the Titagarh Municipality. On the western side of the location passes the State Highway of Barrackpore Trunk Road (B.T. Road) and on the eastern side runs the Main Railway Line of the Sealdah Division of the Eastern Railway. Entries to the slum are from the B.T. Road side.

“*Baries*” are all privately owned, with a small *angan* (courtyard) having structures of tiled roofed small hutments around, numbering 10-15, depending upon their covered area. The average size of a hutment is about 6 feet X 8 feet. The Jute Mill *Sardars*(local labour leaders), who had accommodated the labourers working in the nearby Jute Mills, on a rental basis, originally owned *Baries*. Subsequently, transfer of ownership took place in respect of some *baries*. Hutments were built for a single accommodation tenancy. Labourers usually came alone from the neighbouring States of Bihar and Uttar Pradesh to stay there for employment purpose, leaving their families at their native places. The average rent of a hutment varies from Rs. 15.00 to Rs. 25.00 per month. Now the situation has changed and the families of labourers have come to stay there for economic reasons. In some *baries*, owners and tenants are living together.

Families of owners and tenants, numbering 402, are residing in slums covered by such *baries* in the Muchipara area. There are 1025 males and 1045 females in the total population of this area. 82% of the population is Hindu and the remaining 18% is Muslim. Almost all of them have migrated from either Bihar or Uttar Pradesh.

Most of the male population work as labourers in the local Empire or Harrington Jute Mills. Of late, a considerable number of them have left their jobs in the jute mills and have switched to small trading occupations such as vegetable/fish vending, tea shops, daily labourers, rickshaw pulling etc. A few of them are working in Engineering Industries like Britannia Engineering, Titagarh Steel etc.

Literacy level is generally very low; 51% of the population is illiterate. Only 21% has been educated up to the primary level. The remaining population, however, are educated up to the secondary level. Community feelings and attachment to the soil are yet to develop among the slum dwellers mainly due to their migratory nature of living. They are more or less rooted at their native places in Bihar or Uttar Pradesh. They are not willing or accustomed to invest earnings for improvement of the places where they reside. They are, however, very much religious minded. Hindus celebrate their *Pujas*(Hindu worship) religiously and each *Bari* has a small temple inside its courtyard. Muslims have their own mosques nearby where they go for *Namaz*(Muslim worship) etc. They do not appear to be involved much in social activities. Although an Integrated Child Development Scheme centre has been set up, the rate of dropouts among the children is significant.

Demographic Profile

The following Tables and analyses purport to establish the following demographic features of the slums not covered with systematic preventive health interventions till the time of the survey. These are population according to religion, income groups, family size, average family income, children categorized in various age groups, Mean family income per month, distribution of the levels of literacy according to age, religion and income groups, sources of migration classified according to age, classification of school going children, classification of child and adult wage earners as well as classification of occupations according to employment in organised or unorganised sectors.

In the Muslim Community, there are more females than males unlike the Hindu community where the representation is equal. In comparison to the size of the family of the Hindu community, the Muslim community has a smaller family size in all income levels except at the highest stratum where the family sizes come close to each other in both the religions. In general, however, the Hindus have more number of family members as compared to the Muslims for all income groups(See Table 1). The Mean monthly income of a family among Hindus is Rs. 1622.09 whereas among Muslims it is Rs. 1644.74. Thus it transpires that Muslims have a marginally higher weighted average family income as compared to that of the Hindus.

Table No 1
Distribution of household and population by religion and sex according to the level of monthly income.

Level of the total monthly income of the household	Population by religion										Combined				
	Hindu				Average Family Size	Muslim				Average Family Size	No. of HH	M	F	P	Average Family Size
	No. of HH	M	F	P		No. of HH	M	F	P						
Up to Rs. 1000	25.0	65.0	61.0	126.0	5.0	4.0	8	9	17.0	4.25	29	73	70	143.0	4.63
Rs. 1001-1500	11.0	31.0	26.0	57.0	5.15	5.0	10	14	24.0	4.80	16	41	40	81.0	4.99
Rs. 1501-2000	11.0	22.0	33.0	55.0	5.0	1.0	2	2	4.0	4.00	12	24	35	59.0	4.50
Rs. 2001 & above	39.0	105	103	208	5.35	9.0	25	25	50.0	5.55	48	130	128	258.0	5.94
All income groups	86.0	223	223	446	-	19.0	45	50	95.0	-	105	268	273	541.0	-
Percentage to total	81.9	-	-	82.44	-	18.1	-	-	17.56	-	-	-	-	-	-
Average family size	-	-	-	5.19	-	-	-	-	5.00	-	-	-	-	5.15	-
Females per 1000 males	-	-	-	1000	-	-	-	-	1111	-	-	-	-	1019	-

M—Male

F—Female

P—Person

HH—Household

Table No 2**Distribution of children population (0-14 years) by age, sex and religion of the household**

Age group	Hindu			Muslim			Total		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
Below 1 year	12 (9.3)	12 (9.2)	24 (9.2)	2 (8.0)	5 (16.6)	7 (12.7)	14 (9.0)	17 (10.6)	31 (9.87)
1yrs - 2yrs	13 (10.0)	12 (9.2)	25 (9.6)	5 (20.0)	7 (23.3)	12 (21.8)	18 (11.6)	19 (11.8)	37 (11.7)
2yrs - 5yrs	41 (31.7)	34 (26.1)	75 (28.9)	6 (2.40)	8 (26.6)	14 (25.4)	47 (30.5)	42 (26.2)	89 (28.3)
5yrs - 14yrs	63 (48.8)	72 (55.3)	135 (52.1)	12 (50.0)	10 (33.3)	22 (40.0)	75 (48.7)	82 (51.2)	157 (50.0)
All age groups	129 (100)	130 (100)	259 (100)	25 (100)	30 (100)	55 (100)	154 (100)	160 (100)	314 (100)

It is necessary to look at the distribution of the population of children (0-14 years) in the households of different religious groups. Table 2 depicts the demographic profile. It is observed that the proportion of Hindu boys in the age group 2-5 years and 5-14 years dominate all age groups. The same is true of the Muslim boys with the highest average in the age group of 5-14 years. Among the Hindu girls, the highest proportion is contributed by the age group of 5-14 years and the proportion is almost similar within the age groups 1-2 years and 2-5 years among the Muslim girls.

Table No 3**Proportion of infant population in households**

Proportion per family	Hindus		Muslims	
	Male	Female	Male	Female
Infants	.09	.09	.08	.16
1-2 yrs	.10	.09	.20	.23
Under 5 yrs	.50	.44	.52	.66
5-14 yrs	.48	.55	.50	.33

Proportion of infant population is shown in Table 3 above. There are more female infants in a family of the Muslims than that of in a family of Hindus. The children of the ages of 1-2 years are predominantly higher per family of the Muslims. Female children of the age group 1-2 years outnumber the male children in the Muslim community. The proportion of children below the age group of 5 years is higher per family among the Muslims than among the Hindus. The sex differential between these ratios between the religions is inverted. Each family in both religious group has 1.44 and 1.74 children below the age of five years for Hindus and Muslims respectively.

Table No 4**Income level, sex and literacy among the Hindus**

Income level	Sex	Illiterate	Read & write	Primary	Secondary	Higher secondary & above	College & above
Up to Rs 1000/-	Male	44.2	4.6	20.9	25.6	4.7	-
	Female	75.6	-	9.8	14.6	-	-
Rs 1001/- Rs. 1500/-	Male	36.4	-	27.3	27.3	-	9.1
	Female	85.0	-	10.0	5.0	-	-
Rs 1501/- Rs 2000/-	Male	10.0	-	45.0	35.0	-	10.0
	Female	42.9	-	23.8	33.3	-	-
Rs 2001 & above	Male	47.3	1.1	20.9	24.2	2.2	4.4
	Female	62.6	1.2	19.3	15.7	-	1.2
All income groups	Male	40.6	1.7	24.4	26.1	2.3	4.5
	Female	66.6	0.6	16.4	16.4	-	0.6

Income categories with sex wise distribution of literacy is shown in Table 4. It transpires that illiteracy is a predominant characteristic feature in all income groups. The exceptions are noticed in the income group of Rs 1501/ -Rs 2000/. Literacy levels for women are at a very low level establishing the low priority placed on education of girls.

Among the Muslims, illiteracy is higher among the females than that of the males. The same trend has been noticed among the Hindus of this slum. Out of the total sample of Muslims, 54.55% is illiterate and of this, 66.7% are female (See Table 5).

Table No 5**Income level, sex and literacy among the Muslims**

Income Level	Sex	Illiterate	Primary	Secondary	Higher secondary & above	College and above
Up to Rs.1000	Male	25.0	-	75.0	-	-
	Female	40.0	20.0	40.0	-	-
Rs.1001-1500	Male	62.5	25.0	12.5	-	-
	Female	87.5	12.5	-	-	-
Rs.1501-2000	Male	-	-	10.0	-	-
	Female	100.0	-	-	-	-
Rs 2001 and above	Male	40.0	30.0	25.0	5.0	-
	Female	62.5	18.7	18.8	-	-
All income groups	Male	42.4	27.3	27.3	3.0	-
	Female	66.7	16.7	16.6	-	-

Proportion of children attending school

Two Tables are derived showing the number of school going children of ages 5 to 14 years of the households of different levels of monthly income. (See Table 6 and Table 7)

Table No 6

Number of school going children (5-14 years) in non intervened slums

Sex	Hindu		Muslim	
	Number	Proportion of the total population by sex	Number	Proportion of the total population by sex
Male	43	68.25	8	66.67
Female	31	43.06	4	40.00
Persons	74	54.81	12	54.55

The above Table establishes that, of the total population of ages 5 years to 14 years nearly 45% of children of both religions do not attend school. This non attendance rises to 60% in the case of girl children, vindicating the earlier stand derived from Table 5 that education of females was discouraged not only among those who are mothers but is also discouraged among the daughters.

Looking at the income effect on school going children, the general attitude is one of apathy and indifference in sending children to school irrespective of income levels. The reluctance is all the more apparent in the case of girl children. Only the parents in the income group Rs. 1000/- to Rs. 1500/- among the Hindus and surprisingly the lowest income group among the Muslims have shown more interest in sending their children to school (See Table 7)

Table No 7

Proportion of children in the age group 5-14 years attending school according to levels of income

Income levels	Hindu		Muslim	
	Male	Female	Male	Female
Up to Rs 1000	57.1	25.0	-	100.0
Rs 1001 – Rs 1500	85.7	88.9	66.7	33.3
Rs 1501 – Rs 2000	63.6	68.3	-	-
Rs 2001 and above	48.8	43.1	66.7	33.3
All income levels	68.3	43.1	66.7	40.0

Migration

The place of origin of the slum dwellers indicates an interesting picture There are two types of migrants, those, who have come from other states of India such as Uttar Pradesh and Bihar and the other migrants are primarily refugees from Bangladesh who have left their country either during the partition of India in 1947 or the war in 1971. Most migrants to the non intervened slums have come from neighbouring states of Uttar Pradesh and Bihar to work in local jute mills. Migrants from Bangladesh are insignificant in these slums.(See Table 8).

Table No 8

Distribution of households of different income and religion who have migrated to the slums

Level of monthly income	Religion	1947-70				1971-to date			
		Country/States of India				Country/States of India			
		Bangladesh	Bihar	U.P.	A.P.	Bangladesh	Bihar	U.P.	A.P.
Up to Rs. 1000	Hindu	-	5	3	-	-	3	1	-
	Muslim	-	1	-	-	-	-	-	-
	Total	-	6	3	-	-	3	1	-
Rs. 1001-1500	Hindu	-	-	2	-	-	2	-	1
	Muslim	-	-	-	-	1	-	-	-
	Total	-	-	2	-	1	2	-	1
Rs. 1501-2000	Hindu	-	2	1	-	-	1	-	-
	Muslim	-	1	-	-	-	-	-	-
	Total	-	3	1	-	-	1	-	-
Rs. 2001 and above	Hindu	-	6	3	-	-	11	4	-
	Muslim	-	3	-	-	-	1	-	-
	Total	-	9	3	-	-	12	-	-
All income groups	Hindu	-	13	9	-	-	17	5	1
	Muslim	-	5	-	-	1	1	-	-
	Total	-	18	9	-	1	18	5	1

A.P. — Andhra Pradesh

U.P. — Uttar Pradesh

The main causes of migration are economic that is, the families from Bihar and Uttar Pradesh have moved to West Bengal and more specifically to the slums of the non intervened area in search of livelihood. The migrants to these slums are mostly labour from Uttar Pradesh and Bihar who had come to work as labour in the local jute mills. They started off as single entrants and gradually the second generations settled down as families were brought in from the native places. The refugees of Bangladesh, however, have not largely migrated to the Titagarh Municipal area. Rather, it is the manual labour from North India which has migrated to these slums in search of work at the local jute mills. (See Table 9)

Table No 9

Distribution of households of different income and religious groups with causes of migration

Place of origin	Migrants	Causes and Year of Migration																									
		1947-70												1971- to date													
		Political				Economic				Social				Political				Economic				Social					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Bangladesh	Hindu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-
Bihar	Hindu	-	-	-	-	5	-	2	6	-	-	-	-	-	-	-	-	-	-	-	2	1	11	-	-	-	-
	Muslim	-	-	-	-	1	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
	Total	-	-	-	-	6	1	2	9	-	-	-	-	-	-	-	-	-	-	-	2	1	12	-	-	-	-
Orissa	Hindu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.P.	Hindu	-	-	-	-	3	2	1	3	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	3	2	1	3	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-
A.P.	Hindu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
All places	Hindu	-	-	-	-	8	2	3	9	-	-	-	-	-	-	-	-	-	-	3	4	1	15	-	-	-	-
	Muslim	-	-	-	-	1	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
	Total	-	-	-	-	9	3	3	12	-	-	-	-	-	-	-	-	-	-	3	4	2	16	-	-	-	-

1-Income level up to Rs. 1000/-, 2 - From Rs. 1001- 1500/-, 3 – From Rs. 1501 – 2000/-, 4 - From Rs. 2001 and above

A.P.- Andhra Pradesh, U.P.-Uttar Pradesh

Mostly all households are economically involved as wage earners as will transpire from Table 10. Upon analysing Table 10 relating to wage earners, it is seen that there are no female wage earners among the Hindus and the Muslims. Only 1 child labour has been found among the Muslims. The Hindus have 86 male wage earners and the Muslims have 19 wage earners on an average (See Table 10).

Table No 10
Distribution of adult and child wage earners in the households of non intervened slums

Amount of monthly wage earned group (In Rs.)	Number of wage earners of the household by sex and religion											
	Hindu				Muslim				Combined			
	Adult		Child		Adult		Child		Adult		Child	
	M	F	M	F	M	F	M	F	M	F	M	F
Up to Rs.1000	25	-	-	-	4	-	1	-	29	-	1	-
Rs.1001-1500	11	-	-	-	5	-	-	-	16	-	-	-
Rs.1501-2000	11	-	-	-	1	-	-	-	12	-	-	-
Rs.2001 and above	39	-	-	-	9	-	-	-	48	-	-	-
Total	86	-	-	-	19	-	1	-	105	-	1	-

Again, from Table 11 placed below, it is observed that 38 people are employed in the organised sector; of these, 31 are Hindus and 7 are Muslims. Of those engaged in the organised sector, most are receiving some kind of medical care from their places of work. There are 68 workers in the unorganised sector, 55 Hindu male, 12 Muslim males and 1 child. None of these workers receive any medical help from their places of work.

Table No 11
Distribution of the earning members of the households according to the organised and unorganised sectors

Occupation	Wage-earner engaged in Organised sector												Wage-earner engaged in Un-organised sector											
	Hindu						Muslim						Hindu						Muslim					
	Adult			Child			Adult			Child			Adult			Child			Adult			Child		
	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC	Male	Female	RHC
Y																								
Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a) Jute Mill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
b) Titagarh Paper mill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
c) Iron Foundry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
d) Britannia Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
e) Titagarh Municipality	31	-	27	5	-	-	-	7	-	7	-	-	-	15	-	-	-	-	-	5	-	-	-	-
f) Sewerage Plant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
g) No fixed service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Business	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	2	-	-	-	-	-
Miscellaneous Job	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a) Spray painter	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
b) Washerman	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
c) Labour	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	3	-	-	-	-	-
d) Hawkers	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-
e) Rickshaw cart puller	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
f) Cycle van puller	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
g) Auto rickshaw driver	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
h) Taxi driver	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
i) Bus driver	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
j) Truck driver	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Total	31	-	27	5	-	-	-	7	-	7	-	-	55	-	-	-	-	12	-	-	12	1	-	1

RHC—Receiving Health Care

INTERVENDED SLUMS

Four slums, where health improvement programmes are introduced, have been selected, namely, Shri Hari Palli colony, Netai Nagar colony, Kantapukur Math Bustee and Kalabagan Bustee.

Shri Hari Palli Colony is located in the Ward number 106 of the Kolkata Municipal Corporation on the eastern side of the drainage canal flowing towards Topsia, in the eastern part of the city. The colony was set up in the late seventies by the economically disadvantaged people mostly emigrating from Bangladesh. The colony was named after a locally revered deity 'Shri Harichand' and a temple was also built in the slum area in his honor. A large section of the community is devotee of Shri Harichand, the local god of Faridpur district of Bangladesh. After settling down the devotees built a permanent temple within the colony on a land obtained free of cost from the owner. The community is intensely involved in the "*nam-gan*" *puja*, *kirtan* and *yatra* (different forms of local entertainment) in the temple premises almost throughout the year. In this way, strong community feelings and togetherness have developed among them, which have also led to the development of the colony with their own contribution as well as funds received from various intervening projects.

Netai Nagar colony is situated on the eastern side of the Eastern Metropolitan Bypass near Singher Bari Bus stop in the South eastern part of Kolkata. The Ward number 109 of the Kolkata Municipal Area covers this area and the colony was named after a peasant leader, late Netai Naskar who was killed in this area. Strong community feelings and togetherness have developed among the dwellers of the colony. In fact, the community in general played an effective role in the development of the colony with their own resources and those received from other agencies and individuals. There is a colony committee looking after the development aspects of the colony. A local club runs a pre-primary school along with other social activities.

Kantapukur Math Bustee (slum) is located in the Picnic Gardens area in the Ward number 67 in the southeastern part of the city. It is said that the city morgue, which is now located at Gobra, had initially existed at this location from which the Bustee got the name (in Bengali, dissection is locally termed as Kanta). There were also a number of *pukurs* (ponds) in and around the location. Most of the people living in this *Bustee* come from Bihar, Uttar Pradesh, Bangladesh as also the districts of North and South 24 Parganas, Medinipur and Murshidabad. Majority of them came from other slums of the city for a better living. Although the slum is heterogeneous in nature with regard to language spoken (Bengali, Hindi and Urdu) as also a combination of different well being groups, there is a strong foundation in community involvement in the overall development and maintenance through a *Bustee* committee formed by them.

Kalabagan Bustee is located in the Ward number 141 of the Kolkata Municipal Corporation in the northern part of Abdul Kabir Road (A.K. Road) in the Garden Reach area, starting from "Rajahat More" on A.K.Road and ending at "Birju Nala" crematorium. The *Bustee* hutments are sprawlingly located as the southern side of the New Ghat Road (Lenin Road) running along the eastern bank of river Hoogly. Most of the Hindu families living in the above *Bustee* came from the opposite bank of the river Hoogly, that is from the districts of

Howrah and Medinipur. Muslims also came from those districts and from Bihar (Arrah District). Their language of communication is Bengali. Although they belong to different religions, communal harmony prevails among them since long. This is evidenced from the location of a crematorium along with a Shiva temple in the area with concentration of Muslims.

The owners of the plots in the Shri Hari Palli colony have reportedly purchased lands on an average of 1.5 Cottahs from one Shri Behari Mondal, on easy terms. No deed of ownership was, however, executed in their favour. A stamped receipt was only given to the purchasers. The Netai Nagar colony was set up on a marshy uncultivable low land belonging to a Zamindar named Ganesh Paul. The land was occupied in the 1970's by the Krishak Samiti for rehabilitation of displaced persons from Bangladesh. As many as 25 families residing in the shanties on the Bagha Jatin Khal were brought in 1 batch to be settled in the colony. Each family was allotted a 2 *cottah* (unit for measurement of land) plot for construction of hutment. Subsequently, 12 more families were given one and a half *cottah* (unit of measurement of land) of land each. Families owning the plots raised hutments for renting out to tenants for economic reasons. Land covered by the Kantapukur *Bustee* was owned by a Zamindar, who distributed plots of land to men of his choice to allow them to construct residents therein. Around 1972, the plots were leased out almost permanently to different *Thikadars* (contractors) who raised houses for rental purposes. Under the three-tier tenancy structure, the land came to be owned by the Government, as all lands owned by the Zamindars were vested with the State. This enabled the house owners of the slum to collect rent on their own as long as they paid an amount of tax annually. In 1982, under the Thika Tenancy Act, the right ownership of the house owners that is middle tier system was established. This benefited the lowest tier that is the tenants, who possessed rent receipts and hence could not be evicted. A few Muslim Zamindars like Mohit Molla, Ali Akbar and others, originally owned lands covered by the Kalabagan *Bustee*. The name of the area has its origin from the abundance of banana plantations cultivated in the place. In the early part of the last century, the plots were leased out to the *Thikadars* namely, Ashwini Pal, Krishnakanta Sasmal, Hrishikesh Pal and others. The *Thikadars* constructed *Bustee* hutments for rental to tenants belonging mostly to the potter community. With the passage of time, other people of different occupations took tenancy in the *Bustee* hutments for their livelihood. Right of occupation in the hutments are now being protected under the Thika Tenancy Act of 1982. There is Ghat on the bank of the river Hoogly called "Palu Ghat" named after the *Thikadars*.

In the four slums, which have received interventions, there are a total of 1370 families with 6699 people. In Shri Hari Palli, around 200 families comprising owners and tenants of hutments, are residing in the colony. There are 472 males and 446 females in the families. In Netai Nagar, there are 196 families with a total population of 983 comprising 518 males and 465 females. In Kantapukur Math *Bustee*, there are 374 families with a population of 1498 comprising 806 males and 692 females respectively. In Kalabagan *Bustee*, there are 600 families with a population of 3300. In Shri Hari palli, all residents are Hindus. In Netai Nagar, 92% of the population are Hindus and the remaining are Muslims. In Kantapukur Math, 95% of the population are Hindus and 5% are Muslims. In Kalabagan *Bustee*, the proportion is 50% for both communities. While Hindus mostly reside in the Sitalatala and Baisnabtala parts of the *Bustee*, there is a concentration of Hindu families in the Gharamipara area; there is a preponderance of Muslim families.

In the Shri Hari palli colony, most of the people in the working age group are self-employed. Men are working as daily labourers, rickshaw/van pullers, auto drivers, carpenters, mason, mason helpers and vegetable vendors. Among the women, prominent occupation is that of maidservants. In the Netai Nagar colony, most of the male population is engaged as daily labourers. Some are, however, working as vegetable/fish vendors, rickshaw pullers, auto drivers, carpenters, polishers and hawkers. Women are generally working as housemaids/ayahs. In Kantapukur, about 30% of the adult population work in the organised sector and the remaining in the unorganised sector. Small trades and business engage 30% of these people. A large number of men work as motor/auto drivers and motor mechanics in garages. Others are working as casual workers in construction sites and as masons/mason-helpers in local small industries. Around 30% of women work in domestic services. Few are engaged in tailoring. Unemployed young boys and girls also resort to providing tuition. Few child labourers are also found working in local garages and shops. In Kalabagan, most of the Hindu males are mainly engaged in jobs in the unorganised sector. Few of them are working in the local cotton mill. Main occupations of the Hindu males are pottery, tailoring, hawking, ferrying by boat and daily labour. Hindu women usually work as domestic housemaids in the local area. Both Hindu and Muslim women assist their counterparts in tailoring jobs.

In Shri Hari Palli, 70% of the people are literates, of whom 41% have education at the level of secondary and above and 29% have at the primary level. Quite a good number of boys and girls have passed secondary examination. Literacy level of the older generation is very low in the Netai Nagar bustee. But parents are taking keen interest in education of their children. Only 51% population are literate of whom 25% have education at the level of secondary and above while 26% have primary education. The rest, that is, 49% are illiterate. Literacy level is of significant standard found in the Kantapukur Math where 75% are educated at the level secondary and above where as 25% have received education up to primary level. Only 25% are illiterate. In Kalabagan bustee, literacy level among the Hindus is better than that of the Muslims; 80% of the Hindus are literate with a total of 50% who have received education up to the secondary level. Among the Muslims, about 30% of the population are illiterate, 30% are primary educated and 40% are secondary level educated. Among both the Hindus and Muslims, literacy of the women population is poor.

This section now proceeds to explain the demographic attributes of the slums covered by systematic preventive health interventions. These attributes would give details of the sample families based on income, religion and literacy. Sources of migration and employment are also detailed. This section also looks into the education profile especially with reference to men as compared to women. The four selected slums where government has introduced various health improvement programmes are from Kasba Jadavpur area and Garden reach area of the Kolkata Municipal Corporation. It is seen from the Table 12 that there are more males than females, which have contributed to the combined profile. As compared to the Muslim community, the Hindus have a comparatively bigger family size in all the income strata and except at the highest income level. The average number of family members in the Muslim families is more than that of the Hindus(See Table 12). The Mean level of income in the Hindu families is Rs. 1526.50 and the Mean level of income in the Muslim families is Rs. 1527.50. Hence, the Mean income is almost same between the families of both religious communities.

Table No 12

Distribution of household and population by religion and sex according to the level of monthly income.

Level of total monthly income of the household	Population by religion										Combined				
	Hindu					Muslim					No. of household	M	F	P	Average
	No. of household	M	F	P	Average	No. of household	M	F	P	Average					
Up to Rs.1000	59	128	149	277	5.01	27	76	69	145	4.25	86	204	218	422	4.63
Rs.1001-1500	117	300	323	623	5.18	33	105	111	216	4.80	150	405	434	839	4.99
Rs.1501-2000	89	286	252	538	5.00	26	120	97	217	4.00	115	406	349	755	4.5
Rs.2001 and above	58	302	264	566	5.33	34	198	183	381	5.55	92	500	447	947	5.44
All income groups	323	1016	988	2004	-	120	499	460	959	-	443	1515	1448	2963	-

Note: - **H** – Hindu, **M** – Muslim, **P** – Persons

As in the case of the non intervened slums, an analysis is made to ascertain the proportion of children within the age group of 0-14 years in the intervened slums. It is seen that the Hindu male population dominates in the age group 2-5 years. In the Muslim community, the boys in the age group 5-14 years form the largest group in the total. Among girls, the Hindu girls within the age group of 2-5 years closely followed by the age group 5-14 years and the Muslim girls of the age group 5-14 years form the majority. (See Table 13)

Table No 13

Distribution of the children population (0 to 14 years) by age, sex and religion of the household

Age group	Hindu			Muslim		
	Male	Female	Person	Male	Female	Person
Below 1 year	42 (12.8)	30 (9.14)	72 (10.97)	19 (8.92)	9 (5.66)	28 (7.52)
1yr-2yr	54 (16.46)	56 (17.07)	110 (16.76)	36 (16.90)	19 (11.94)	55 (14.78)
2yr-5yr	119 (36.28)	122 (37.19)	241 (36.73)	67 (31.45)	44 (27.67)	111 (29.83)
5yr-14yr	113 (34.45)	120 (36.58)	233 (35.51)	91 (42.72)	87 (54.71)	178 (55.10)
All age groups	328 (100)	328 (100)	656 (100)	213 (100)	159 (100)	372 (100)

As in the case of non intervened slums, the proportion of infant population in the intervened slums has been tabulated (See Table 14). It is seen that male infants are proportionately higher per family in both communities. There are proportionately more infants in the Hindu families as compare to the Muslims,

Table No 14

Proportion of infant population in the intervened slums

Proportion per family	Hindus		Muslims	
	Male	Female	Male	Female
Infants	.13	.09	.09	.06
1 – 2 years	.17	.17	.17	.12
Under 5 years	.64	.63	.67	.45
5 – 14 years	.34	.37	.43	.55

As compared to the non intervened area, illiteracy is of a lesser proportion among the population of the slums where health intervention programmes are introduced. Among the Hindus in all the income groups, the greatest proportion has been educated up to the secondary level. Next are the primary educated, followed by the illiterate and read and write group. There are Hindus educated up to the college level in all the income groups. This is in contrast to the non intervened area, where there are no residents educated up to the college level in the lowest income group. In the lowest income group, illiteracy among the Hindu women is 32.11% as compared to 75.6% in the non intervened area. Significant proportions of the women are educated up to the primary and secondary level and there are women educated up to the college level in all income groups. (See Table 15)

Table No 15

Income level, sex and literacy among the Hindus

Income Level	Sex	Illiterate	Read and write	Primary	Secondary	Higher secondary and above	College and above
Up to Rs.1000	Male	21.42	4.7	27.38	40.47	5.95	1.19
	Female	32.11	8.25	30.27	28.44	-	0.91
Rs.1001-1500	Male	14.09	12.27	23.63	44.54	3.18	2.27
	Female	20.83	16.20	25.00	35.64	0.92	1.38
Rs.1501-2000	Male	15.48	8.0	21.68	44.69	7.07	2.65
	Female	12.56	10.18	30.36	41.36	2.09	2.09
Rs.2001 and above	Male	21.73	10.67	20.55	32.41	9.09	5.53
	Female	31.33	10.59	18.43	28.57	6.45	4.60

Among Muslims, illiteracy is as high as 64.15% among the women in the lowest income group. There are no graduates except in the highest income group and there are no women graduates. Majority of the illiterates are concentrated among the lowest income group and the income group of Rs 1501 to Rs 2000. (See Table 16)

Table No 16**Income level, sex and literacy among the Muslims**

Income Level	Sex	Illiterate	Read and write	Primary	Secondary	Higher secondary and above	College and above
Up to Rs.1000	Male	30.61	6.12	36.73	26.53	-	-
	Female	64.15		30.18	5.66	-	-
Rs.1001-1500	Male	26.38	13.88	30.55	29.16	-	-
	Female	37.77	10.00	28.88	23.33	-	-
Rs.1501-2000	Male	42.55	15.95	24.46	17.02	-	-
	Female	56.09	13.41	21.95	8.53	-	-
Rs.2001 and above	Male	12.88	16.56	27.60	38.03	3.06	1.84
	Female	2.83	14.81	31.48	29.62	1.23	-

The proportion of school going children are higher than that of the non intervened slums in both religious groups. Almost 50% of children of school going age attend schools. More attention has been paid especially in the Hindu community in sending girls to schools. There are proportionately more males among the Muslim families and more females among the Hindu families in the school going age. (See Table 17)

Table No 17**Number of school going children (5-14 yrs) in intervened slums**

Sex	Hindu		Muslim	
	No. of children	No. per family	No. of children	No. per family
Male	113	48.49	91	51.12
Female	120	51.50	87	48.87
Persons	233	49.50	178	47.84

Migration

As in the case of non intervened slums, the places of origin of the migrants to the intervened slums is analysed as below. The predominant migrants are from Bangladesh both in 1947 and in 1971. It is seen that refugees from the erstwhile East Bengal and thereafter Bangladesh have largely settled in these slum areas. The next group of arrivals are from Bihar followed Orissa, Uttar Pradesh and Andhra Pradesh(See Table 18)

Table No. 18

Distribution of households of different income and religion who have migrated to the slums

Income Level	Religion	1947-70					1971 to date				
		Country/State of India					Country/State of India				
		Bangladesh	Bihar	Uttar Pradesh	Orissa	Other States and Andhra Pradesh	Bangladesh	Bihar	Uttar Pradesh	Orissa	Other States including Andhra Pradesh
Upto Rs.1000	Hindu	2	4	1	2	2	2	-	-	2	4
	Muslim	1	-	1	-	-	-	3	-	-	-
	Total	3	4	2	2	2	2	3	-	2	4
Rs.1001-1500	Hindu	10	10	1	3	3	22	12	1	3	3
	Muslim	-	-	1	-	-	-	1	-	-	-
	Total	10	10	2	3	3	22	13	1	3	3
Rs.1501-2000	Hindu	5	7	1	1	2	6	-	-	2	-
	Muslim	1	-	1	-	-	-	7	1	-	-
	Total	6	7	2	1	2	6	7	1	2	-
Rs.2001 and above	Hindu	1	7	1	-	-	4	5	-	-	-
	Muslim	-	-	1	-	-	-	1	-	-	-
	Total	2	7	2	-	-	4	6	-	-	-
Household	Hindu	18	28	3	6	7	34	17	1	7	7
	Muslim	2	-	1	-	-	-	12	-	-	-
	Total	20	28	4	6	7	34	29	2	7	7

Those occupying these slums are mostly of the income group ranging from Rs 1001/ to Rs 1500/ followed by those in the next income strata. Economic reasons and looking for sources of livelihood have prompted these migrants to leave their native places and settle in these slums in the Kolkata Corporation area. The next important factor guiding migration has been ethnic turmoil as a consequence of historical causes, primarily the partition of the country and the creation of Bangladesh. (See Table 19)

Table No 19

Distribution of households of different income and religious groups with causes of migration

Place of Origin	Migrants	Causes and year of Migration																									
		1947-70												1971 to date													
		Political				Economic				Social				Political				Economic				Social					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Bangladesh	Hindu	2	10	1	1	-	-	-	-	-	-	-	-	2	22	6	4	-	-	-	-	-	-	-	-	-	-
	Muslim	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	2	10	1	-	1	-	1	-	-	-	-	-	2	22	6	4	-	-	-	-	-	-	-	-	-	-
Bihar	Hindu	-	-	-	-	4	10	7	7	-	-	-	-	-	-	-	-	-	12	5	-	-	-	-	-	-	
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	7	1	-	-	-	-	-	
	Total	-	-	-	-	4	10	7	7	-	-	-	-	-	-	-	-	3	13	7	6	-	-	-	-	-	
Orissa	Hindu	-	-	-	-	2	3	1	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-	-	-	
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-	-	2	3	1	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	-	-	-	
Uttar Pradesh	Hindu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	
Other States	Hindu	-	-	-	-	4	3	-	-	-	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	-	
	Muslim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	-	-	-	-	4	3	-	-	-	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	-	
All Places	Hindu	2	10	5	1	10	16	9	7	-	-	-	-	8	28	8	4	-	14	5	-	-	-	-	-	-	
	Muslim	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3	-	8	1	-	-	-	-	-	
	Total	2	10	5	1	11	16	9	7	-	-	-	-	8	28	8	4	3	14	8	6	-	-	-	-	-	

1: Upto 1000, 2: Rs. 1001 – Rs. 1500, 3: Rs. 1501-Rs. 2000, 4: Rs. 2001 and above.

Distribution of earning members in the households of the intervened slums

595 male adults and 124 female adults are engaged as wage earners. There are also 8 male child labourers, 4 each from each religious group. 6 Hindu female children work as maids in neighbouring households. (See Table 20)

Table No 20

Distribution of the adult and child wage earners in the households of intervened slums

Amount of monthly wage earned group (in Rs.)	Number of wage earners of the household by sex and religion							
	Hindu				Muslim			
	Adult		Child		Adult		Child	
	M	F	M	F	M	F	M	F
Up to Rs.1000	65	12	-	1	27	4	2	-
Rs.1001-1500	129	32	3	2	36	8	1	-
Rs.1501-2000	111	13	1	3	38	14	1	-
Rs.2001 and above	117	15	-	-	72	26	-	-
Total	422	72	4	6	173	52	4	-

M-Male, F-Female

Another finding of interest is that, in the organised service sector, 43 Hindu workers are receiving medical benefits at their places of work and 8 Muslims are also in receipt of the same (See Table 21). None of the workers, male or female in the unorganised sector receive any health care from their place of work.

Table No. 21
Distribution of the earning members of the households according to the
organised and unorganised sectors

Occupation	Wage-earner engaged in Organised sector												Wage-earner engaged in Un-organised sector											
	Hindu						Muslim						Hindu						Muslim					
	Adult			Child			Adult			Child			Adult			Child			Adult			Child		
	Male	Female	RHC		Male	Female	RHC		Male	Female	RHC		Male	Female	RHC		Male	Female	RHC		Male	Female	RHC	
Y			N	Y			N	Y			N	Y			N	Y			N	Y			N	Y
Service	49	1	43	7	-	-	-	8	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trade	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	
Spray painter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Washer man	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Labourer	-	-	-	-	-	-	-	-	-	-	-	-	-	82	9	-	1	-	-	11	-	-	1	-
Hawkers	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1	-	-	-	-	1	-	-	-	-
Rickshaw cart puller	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	-	2	-	-	-	-
Cycle van puller	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	1	-	-	-	-
Auto driver	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-
Taxi driver	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	1	-	-	-	-
Bus driver	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
Security guard	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Fishermen	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Boatmen	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Compounder	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Tuition	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Shop assistant	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1	-	-	-	-	-	2	-
Barber etc	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	1	-	-	1	-
Carpenter	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	2	-	-	2	-	-	-	-
Maid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-
Mechanic	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Electrician	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
Tailoring	-	-	-	-	-	-	-	-	-	-	-	-	-	17	5	-	22	-	-	150	51	-	201	-

RHC --- Receiving Health Care

CHAPTER III

HEALTH PRACTICES IN NON INTERVENED SLUMS

REPRODUCTIVE HEALTH

Relevance of Reproductive Health:

Reproductive Health Care covers a wide range of issues: pregnancy and childbirth, protection of women, children and adolescents from physical and sexual abuse, family planning counselling and services to prevent unwanted pregnancies, the sequel to unsafe abortion, treatment and prevention of sexually transmitted diseases and the discouragement of harmful traditional practices. Provision of reproductive health services would be based on the needs of the population, with particular attention being paid to the vulnerable groups, such as women and children. The social and cultural values of the community should be respected and the reproductive health for communities experiencing the trauma of displacement such as migrant families to urban slums need to be considered to be as much as a human right as the basic essentials of shelter, food, water and sanitation.

For a better understanding of women's health and ill health, there is a need to explore systematically the social and cultural determinants of reproductive health. Although several studies have highlighted the relevance of reproductive health in community settings, few have explored the social context of reproductive health. Relatively little light has been shed on the ways in which women seek treatment for gynaecological problems, or on the consequences and implications of gynaecological morbidity in women's daily lives. Drawing on a variety of reviews, Jeejeebhoy and Koenig (2002) have developed a conceptual framework that identifies a range of immediate and background factors that affects the gynaecological morbidity patterns of women.

Some of the background factors so identified are as follows:

Gender power imbalances and lack of autonomy have been identified as underlying factors for women's vulnerability to ill health. Women's limited control over resources in many settings compounds their lack of decision making and makes them socially and economically dependent on their husbands and partners in matters of sex and reproduction as well in the area of health care, including care during pregnancy and childbirth. Poor communication with the partner, cultural norms emphasizing on female chastity are some other socio cultural factors which affect reproductive health behaviour especially of women from the economically disadvantaged class.

Community attitudes often reinforce adverse reproductive health behaviour. Inequalities of age and gender make young women vulnerable to gynaecological morbidity. Reproductive failure itself has many social consequences, such as disruption of women's domestic and economic activities, verbal and physical abuse, fear of childlessness, abandonment and threat of actual divorce, and damage to psychological and emotional well being.

A range of factors inhibit appropriate health seeking behaviour. Even if reproductive health demands attention, it is perceived as normal as a woman's lot and is therefore ignored.

Reproductive morbidities are either not considered serious, or are considered self limiting or a simple consequence of marriage and childbearing, and for all these reasons not severe enough to warrant attention. Another factor affecting reproductive health is the “Culture of Silence” that surrounds women’s lives. Women consider any morbidity relating to the reproductive system a matter of shame and may not discuss it within the family, let alone seek care for it. Women’s reluctance to undergo a clinical examination, especially by male doctors, poor quality of care, high costs and inaccessibility of services also pose social and economic barriers to reproductive health behaviour.

It is against this background that an attempt has been made to conduct further research to explore the social, cultural and behavioural factors that affect reproductive health behaviour among women in the urban slums in the Kolkata Metropolitan Area. This study attempts a contrast of factors that influence health especially for reproductive health in slums that have received no intervention and those slums that have received intervention to draw attention of policy makers, programme planners and managers to critical areas in this sector.

Reproductive health Behaviour of women:

This section looks at the reproductive health behaviour of the respondent women dwelling in slums that have not received any systematic preventive health inputs in the area of antenatal care, delivery, post-natal care, contraception and institutional services such as hospital facilities. This section would look at the existing systems, examine beliefs and cultures associated with conception, antenatal and post-natal care, actual childbirth, taboos related to institutional deliveries, deliveries by male doctors, contraception and family planning. This section would also look at the social causes for permanent sterilisations in women as compared to the men. The three important social parameters, which serve as bases of classification, are income, literacy and religion. In this sample there are 105 households in these non intervened slums, comprising 268 men and 273 women.

Research Findings in the non intervened slums:

One of the purposes of this study is to enquire about the levels of literacy in the slums and gender differentials therein:

Respondent mothers and their income, religion and literacy:

Among the respondent mothers Hindus and Muslims have been considered for the study. Of these 68.60% Hindus and 68.42% Muslims are illiterate. Only 25.71% are educated up to the secondary level and above, comprising 25.58% Hindus and 26.32% Muslims. 6.97% of Hindus and 5.26% of Muslims are educated up to the primary level. Examining the distribution of illiterate Hindu respondents of different income levels, it is found that the highest income level contains 69.23% of illiterate Hindus. Among the Muslims, illiteracy is found more in the income group Rs 1001/- to Rs.1500/- and in the highest income group. Interestingly, the same number of Hindus educated up to the secondary level and above, is found in the lowest and highest income groups. (See Table 22)

Table No 22

Distribution of respondents according to monthly income, religion and literacy

Level of monthly income of the family (in Rs)	Religion	Level of literacy			
		Illiterate	Primary	Secondary and above	Total
Up to Rs 1000/	Hindu	15 (60.0)	2 (8.0)	8 (32.0)	25 (100.0)
	Muslim	2 (50.0)	-	2 (50.0)	4 (100.0)
	Total	17 (58.62)	2 (6.89)	10 (34.48)	29 (100.0)
Rs 1001/ -Rs 1500/	Hindu	9 (81.8)	1 (9.09)	1 (9.09)	11 (100.0)
	Muslim	5 (100.0)	-	-	5 (100.0)
	Total	14 (87.5)	1 (6.25)	1 (6.25)	16 (100.0)
Rs 1501/ -Rs 2000/	Hindu	6 (54.54)	-	5 (45.45)	11 (100.0)
	Muslim	1 (100.0)	-	-	1 (100.0)
	Total	7 (58.33)	-	5 (41.66)	12 (100.0)
Rs 2001/- and above	Hindu	27 (69.23)	3 (7.69)	8 (20.51)	39 (100.0)
	Muslim	5 (55.5)	1 (11.11)	3 (33.33)	9 (100.0)
	Total	32 (66.66)	4 (8.33)	11 (29.91)	48 (100.0)
All income levels	Hindu	57 (68.60)	6 (6.97)	22 (25.58)	86 (100.0)
	Muslim	13 (68.42)	1 (5.26)	5 (26.32)	19 (100.0)
	Total	70(66.66)	7(6.66)	27(25.71)	105(100.0)

(Figures in parenthesis indicates % of literacy levels)

It is seen that in contrast with the level of education of the females, the male counterparts have higher percentages of levels of education. For the Hindus, 39.53% husbands are educated up to the secondary level as compared to 25.58% of their wives. There are no wives in the read and write category but 2 husbands of the first income strata do belong to this group. Only 1.16% of wives have qualified up to the Higher secondary and above standard, whereas 10.46% of the husbands are educated up to the Higher secondary and above standards. In the Muslim community, similar characteristics may be traced. 68.42% of the wives and 42.10% of the husbands are illiterate. 5.26% of the wives and 10.57% of the husbands are educated up to the primary level. 26.3% of the wives and 42.10% of the husbands have studied up to the secondary level and 5.26% of the husbands alone qualify for Higher secondary levels and above. There are no wives in this group. In general, educational accomplishments of the Hindus are marginally better than that of the Muslims. For all communities, however, education of women have suffered and it is possible to

establish gender bias in the female education in the slums under survey, as it is seen that the women members of the households are much less educated than their husbands. 68.60% of Hindu wives are illiterate as compared to 32.55% of illiterate Hindu husbands. Similarly, 68.42% of the Muslim wives are illiterate as compared to 42.10% of the Muslim husbands. (See Table 23)

Table No 23
Level of education of wives as compared to that of the husbands

		Level of Education of the husband of the respondent						(Eligible Couples)					
Level of monthly income of the family (Rs.)	Level of Education of the wife (respondent)	Illiterate		Can read and write		Primary (Class I-IV)		Secondary (V-X)		Higher secondary and above		All levels of Education of wives	
		H	M	H	M	H	M	H	M	H	M	H	M
Up to Rs.1000	Illiterate	7	1	2	-	2	-	3	1	1	-	15 (17.44%)	2 (10.52%)
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	1	-	-	-	-	-	1	-	-	-	2 (2.32)	-
	Secondary (V-X)	1	-	-	-	2	-	4	2	1	-	8 (9.30%)	2 (10.52)
Rs.1001 to Rs.1500	Illiterate	3	4	-	-	-	-	5	1	1	-	9 (10.46%)	5 (26.31%)
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	1	-	-	-	-	-	-	-	-	-	1 (1.16%)	-
	Secondary (V-X)	-	-	-	-	-	-	-	-	1	-	1 (1.16%)	-
Rs.1501 to Rs.2000	Illiterate	2	-	-	-	1	1	3	-	-	-	6 (6.97%)	1 (5.26%)
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	-	-	-	-	-	-	-	-	-	-	-	-
	Secondary (V-X)	-	-	-	-	-	-	3	-	-	-	3 (3.45%)	-
Rs.2001 and above	Illiterate	12	3	-	-	5	-	9	2	1	-	27 (31.39%)	5 (26.31%)
	Can read and write	-	-	-	-	-	-	-	-	1	-	-	-
	Primary (I-IV)	1	-	-	-	-	-	-	-	1	1	3 (3.48%)	1 (5.26%)
	Secondary (V-X)	-	-	-	-	1	1	6	1	1	1	8 (9.30%)	3 (15.78%)
All income Group	Illiterate	24	8	2	-	8	-	20	4	3	-	59 (68.60%)	13 (68.42%)
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	3	-	-	-	-	1	1	1	2	1	6 (6.97%)	1 (5.76%)
	Secondary (V-X)	1	-	-	-	3	-	13	3	5	1	22 (25.58%)	5 (26.31%)
All levels of Education of Husband	Higher secondary and above	-	-	-	-	-	13	-	-	1	-	1 (1.16%)	-
		28 (32.55%)	8 (42.10%)	2 (2.32%)	-	11 (12.77%)	2 (10.57%)	34 (39.53%)	8 (42.10%)	9 (10.46%)	1 (5.26%)	100%	100%

NOTE :- H -- HINDU, M - MUSLIM

Hence the following observations emerge with regards to education from an analysis of Table 22 and 23.

- Male counterparts have higher level of education than their female counterparts.
- Gender bias exists in terms of education in the slum areas.
- The level of education in the Muslim community is lower than that of Hindus.

The present study looks at the two sets of slums, those that have received health interventions through programmes and projects and those, which have not received any such inputs. The purpose of the study is to establish the following:

- Social factors and social beliefs considerably influence and dominate the reproductive and child health seeking behaviour and other significant factors such as age at marriage, beliefs and understanding of conception, beliefs associated with pregnancy, age at first child birth and allied concerns in the non intervened slums as compared to the intervened slums.
- Social factors and customs have dominant influences on the practices regarding pregnancy, family planning, conception and preference of place of delivery.

Accordingly in this section, the study intends to establish that the knowledge regarding reproductive health practices emanate from socially dominant factors and beliefs (varying according to religion) in the non intervened slums. The following factors have been studied.

1. Age at marriage,
2. Beliefs associated with pregnancy,
3. Influence of social and cultural norms and concepts,
4. Size of family,
5. Age at first child birth,
6. Spacing between two successive births,
7. Antenatal care seeking behaviour,
8. Managing high-risk pregnancy,
9. Safe deliveries,
10. Acceptance of male doctors,
11. Postnatal Care,
12. Place of confinements,
13. Beliefs and faith in family planning,
14. Factors influencing adoption of family planning methods and
15. Factors influencing women to take recourse to permanent family planning methods.

Age at Marriage:

Age at marriage is an important determining factor in the area of reproductive health, especially in deciding the total fertility rate and the condition of the health of both the mother and her children. Bhargava's (1984) study among the slum dwellers of Mumbai have established that variations occur in fertility levels due to changes in the ages at marriage among the females. This has been further corroborated by Jayshree's (1989) study on religion, social change and fertility behaviour based in the Travancore region in Kerala.

The hypotheses that have been examined are:

- Individuals prefer to solemnise marriage at a higher age but are governed by social and cultural norms in reality.
- Individual preferences for higher age at marriage are dominated by dictates of the community.

The present study has found that the respondent mothers prefer that the ages at marriage should be within the range of 19.77 years to 20.75 years. This is at variance with the actual age at marriage of the respondent, which closes around 17.9 years. This clearly validates the hypothesis stating that the age at which individuals prefer to be married differs significantly from the actual age of marriage.

Table 25 contrasts individual opinion regarding suitable age of marriage as against that of the community. The separate findings for both the religious groups classified according to literacy (clubbed to get significant figure for estimation) indicate that although the age at marriage of the daughters as preferred by the mothers and the community's dictum are placed within the range 18.66 years to 22.33 years, the preference of the respondents place the suitable age at marriage at a level higher than that by the community. The age limits as expressed both by the respondent and the community, however, are in conformity with the legally prescribed age at marriage. The age levels as suggested by the Muslims both as individual respondents as well as the community places the suitable age of marriage at a higher level than placed by the Hindus. This trend, however, is reversed in the case of the illiterate respondents. The above clearly establishes the hypothesis that individual preferences gives way to the dominant societal/community view. This also establishes the hypotheses that though individuals prefer to get married at a higher age, the factors deciding the actual age at marriage are social and cultural practices.

Table No 25

Table contrasting the Individual opinion with that of the community on the age at marriage suitable for girls

Religion	Literacy of respondent	Community's dictum	Opinion of the Respondent
Hindu	Illiterate	19.53 yrs	19.89 yrs
	Primary to Higher secondary and above	18.66 yrs	20.17 yrs
	All educational levels Combined	19.23 yrs	19.98 yrs
Muslim	Illiterate	19.15 yrs	19.77 yrs
	Primary to Higher secondary and above	21.00 yrs	22.33 yrs
	All educational levels Combined	19.74 yrs	20.58 yrs

Beliefs associated with Pregnancy

It has been seen from the previous findings that girls in the sample selected in the non intervened slums get married at a young age averaging at 17.9 years. This has obvious implications for conception, childbirth and size of the family. The hypotheses that have been considered here are:

- Social values and cultural beliefs dominate the beliefs regarding pregnancy.
- Education and literacy have limited influence on the belief associated with pregnancy in slum areas with little or no interventions.

Reproductive health is guided by knowledge and awareness of the process of conception and fertility. In most tradition-ridden societies, however, where education is not encouraged in women, a number of superstitions, beliefs and taboos guide the individual's mindset on conception.

It is observed that nearly 90% of the eligible couples of both the communities (88.37% of Hindus and 89.47% of the Muslims) have the firm belief that pregnancy occurs due to God's blessings, whereas the proportion of respondents rationally planning for children is only 8.14% for the Hindus and none for the Muslims. The influence of others that is the desire of husbands and other inmates seems to have very little effect on the respondents' conceptions for childbearing. Upon trying to analyse the effects of literacy, of those who ascribe God's blessings to successful childbirth consequent upon conception, 84.21% are Hindu illiterates and 100% are Muslim illiterates. Subscribing to the same theory are 95.23% of secondary educated Hindus and 80% of secondary educated Muslims. 10.52% of illiterate Hindu mothers believe in self-planning for children as compared to about 1.16% of mothers educated up to the secondary level. There are none in this category among the Muslims. (See Table 26)

Table No 26

Distribution of respondents classified according to their belief and knowledge on the causes of pregnancy.

Classification of beliefs on causes of pregnancy												
Levels of Literacy	God's blessings			Self planning			Without planning			Desire of husband/ in laws		
	H	M	T	H	M	T	H	M	T	H	M	T
Illiterate	48 (84.21)	13 (100.00)	61 (87.14)	6 (10.52)	-	-	-	-	-	3 (5.26)	-	3 (5.26)
Read and write	-	-	-	-	-	-	-	-	-	-	-	-
Primary	6 (100.00)	-	6 (87.50)	-	-	-	-	-	-	-	1 (100.00)	1 (100.00)
Secondary	20 (95.23)	4 (80.00)	24 (92.30)	1 (1.16)	-	1 (0.95)	-	1 (5.26)	1 (0.95)	-	-	-
Higher secondary and above	1 (100.00)	-	1 (100.00)	-	-	-	-	-	-	-	-	-
Total	76 (88.37)	17 (89.47)	93 (88.57)	7 (8.14)	-	7 (6.66)	-	1 (5.26)	1 (0.95)	3 (3.40)	1 (5.20)	4 (3.80)

H - Hindu; M - Muslim; T - Total
(Figures in brackets indicate % to total house holds)

Hence the following emerge from above analysis:

- Nearly 90% of the eligible couples believe that pregnancy occurs due to blessings of God.
- Only a low proportion of eligible couples plan childbirth.
- Education and literacy have little influence on planning for children and beliefs regarding conception.

The data clearly establishes that both the hypotheses postulated hold good in the case of non intervened slums.

Influence of social and cultural norms on conception

The following hypotheses have been postulated and tested using logical inference from data:

- Traditions guide individual beliefs
- Social and cultural influences lead to 'faith' based practices to beget children.

Associated closely with the traditions guiding individual beliefs towards conceiving children, are social and cultural practices that are often practised in many societies to beget children. The followers of such practices actually believe that such rituals are actually required to be followed in order to beget children. In the following Table 27, respondent mothers have been classified according to such beliefs.

Table No 27

Distribution of respondents classified according to her opinion as to whether it is necessary or not to follow cultural norms or social dictum to beget a child (in %)

Level of literacy	Whether respondent agrees to follow cultural/social norms				If yes, nature of norms to be followed									
	Yes		No		To pacify influence of evil planet		Pray to God		Exorcism		Superstition		Doctor's advice along with socio-cultural taboos	
	H	M	H	M	H	M	H	M	H	M	H	M	H	M
Illiterate	55.81	57.89	10.46	10.52	-	-	52.32	10.52	1.16	-	3.48	10.46	2.32	-
Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary	6.97	-	-	25.0	-	-	5.81	-	1.16	-	1.16	-	-	-
Secondary	20.95	21.0	-	25.0	-	-	24.41	5.26	-	-	-	15.28	5.26	-
Higher secondary and above	1.16	-	-	-	-	-	1.16	-	-	-	-	-	-	-
Total	89.53	78.94	10.46	21.05	-	-	83.72	15.78	7.32	-	4.65	63.15	3.48	-

H-Hindu, M-Muslim

The findings reveal that mothers of both communities believe very strongly in social and cultural rituals. About 89.53% of the Hindu respondents along with 78.94% of the Muslim

respondents believe that it is necessary to practise some kind of social and cultural rituals to beget children. The illiterate groups dominate the composition of such believers, the break up being 55.81% of the Hindus and 57.89% of the Muslims respectively. 20.95 % of Hindus and 21% of the Muslims belonging to the secondary educated group also subscribe to such theories. The respondents irrespective of their literacy levels prefer to rely on praying to God and following other rituals. 2 mothers, 1 each of the primary level and 1 illiterate Hindu believe in exorcism to conceive a child. Those adhering to social and cultural rituals are 94.5% of Hindus and 78.93% of Muslims irrespective of their literacy levels.

3 Hindu mothers, 2 illiterate and 1 of the secondary level would like to seek doctor's advice and prescriptions despite their social and cultural convictions. These three cases illustrate the combination of scientific thinking with extremity of social and cultural prescriptions.

Reddy(1984), in his study of the Chittoor district of Andhra Pradesh, inhabited by the Reddys, Kammas and others belonging to the scheduled castes and scheduled tribes, has confirmed the hypothesis that rational approach of women towards family planning is positively associated with literacy of women. This is borne out by our findings also, where the illiterate mothers dominated the believers of rituals to beget children.

The following observations may be summed up from the findings of the present study:

- The inmates of the non intervened slums actually believe that such rituals are to be followed in order to beget children.
- Strong beliefs of social and cultural rituals exist across different communities regarding conception.
- Since lack of education seems to dominate the proportion of believers, it can be concluded that literacy and education can influence the modification and change in these beliefs.

These observations validate the hypotheses.

Size of the Family

Average size of the family is dependant on the age at marriage and attitudes to planning for children. Having established that the age at marriage is low in the non intervened slums and also the eligible couples resort little to self planning to beget children, it is necessary to ascertain the average number of living children in the family.

The following hypotheses have been tested:

- The number of children in a family would directly correlate with literacy and education.
- Age of marriage would considerably influence the number of children.

The present study finds that the average number of living children born to illiterate Hindu mothers of different income levels ranges from 3.3 to 3.7, higher proportions contributed mostly by the Hindus in the income group Rs. 1001/- to Rs. 1500/-. The range narrows down in the case of Muslims where the range is between 2.0 to 3.75, the lowest proportion being contributed by Muslims in the lowest income group. Hence low age of marriage of mothers has contributed to a high number of children per family validating the hypotheses.

The average number of children born to each mother is highest in both communities to the highest income groups, namely, 3.4 for Hindus and 3.7 for Muslims respectively. Again, in both communities at every income level, there is more number of living children in the eligible couples in the illiterate groups than in the literate groups combined, excluding illiterate Muslims of the income group Rs. 2001/- and above. (See Table 28)

Table No 28

Number of living children per eligible couple classified by income and religion.

Income levels	Religion	Illiterate	Literate	All
Up to Rs 1000	Hindu	3.5	2.0	2.9
	Muslim	3.0	1.5	2.25
Rs.1001-Rs1500	Hindu	3.7	1.0	3.2
	Muslim	-	-	-
Rs.1501-Rs.2000	Hindu	3.3	2.6	3.0
	Muslim	2.0	-	2.0
Rs. 2001 and above	Hindu	3.6	2.75	3.4
	Muslim	3.4	3.75	3.6
All income groups	Hindu	3.6	2.3	3.2
	Muslim	3.0	3.0	3.0

As the number of children per family is directly correlated with level of literacy and education, the hypotheses holds good in the non intervened slums.

It is expected that women marrying at an early age will have a larger number of living children. The present study has further found that nearly 72% of (194/270) that is, the highest number of children were presently living to Hindu mothers, 70% of whom were mostly married below the age of 19 years. The corresponding proportion of Muslim mothers married below the age of 19 years is 68.4% and the proportion of children born to them is 75.4%. Hence the average number of children born to the Hindu and Muslim mothers are 3.2 and 3.3 respectively. Nearly three fourths of the children born to the Hindu mothers have been born to the mothers of the illiterate group (74.4%). For the Muslims, the corresponding proportion is 68.4%. The average number of living children in the two communities of the illiterate group are 3.5 and 3.0 respectively that is the illiterate Hindus have more children on an average than their counterpart Muslims. The next high average number of children is born to mothers of secondary level of education. The majority of these mothers have been married within the age group of 15 to 18 years. 20% of the children have been born to Hindus with an average of 2.5 children. The Muslims, on the other hand, have 19% of the children with an average of 2.2 living children. 97.7% and 94.7% of the Hindu and Muslim mothers respectively out of a total sample of 105 eligible couples have married below the age of 23 years. The Hindu mothers of this group have an average number of 3.2 living children borne by about 98.1% of Hindu mothers. The Muslim mothers, on the other hand, have an average of 3.0 children contributed by 94.7% of the Muslim mothers.

The following observations have therefore been established:

- Higher the income bracket, the higher is the average number of living children irrespective of the community.
- Levels of literacy and education influence the number of children.
- The age at marriage considerably influences the average number of living children across communities/religions.
- The higher the number of male children, the higher is the desired potential to increase the income levels especially among the illiterate.
- The above analysis of data clearly establishes the validity of the hypotheses. It also points to the importance of creating awareness through communication when planning for a family.

Age at first childbirth

When interviewed, respondent mothers have opined as to what they considered to be the suitable age for giving birth to the first child. The hypothesis that has been postulated for testing is as follows: that social, cultural and religious beliefs influence the age at first childbirth.

The Mean age computed for literacy and religion differentials as to the age when a mother may get her first child oscillates within the age group 19-22 years. The Standard Deviation swings within 1.9 to 3.0. The Mean age at which the first child would be born to future mothers of the Hindu is 22.07 years with a Standard Deviation of 2.55. The rationale put forward in justifying the age of childbirth is as follows: 39.5% and 34.9% of the Hindu mothers opine in favour of the physiological and health grounds and social and religious issues respectively. 11.6% have ascribed it to the postnuptial agreement between couples to delay childbirth on an average by 2-4 yrs. A similar proportion has stated that the media on family planning influences them. As there is a preponderance of illiterate mothers among the Hindus, the proportion ascribing the views mentioned above reads as 40.4%, 35%, 10.5% and 12.3% respectively. In the secondary group, however, better educational standard has had its effect in raising the proportion to 45.5% when ascribing to physiological and health grounds, conjugal understanding was ascribed to by 18.2%, media impact by 4.5% and social and religious taboos by 27.3% respectively.

In case of the Muslims, the proposed Mean age of motherhood is computed at 21.63 years with a Standard Deviation of 2.68 as suggested by all mothers irrespective of literacy levels. This Mean age is lower than that of the Hindus. Regarding the causes put forward by the Muslims, 47.4% have suggested the physiological and health grounds as well as social and religious grounds. Of this opinion group, 45.5% formed the proportion of illiterate Muslims. In the secondary group, 60% have opined in favour of the physiological grounds and the rest on social grounds dictated by religious dogmas. Only 2 mothers have ascribed the conjugal agreements and media influence to be influencing their decisions to defer conception by a few years after marriage. Hence, 34.88% of the Hindu respondents and 47.36% of the Muslim respondents believe that social and religious taboos should decide the age at which mothers should have their first child.

This proves the prevalence of social, cultural and religious influences in both communities. The data clearly validates the hypothesis. It points to the requirement of awareness rising through communication, which is essential to increase the age of first childbirth.

Spacing between two successive childbirths

Respondent mothers also opined on the interval that should be maintained between two successive births of children. The Mean of the interval (in years), (combined religion/combined literacy) between the two consecutive births of babies is computed at 3-4 years with Standard Deviation ranging from 1 to 2. The Mean interval among the secondary level mothers is 4.1 years with a Standard Deviation of 1.3 (See Table 29).

Table No 29

**Mean, Standard Deviation and Median interval between two successive childbirths.
(In years except for Standard Deviation)**

Religion	Statistic	Illiterate	Primary	Secondary	Combined literacy
Hindu	Mean	3.6	3.7	4.0	3.7
	Standard Deviation	1.9	0.9	1.3	1.4
	Median	3.5	4.0	3.9	3.6
Muslim	Mean	4.3	-	4.5	4.4
	Standard Deviation	1.1	-	1.3	1.2
	Median	4.25	-	45.5	4.4
Combined religion	Mean	3.7	3.9	4.1	3.82
	Standard Deviation	1.4	1.05	1.3	1.35
	Median	3.6	4.2	3.9	3.75

Among the Hindu mothers, the Median of the interval between two consecutive births of babies has a range of 3.5 years to 4.0 years. 49.1% of the Hindu illiterate mothers have stated physiological and health grounds, the rest 51% have stated that there were domestic advantages for taking proper care of the child. Primary level Hindu mothers, however, do not ascribe the health and physiological grounds to justify spacing. The entire primary educated group believe in domestic advantages for the purpose of spacing. This group opines that a Mean interval of 4.3 years with a Standard Deviation of 1.1 ought to be maintained between two consecutive births. Unlike the illiterate Hindu mothers, 25% of the secondary level Hindu mothers opines that Mean interval of 4 yrs (Standard Deviation = 1.3) should be maintained between two consecutive child births. They ascribed physiological and health grounds towards this purpose. The overall responses of the Hindu mothers of different educational standards, according to the reasons of their preference, are as follows: 39.3% have supported reproductive physiology along with maternal and child health care and 60.7% supported on grounds of domestic convenience allowing the first child to become a toddler.

Among the Muslims, 26.3% prefer the health grounds; 31.6% wished to wait for the first child to reach a pre school age and 73.68% cited grounds of domestic advantages. In case of the Muslim mothers, the Mean interval is to the extent of 4.3 years which is about 8.5 months more than the Hindus and hence Muslim mothers appear to be better exponents of birth spacing as compared to their Hindu counterparts. Of this, 38.5% have ascribed physiological grounds to such spacing. 30.8% have ascribed spacing to domestic convenience and the other cited personal reasons. None of the Muslim respondents, educated up to the secondary level, however, subscribe to this view. The Muslims of this group favour a Mean interval of 4.5 yrs (Standard Deviation = 3); 40% wish that the first child should become a toddler to facilitate bringing up of the second child. The balance 60% ascribed this entirely to domestic advantages.

It is obvious, therefore, that in both religious communities, there is not much awareness of the necessity to have adequate spacing between the births of two children in the interest of the physiological and health ground of the mother. Domestic convenience, which is more of a social issue, clearly takes the precedence here. Further, while looking at the actual sequence of childbirth, the frequency of childbirth clearly belies the theory put forward by these mothers regarding birth interval of their consecutive children. This also points out that women have a very weak position in determining their family size and spacing of their children. Sivaraju (1987) has studied the influence of vital socio economic status variables on the family size and spacing of successive childbirths of two extreme cultural groups in Andhra Pradesh (scheduled castes and caste Hindus) and has concluded that knowledge and attitude towards family planning is stronger among developed communities.

The data clearly establishes the following:

- Awareness regarding the requirement of spacing of children on the ground of preserving mother's health is low.
- Mothers have low awareness and have very little role to play in determining family size and spacing of children.

Relationship between age at first pregnancy and religion of both communities.

The age at first pregnancy was compared through means of two characteristics classified by religious community through a test of significance. Only 2 out of the 86 Hindu mothers had had their first pregnancy below the age of 16 years, 1 at the age of 13 and the other at the age of 15 years. 1 illiterate Muslim mother was married at the age of 12 years but conceived at the age of 15 years. The Hindu mothers have delayed their conception by nearly 3 years and the Muslim mothers by 2.5 years. Upon conducting a T test of significance, high degrees of significance is established at 5% level with 103 degrees of freedom. Hence, it is concluded that there is close association between the Mean ages at marriage between the two religious groups and there is also close association between ages at pregnancy between the two groups.

Antenatal Care

Quality of reproductive health depends much on the kind of antenatal care received by the pregnant mother. After registering within 12 weeks of pregnancy, the mother should have a minimum of 3 check ups of antenatal care, comprising 2 doses of Tetanus Toxoid injection, iron folic acid and regular check ups on blood pressure, foetal status, anaemia and weight of the mother. Proper antenatal care controls maternal and infant mortality. The respondents interviewed are requested to opine on their perception as to the need for antenatal care. 90.7% of the Hindu mothers and 68.4% of the Muslim mothers respectively prefer to avail of antenatal check ups. Among the 78 Hindu mothers who have assented to the necessity of antenatal care, 32.05% and 7.69% have respectively wanted to ascertain blood pressure, weight, foetal position and wish to receive nutrients, vitamins, iron tablets and Tetanus immunisation respectively. Of the 13 Muslim mothers desirous of availing of antenatal care, 53.8% sought for antenatal care to ascertain blood pressure, weight, foetal status etc. and 23% desire to avail of nutrients as well as immunisation. Hence, while a greater proportion of Muslim mothers sought assistance on ascertaining blood pressure, weight and foetal status, and a lower proportion have wished to avail of immunisation etc as compared to the Hindus. (See Table 30)

Table No 30
Distribution of respondent mothers supporting the need for antenatal care.

Level of Monthly Income of the Family	Level of education of the wife (respondent)	Number of respondent Eligible Couples															
		Whether ANC is to be sought				Causes for seeking antenatal Care											
		Yes		No		Awareness of Health		BP weight foetus position (Antenatal care)		Medical check up and nutrition, stool, urine, blood.		Traditional belief		Fatalism		No reasons given/No Knowledge	
H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M
Up to Rs. 1000	Illiterate	13	2	2	-	11	0	2	1	0	1	1	0	-	-	1	0
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	2	-	-	-	1	0	1	0	-	-	-	-	-	-	0	1
	Secondary (V-X)	8	1	-	1	4	0	3	1	1	0	-	-	-	-	-	-
	Higher secondary+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1
Rs. 1000 to Rs. 1500	Illiterate	7	3	2	2	4	0	2	2	1	1	1	0	0	1	1	1
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	1	-	-	-	-	0	1	0	-	-	-	-	-	-	-	-
	Secondary (V-X)	1	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-
	Higher secondary+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rs. 1501 to Rs. 2000	Illiterate	5	-	1	1	3	0	2	0	-	-	1	0	-	-	0	1
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Secondary (V-X)	5	-	-	-	5	0	-	-	-	-	-	-	-	-	-	-
	Higher secondary+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rs. 2001 and above	Illiterate	24	4	3	1	10	2	10	1	4	1	2	0	-	-	1	1
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	3	1	-	-	2	0	1	1	-	-	-	-	-	-	-	-
	Secondary (V-X)	8	2	-	1	4	1	3	1	-	-	-	-	-	-	1	1
	Higher secondary+	1	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-
Total of all income groups	Illiterate	49	9	8	4	28	2	16	4	5	3	5	0	0	1	3	3
	Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Primary (I-IV)	6	1	-	-	3	0	3	1	-	-	-	-	-	-	0	0
	Secondary (V-X)	22	3	-	2	14	1	6	2	1	0	-	-	-	-	1	2
	Higher secondary +	1	-	-	-	1	0	-	-	-	-	-	-	-	-	-	-
	Total	78	13	8	6	46	3	25	7	6	3	5	-	-	1	4	5
(%)		90.7	68.4	9.3	3.5	58.97	23.07	32.05	93.84	7.69	23.07	1.08	0	0	12.5	50.0	83.3

H: Hindu, M:-Muslim, ANC:-Antenatal Care, BP:-Blood Pressure

8 Hindu mothers have not wished to avail of antenatal care and of them, the response of 5 mothers is based on traditional beliefs and taboos while 3 mothers are ignorant of the facilities available for antenatal care. Similarly, in the case of Muslim mothers who have rejected the need to avail of antenatal care, 1 mother relied on 'fate' while the rest 5 had no knowledge of such specific antenatal care. The economic status of the respondents had no effect on the respondent behaviour on antenatal care. 90% of the Hindu mothers of all categories supported such care except those belonging to the income category of Rs 1001/- to Rs 1500/-. The Muslims in all categories responded poorly, as compared to the Hindus, with a proportion of affirmation varying from 60% to 78.8% respectively. Trying to assess the education effect, all Hindu mothers educated at the primary and secondary level have agreed on the need for antenatal care. Among the secondary level Muslim mothers, only 50% and 66.7% (at the highest and lowest levels of income) support this view.

Hence the need for antenatal care is literacy and income neutral in the non intervened slums.

Management of High risk pregnancies

The hypothesis tested here is that the traditions and beliefs dominate the process of management of high- risk pregnancies. One of the major causes of maternal deaths is non-availability of proper referral and treatment of high- risk pregnancies. One of the factors leading to maternal mortality is eclampsia which leads to epileptic outbursts from would be mothers. This manifestation is often associated in tradition-ridden societies with the superstition of evil influence. The households sometimes resort to exorcism resulting in great peril to the lives of the mother and the child. Respondents of non intervened slums were interviewed to obtain their views about this illness. The lone graduate mother has no knowledge of eclampsia of pregnancy. Similarly, as it appears from the present study, nearly 75.6% of the total respondent Hindus have no idea of this obstetrical complication. In the case of the Muslims, 73.7% have no idea of eclampsia of pregnancy either.

It is very important to note here that 5 Hindu mothers (4 illiterate and 1 secondary level educated mother) have conceded that eclampsia of pregnancy is caused by the influence of the evil spirit. They further believed that it is necessary to exercise exorcism to remove the same. It is also of interest that none from the Muslim community held such a view. Hence, one may conclude that the influence of taboos as well as ignorance prevails in the non intervened area in the context of knowledge and treatment of eclampsia during pregnancy especially in the Hindu community. This confirms the hypothesis.

Safe Deliveries

As home deliveries continue to dominate childbirth in urban slums, maternal and infant mortality may be suitably controlled by arrangement of trained birth attendants. Respondents were accordingly asked as to whether they felt the need of trained *dais* to attend to deliveries or not.

Among all the respondents 32.55% of the Hindus and 26.31% of the Muslim mothers have supported the idea that a *dai* (local birth attendant) should conduct domiciliary deliveries. The lone Hindu Graduate mother, however, did not support the services of a *dai* even for

home delivery. The proportion of Hindu mothers is higher than that of the Muslims in confirming the services of a trained *dai*, at all levels of literacy. Surprisingly, the proportion of secondary level educated Hindu and Muslim mothers supporting this idea is only 22.72% and 0% respectively. Compared to this, the proportion of the illiterate mothers is much higher, namely, 77.27% and 100% respectively. In all, 25.58% of the Hindu mothers have stated that the *dai* conducting home delivery should be trained. 15.78% of Muslim mothers have agreed that the *dai* should be trained. (See Table 31)

Table No 31

Respondents supporting delivery by trained *dais*(local birth attendants)

Literacy	Number of Respondents justifying delivery by a <i>dai</i>				Number of Respondents supporting services of a trained <i>dai</i>				
	Yes		No		Yes		No		Total
	H	M	H	M	H	M	H	M	
Illiterate	20 (71.4)	4 (80.0)	37 (63.7)	9 (64.28)	17 (77.27)	3 (100.00)	3 (50.00)	1 (50.00)	24 (72.72)
Read and Write	-	-	-	-	-	-	-	-	-
Primary	2 (7.1)	-	4 (6.89)	1 (7.14)	-	-	2 (33.3)	-	2 (6.06)
Secondary	6 (21.4)	1 (20.00)	16 (27.58)	4 (28.57)	5 (22.72)	-	1 (16.66)	1 (50.00)	7 (2.12)
Higher secondary and above	-	-	1 (11.72)	-	-	-	-	-	-
Total	32.55	26.31	67.44	73.68	25.58	15.78	6.97	10.52	31.42

H—Hindu M—Muslim
(Figures placed below indicate % of respondents to total households)

While explaining the reasons behind home delivery, 8.77% of the Hindu illiterate mothers have reported that development of sudden labour pain had prevented them from availing of hospital services; 14% of the Hindu mothers have stated domestic difficulties especially the non availability of escorts to hospitals at the time of acute labour pain to be a primary cause of home delivery. 5.26% mothers have gone to their native place in Bihar for delivery and remoteness of hospitals have compelled them to resort to home delivery. 1.75% of the illiterate Hindu mothers, 33.3% of the primary level educated mothers and 33.3% of the secondary level educated mothers have fear of surgeries (Caesarean sections) being conducted at the hospitals. About 23% of the Muslim mothers preferred domestic reasons to be the primary causes leading to such home deliveries. The rest declined from giving reasons as to why they did not avail of hospital services. This reveals that lack of hospitals, fear of hospitals, lack of timely admission in hospitals and lack of escorts has prevented access to hospital deliveries and the household has been compelled to take recourse to home deliveries. Hence, policy makers designing health interventions for the urban poor should pay attention to extensive out-reach, well equipped Public Health Centre/First Referral Unit, train birth attendants and arrange for referral transports as and when required. Upon summarising the above, the following emerge:

- 32.55% of the Hindu and 26.31% of the Muslim mothers supported the idea that a *dai* should conduct domiciliary deliveries. Of this group, 66.7% stated that the *dai* should be trained.
- The proportion of Hindu mothers confirming the services of a trained *dai*, at all levels of literacy, is higher than that of the Muslims.
- The reasons ascribed for preference to home deliveries is that there are no proper escorts to accompany them to the facilities, sudden development of acute labour pain, remoteness of the facilities, fear of having to undergo surgeries and apathetic attitude of hospital staff.
- Respondents in both communities concur that trained *dais* are preferred for deliveries
- The lengthy process of getting admitted into the facilities (if they are available) and the possible delays that this may cause are the factors deterring institutional attendance for deliveries.
- One of the important urban health design inputs that can be drawn out of this are that it should have extensive outreach, well-equipped Public Health Centre/First Referral unit, train birth attendants and arrange for referral transports when it is required.

Acceptability of Male doctors

Male doctors mostly provide hospital services. Social permissiveness and conventions often prevent women from approaching male doctors for antenatal care and actual delivery. Mothers of the non intervened slums were interviewed on their views on conducting of deliveries by male doctors.

It is seen that about 79.04% women agreed to deliveries by a male doctor and 20.95% disagreed. Hindus were mostly assenting and they formed 82.55% of the total respondents, 63.15% of Muslims agreed, while 36.84% disagreed to allow male doctors to conduct deliveries in their families. Of the social and economic causes forwarded as to why the services of male doctors were not supported, personal and social hindrances were stated to be the main cause. Two of the respondents, though refusing, did not advance any reason for such refusal (See Table 32).

Table No 32

Opinion of respondent mothers regarding delivery by male doctors with reasons

Level of literacy of the respondent mother	Number of respondent mothers								Reasons for Negative Opinion					
	Yes			No			No response		Personal shyness		Social hindrance		No response	
	H	M	T	H	M	T	H	M	H	M	H	M	H	M
Illiterate	44	7	51	13	6	19	-	6	11	5	-	-	2	-
Can read and write	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primary (V-X)	5	-	5	1	1	2	-	1	1	1	-	-	-	-
Secondary (V-X)	21	5	26	1	-	1	-	-	1	-	-	-	-	-
Higher secondary and above	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Total	71	12	83	15	7	22	-	7	13	6	-	-	2	-
%	82.55	63.15	79.04	17.14	36.84	20.95	-	36.84	15.17	31.57	-	-	2.32	-

NOTE: - H - HINDU, M-MUSLIM, T-TOTAL

The overall findings are hence as follows:

- There seems to be a general acceptability of male doctors conducting deliveries across the respondents of the two communities.
- Hindus are more willing to accept services of male doctors during deliveries as compared to Muslim respondents.
- Personal shyness and social hindrances are some of the dominant reasons for not accepting the services of a male doctor.

Post Natal Care

A large number of maternal deaths take place on account of lack of postnatal care. This very important element of reproductive health, however, is rejected in most societies as unnecessary, more so, when slum women have to go back to work after delivery of their children. M.E. Khan (1987), in his study on the complexities of relationships between productive and reproductive roles has advocated that more information be generated on the dynamics through which these linkages work in different socio-economic systems. It appears from the present study that all mothers have sufficient awareness about the necessity of availing of postnatal services in the areas of mother's and infant's care, child's development, immunisation, growth monitoring and administration of nutritious food. Of the illiterate Hindu mothers agreeing to the concept, 50% sought medical advice during convalescence after labour. 30% illiterate Muslim mothers also sought for this service. 50% illiterate Hindu mothers and 70% illiterate Muslim mothers wished to avail of infant's care services such as immunisation, nutrition, etc. 20% of the illiterate Hindu mothers did not agree to the necessity of post natal care, ostensibly on the ground that no post delivery complications had developed either to them or their babies. All 3 illiterate Muslim mothers also denied the need to avail of postnatal care. Mothers educated up to the primary level had assented to the need for postnatal care on grounds of infant's growth monitoring, supplementary nutrition, and immunisation against the 6 killer diseases. Of the secondary level mothers, while all the mothers felt the need for postnatal consultations, 54.5% advocated the same on grounds of mother's care, and 45.5% advocated entirely on grounds of infant's care. 1 Muslim mother in this group declined the need as according to her both she and her child kept well after the birth. An overall proportion of 85.7% of the mothers were found agreeing with this concept. (See Table 33)

Table No 33

Proportions of responses towards post natal care by religion and literacy

Literacy	Hindu	Muslim	Combined
	Proportion affirming	Proportion affirming	Proportion affirming
Illiterate	80.7	76.9	80.0
Primary	100.0	100.0	100.0
Secondary	100.0	80.0	96.3
Higher secondary	100.0	-	100.0
Total	87.2	78.9	85.7

Though most of the mothers agreed to the requirement of postnatal services, it is essential for them to realise that it is not only for their infant's health but for both the mother's and child's health. A study conducted in 1983 in Bijnour has similarly looked at the work patterns of women presenting data on childbearing and delivery and changes in women's work

patterns during these periods and has confirmed the negligent attention paid to the post natal needs of women among the urban poor families.

Reproductive Health Services actually availed of by mothers in the non intervened slums

When interviewed a large proportion of mothers did desire to avail of antenatal services in the pre delivery period. This study tried to ascertain what the reality was, that is, whether the aspiring mothers were actually able to take recourse to antenatal care. It is seen that 87.2% of Hindus and 78.9% of the Muslims have availed of the antenatal care services. Mothers of the Hindu community have availed of more of the facilities as compared to the Muslims but Muslim mothers from the primary and secondary group have all availed of such facilities (Table 34). Nearly 87.2% of the illiterate Hindu mothers have sought hospital services while seeking antenatal check up and 12.2% could afford to visit the private doctor. 77.8% and 22.2% were the proportions of Muslim mothers who have visited the hospitals and private practitioners respectively. Among the primary level mothers 5.81% Hindu mothers have gone to the hospitals and 5.26% Muslim mothers have sought advice of the private doctor. Of the secondary educated group, 85% have gone to the hospital and 15% have visited private doctors. Interestingly, 1 mother has stated that she has consulted the local *dai* because she is scared of the apathetic attitude meted out to patients in hospitals. Considering all groups of literacy, 88% and 12% of the Hindu mothers have visited hospitals and private doctors respectively during their last pregnancies. The proportions of their Muslim counterparts are 66.7% and 33.3% respectively.

Analysing the behaviour of the mothers refusing to avail of such care, 12.8% mothers of the Hindus and 21.05% of the Muslim mothers have not availed of such antenatal care. Of the Hindu negating respondents, 45.5% are non responsive, 18.2% were confined to their native home and 18.2% have consulted *dais* on account of difficult atmosphere experienced at the hospitals. The remaining 2 mothers are too poor to pay for conveyance to hospitals or visit the private doctors, Similarly, the Muslim mothers who have refrained from availing of antenatal care also have cited economic stringencies as the cause of not availing of antenatal services.

Table No 34

Proportions of mothers who availed of antenatal care during the last pregnancy

Literacy	Hindu	Muslim	Combined
Illiterate	86.0	69.2	82.9
Primary	83.3	100.0	85.7
Secondary	90.9	100.0	92.6
Higher secondary	100.0	-	100.0
Total	87.2	78.9	85.7

Coverage by Tetanus Toxoid:

One of the important components of antenatal care is the administration of Tetanus Toxoid immunisation to the pregnant mothers. The profile is obtained from mothers of the slums under study. Of the illiterate and secondary group 50% of the Muslim mothers have been covered by the second doze, but overall proportion is 47.1%. Regarding the Hindu mothers, however, the overall coverage is only 25%. Hence, although a very high percentage of mothers have received the first doze of immunisation of Tetanus Toxoid, very few could complete the immunisation process. Of the 4.7% Hindu and a single Muslim mother who have not availed of any doze of immunisation, the former have pointed out that want of escort to the hospital has prevented such access. The Muslim mother has stated that she is ignorant of the need for such immunisation. Hence it is seen that very few mothers have completed the process of immunisation diluting thereby the intended quality of health care as required by complete immunisation process.

Places of delivery

The illiterate respondents had clearly articulated the desire to have deliveries in the hospital even if the attendance was by a male doctor. This attitude was not very clear in groups with higher levels of education. The analysis presented below captures the situation where the deliveries actually took place.

Nearly 25% of the deliveries up to the third order of the birth of the babies have occurred at homes and 57.4% have taken place in the hospitals. Among the Muslims, up to the third order of birth, 56.1% of the deliveries have taken place in hospitals and 47.4% of such births have taken place at homes. For the Hindus, 67.4% of deliveries up to the third order of births have taken place at hospitals and 33.3% at homes. 8% of the deliveries (up to the fourth order of births) have taken place at homes. 10% of the births (up to fourth order of births) have taken place in hospitals respectively. Hence, the Hindus have preferred hospital deliveries more as compared to the Muslim households.

It is found that 79.06% of the Hindu mothers have been admitted to the hospitals for delivery of 67.4% of the total births. For Muslim mothers the corresponding proportions are 63.15% and 56.14% respectively. Another feature is that, equal proportion of confinements have occurred to each of the mothers of both religious groups at hospitals, that is, 76.19% of total mothers have attended the hospitals for giving birth to 65.44% of the children (Table 35).

Table No 35

Places of deliveries of mother by religion

Place of delivery	Hindu			Muslim			Total		
	No. of mothers	No. of deliveries	Prop. of confinement	No. of mothers	No. of deliveries	Prop. of confinement	No. of mothers	No. of deliveries	Prop. of confinement
Hospital	68 79.06	182 67.40	2.68	12 63.15	32 56.14	2.67	80 76.19	214 65.44	2.68
Home	18 20.93	88 32.59	4.89	7 36.84	25 43.85	3.57	25 23.80	113 34.55	4.52
Total	86 100	270 100	3.14 100	19 100	57 100	3.00 100	105 100	327 100	3.11 100

Figures below indicate percentage of confinements

Table No 37**Factors leading to home confinements**

Factors	Proportion of mothers	
	Hindus (%)	Muslim (%)
Apathetic attitude of family members	11.1	20.0
Domination by mother in law	11.1	12.9
Sudden labour pain	11.1	24.2
Lack of money and escort	66.7	42.9
Total	100.0	100.0

Family Planning practices

Current literature has studied and explored adoption/non-adoption of family planning methods and practices by different social and economic groups. Reddy (1984), in his study of Andhra villages has found that literacy, occupational mobility, socio economic variations of communities and attitudes of husbands and wives are the important social factors influencing acceptance of family planning methods in backward communities. Kar(1993), found that Nocte women in Arunachal Pradesh are deeply influenced by their value systems and cultural traditions in their reproductive health Behaviour. Chatterjee(1983), has stated that evidence of conflict between traditional norms and practices and state policies is most obvious in the area of family planning. Singh (1984), in his study on the Ranchi town found that most women had little knowledge, if not none, on reproductive health and birth control methods. Our findings on the faith and belief in family planning methods between the Hindu and Muslim respondents are interesting.

The present study wished to test the social factors affect family planning behaviour. It is found that only 31 out of 86 Hindu respondents (36.04%) and 6 out of 19 Muslim respondents (31.57%) have any belief in family planning. The majority of the respondents, namely 65 Hindus (75.58%) and 13 Muslims (68.12%) stated that they did not believe in family planning.

Reasons were forwarded to explain why 36.04% of Hindu respondents and 31.57% of the Muslim believed in family planning. Only 19.35% of Hindus relied on family planning to adopt the small family norms. 48.38% Hindus and 10.52% Muslims used family planning to maintain space between childbirths. 19.35% of Hindus and 10.52% of Muslims wanted to adopt the permanent method to prevent further childbirth (See Table 38).

A very large proportion of the respondents, namely 75.58% of Hindus and 68.42% of Muslims did not have faith in family planning. Of the varying reasons advanced behind such non-belief, the majority that is 32.30% of Hindus and 38.46% of Muslims did not advance any reason. 4.61% of Hindus stated that there was objection from in laws. 16.92% Hindus and 15.38% Muslims thought that use of family planning methods affected health 16.12% Hindus and 21% of Muslims were clearly opposed to the use of family planning methods. 20% of Hindus considered that as children were God's blessings, no artificial methods should be used. 1.52% Hindus and 7.68% Muslims were concerned with the costs involved in purchasing contraceptives (See Table 38).

Table No 38

Respondents relying on Family Planning programmes with reasons according to literacy

Level of literacy of the respondent mothers	No. of respondent mothers having reliance on Family Planning Programmes or not.		Reasons for reliance on Family Planning Programmes.						Reasons for not believing in the F.P. Programme.																	
	Yes		No		Small family norm desiring of child according to choice of time in need.		Maintaining space between two births.		Better permanent method of stopping of further birth.		No appreciation affirmation on the reliance of methods		In-law's objection belief/husband's discard.		Reluctant use/hostile attitude towards methods,		Methods affect health.		Issues being the God's blessings should not be forbidden.		Habitually less number of issues..		Economic reasons – no further requirement of methods		No answer given.	
	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M	H	M
36.04	31	-	8	1	-	5	0	10	0	5	2	2	1	-	4	4	6	1	7	0	-	-	1	1	15	5
31.57	6	-	3	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75.58	65	1	14	5	1	4	1	2	0	1	0	1	1	3	0	0	1	0	0	0	1	0	1	1	5	0
68.42	13	0	2	1	-	0	-	1	-	0	-	1	-	0	1	4	1	3	0	0	0	1	0	1	1	0
19.35	6	-	1	-	-	4	1	2	0	1	-	1	-	0	1	1	1	3	0	0	1	0	1	1	1	0
0	0	-	0	-	-	2	0	1	-	0	-	1	-	0	0	0	0	0	0	0	0	0	0	0	0	0
48.38	15	-	4	1	-	1	0	10	0	1	-	2	1	0	1	1	1	3	0	0	1	0	1	1	15	5
10.52	2	-	2	0	-	2	0	0	-	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
19.35	6	-	1	-	-	1	-	5	-	1	-	2	-	0	1	1	1	3	0	0	1	0	1	1	1	0
10.52	2	-	0	-	-	0	-	2	-	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
6.13	4	-	1	1	-	1	1	2	-	1	-	2	-	0	1	1	1	3	0	0	1	0	1	1	1	0
15.58	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.61	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.12	5	-	1	-	-	1	-	4	-	1	-	4	-	0	1	1	1	3	0	0	1	0	1	1	1	0
21	4	-	0	-	-	0	-	4	-	0	-	4	-	0	0	0	0	0	0	0	0	0	0	0	0	0
16.92	11	1	4	-	-	1	-	6	-	1	-	6	-	0	1	1	1	3	0	0	1	0	1	1	1	0
5.38	2	0	1	-	-	0	-	1	-	0	-	1	-	0	0	0	0	0	0	0	0	0	0	0	0	0
20	13	-	3	3	-	0	-	7	-	0	-	7	-	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	-	0	0	-	0	-	0	-	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0
1.52	1	-	0	1	-	1	-	-	-	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1
7.68	1	-	1	0	-	1	-	-	-	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1
1.52	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.68	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32.3	21	-	5	1	-	5	1	15	-	1	-	15	-	1	1	1	1	1	1	1	1	1	1	1	1	1
38.46	5	-	0	1	-	0	-	5	-	0	-	5	-	0	0	0	0	0	0	0	0	0	0	0	0	0

Note:- H means Hindu, M means Muslim, T means Total, CRW means Can Read and Write, , HS+ means Higher secondary and above., F.P.: family planning

Hence the following conclusions may now be drawn on the belief patterns of the respondents of the non intervened area.

1. There is generally opposition to the family planning methods, especially from the illiterate groups. 75.58% of the Hindus and 68.42% of Muslims did not believe in the necessity to adopt family planning.
2. Belief that family planning adversely affects health is another significant reason.
3. As has been stated in the section on beliefs regarding conception as blessing of God and hence family planning is seen as opposing the blessing of God.
4. Economic reasons also stood in the way of obtaining contraceptives, nutrients etc and families did not wish to incur expenses on the same.

Position of women in accepting permanent methods.

Our hypothesis was to test the influence of social and cultural practices on the actual practice of family planning. One important social factor that influences family planning behaviour is that it is mostly the women who are compelled to adopt family planning methods and this is so especially in the case of sterilisation methods such as tubectomy.

In the present study, it was attempted to ascertain the opinion of the respondents as to whether it is the wife or the husband who should adopt family planning methods. It was found that 70% of Hindu illiterate and 50% of Muslim illiterate respondents supported that wives should accept permanent methods. 26.7% of Hindus and 50% of Muslims educated up to the secondary level supported this view. (See Table 40)

Table No 40

Proportions of wives agreeable to adopt permanent methods of family planning

Literacy	Hindu Proportion	Muslim Proportion	Combined Proportion
Illiterate	70.0	50.0	66.7
Primary	3.3	-	2.8
Secondary	26.7	50.0	30.5
Total	100.0	100.0	100.0

Out of the Hindu mothers, (excluding the lone respondent who despite supporting ligation, was discouraged by the elderly relatives), 67.7% stated that if husbands were sterilised, there will be potential loss of family income as husband's working abilities may be affected. 9.7% relied on the advice of mother in law, and 12.9% were compelled to undergo ligation due to too many child births.(See Table 41)

Table No 41

Reasons influencing wives to take recourse to permanent methods of family planning

Reasons	Hindu	Muslim
	Proportion	Proportion
Husband's working capacity may be affected	67.7	83.30%
Mother in law's desire	9.7	-
Small family desired	6.5	-
Too many childbirth compelled ligation.	12.9	16.66%
Elderly relative's advice	3.2	-
Total	100	100

It is of interest, however, to note that, although 34 mothers had more than 3 living children, only 11.76% (4/34) resorted actually to ligation. For the rest, the belief was not translated into practice.

Among the Muslim respondents, a vast majority of 83.3% was concerned about husband's capacity to earn income in case he underwent vasectomy. 16.66% was compelled to undergo ligation due to too much childbirth. Hence it is clearly established that women in these non intervened slums are compelled to adopt permanent methods doing to social and economic pressures. Either the husbands potential to work or the fear of too frequent childbirths becomes the overriding cause. This proves our hypothesis that the actual practice of family planning that is, adoption of permanent methods by women is influenced by social factors.

Actual contraception practices

In our present study, in order to prove the hypothesis that social practices affect contraceptive practices, an analysis was made to ascertain the proportion of contraception users after birth of the first/second/third child and underlying causes towards the same. Hence, contraceptive users among the Hindus have improved after the third child by 13%, with respect to the practice prior to birth of the first child. Among the Muslims, it has regressed by 16.3%. The percentage of the Hindu acceptors has gone up from 1st to the 3rd conceptions, that is, from 11.6% to 14.6% to 24.6%. Among the Muslims, the percentage has varied from 26.3% to 11.85% to 10.0%. The reluctance to adopt family planning after the birth of the first child has been the result of social and cultural pressures such as domination of the mother in law, cultural taboos of the population migrating from Uttar Pradesh, Bihar and Andhra Pradesh. The second child is born due to a few social causes. 66.3% are due to conjugal understanding, but 32.5% thought that it is God's blessings, which causes childbirth and not conscious human choice. Especially interesting is that 50% of the primary and secondary educated mothers subscribe to this view. In the case of the Muslims, the proportion is even higher, with nearly 60% of the samplé mothers ascribing cultural beliefs to consecutive births of their children. Very important social influences, namely, desire for a son and god's blessings play an important role among the sample population while conceiving for a second child. Out of 76 eligible couples, 34.2% have stated that they are blessed with a second child on account of God's grace. The proportions contributing to this idea among the illiterate, secondary and primary groups are 27.8%, 44.4% and 75% respectively. In the case of the Muslim couples the proportion is almost 19% higher than the Hindus while ascribing to this cultural belief. 3 Hindu couples desire a second child on account of preference for a son. No Muslim respondents, however, subscribe to this view. Hence, there is some element of gender bias in the sample of Hindu respondents from the non intervened area.

The deep-rooted traditional belief that children are given by God has prevailed over the sample respondents in the non intervened area. This is irrespective of religion, caste, creed or levels of education. This is found present in the situations of having the first, second, third and even more children. In case of the Hindus, the proportion of those ascribing childbirth to God's blessings has moved from 32.5% to 34.2% to 29.5% according to the orders of birth. Among Muslims, the percentages have moved from 57.9% to 52.9% to 70.0% according to the orders of birth. Regarding the desire for a son, eligible Hindu couples have shown their preferences for at least two male children in the family. This corroborates the previous finding on gender bias.

43.7% of all eligible couples have had the third child on the basis of self-planning and 56.3% of the eligible couples have been influenced by social factors while having the third child. 15.5% have the third child without planning; a very significant proportion of 35.2% of the eligible couples ascribe the birth of the third child to God's blessings. The desire for a son has been the main motivation for 2.8% of eligible couples. (See Table 42)

Table No 42
Factors leading to third conceptions

Religion	Literacy	Couple's desire	Without planning	God's blessings	Desire for son	Total Respondents
Hindu	Illiterate	47.9	20.8	22.9	4.2	48
	Primary	50.0	0	50.0	4.2	2
	Secondary	45.5	0	54.5	0	11
	Total	47.5	16.4	29.5	3.3	61
Muslim	Illiterate	25.0	0	75.0	0	8
	Primary	0	100.0	0	0	1
	Secondary	0	0	100.0	0	1
Combined	All literacy	43.7	15.5	35.2	2.8	71

Findings on reproductive health from non intervened slums:

The tabulations and analyses of the foregoing chapter are intended to examine the reproductive health behaviour of the slum dwellers wherein preventive health interventions have not been introduced systematically and to ascertain to what extent social factors such as religion, literacy, influence of laws and income as well as cultural taboos such as superstitions, faith in spirits, exorcism and other prescriptions have influenced such behaviour.

The following conclusions are drawn from the same:

In the representative sample behaviour analysed so far, a very high level of illiteracy has been detected, amounting to 68.60% among the Hindu and 68.42% among the Muslim respondents.

Wives are much less educated than their husbands, namely, 32.55% of Hindu males are illiterate as compared to 68.60% of their wives. Among Muslims, the proportions of illiteracy among males and females are 42.10% and 68.42% respectively.

The Mean age of marriage of combined religion is 17.9 years, which is less than the minimum age of marriage as laid down by law. While the respondent mothers have opined that the Mean age of marriage should be between 18.5 to 22.5 years, the actual Mean age is fixed at 17.9 years, which is less than that desired. This proves that the opinion of the mothers is subdued and that of the society prevails.

90% of the eligible couples believed that children are the result of God's blessings. Those advocating self-planning for children are only 18.4% for Hindus and none from among the Muslims. The average number of living children per eligible couple is 3.2 for Hindus and 3.0 for the Muslims. The number of children is highest for the illiterate group whose average number ranges between 3.4 and 3.7 respectively. It has been statistically proved that literacy has a direct association with the determination of the family size.

The average number of children desired as against living, is 2.53 for both religions. The variability of choice for desired number of children as against actually living is 15% for

Hindus and 23% for Muslims. Gender bias is present especially among the Hindu eligible couples who have desired to have sons on grounds of future income, security and social status. There is strong adherence to socio economic dicta by mothers of both communities, which they believe are necessary to be observed to beget children. The proportions are 90% among Hindus and 79% among the Muslims. As the Mean age of marriage is lower than that prescribed, the average number of children likely to be born to mothers of this area would be fairly high, defeating the norms of a small family.

Mothers opined on the suitable age of marriage for girls on the basis of health grounds, social and religious grounds, conjugal agreement and media impact. 39.5% and 34.9% of the Hindu mothers favoured the first two grounds while advocating the suitable age of marriage; 47.4% of the Muslim mothers opined similarly. Hence, social and religious influences continue to be predominant in the thinking of the others of the sample population. 87% of the eligible couples agreed on the necessity of antenatal care. Eligible couples who negated this idea did so on the basis of traditional beliefs and the inevitability of fatalism.

75.6% of Hindus and 73.7% of the Muslim mothers have no knowledge of eclampsia of pregnancy. 5 Hindu mothers actually believed that the symptoms were created by the influence of evil spirits and exorcism was required to drive away the same. 32.6% of Hindus and 26.3% of the Muslims supported the idea of home delivery by a *dai* in contrast to hospital delivery. Of this group, only 66.7% agreed that the *dai* should be a trained one.

Of the respondents who negated home delivery by a *dai*, only 82.6% of Hindus and 63.2% of the Muslims supported the idea of hospital delivery by a male doctor. This indicates high level of permissiveness in society that disapproved of pregnant mothers being attended to by male doctors. 88% and 12% of Hindu mothers and 66.7% and 33.3% of Muslim mothers visited the hospitals and private doctors respectively to avail of postnatal care. In the case of Tetanus Toxoid immunisation, however, while about 83% of mothers availed of the first doze, only 25.6% of Hindu mothers and 47.1% of Muslim mothers availed of the second doze. 25% of the births up to the third order took place in homes for Hindus and 33.3% for the Muslims respectively. Family apathy, domination of mothers in law, absence of money and escort were some of the social and economic causes, which prevented access to hospitals for delivery.

It was statistically tested that literacy had no influence on the family planning belief of the respondent mothers. 64% of the Hindus and 69% of the Muslims had no faith or belief in family planning methods to restrict their family size. Discouragement by husband and in laws, reluctance to use family planning methods, belief that children are the result of God's blessings and avoidance of likely costs were some of the social, cultural and economic factors, which led to such poor response to family planning. Literacy again, had no influence while deciding on the family planning methods by the acceptors. 11.76% of mothers resorted to family planning after the birth of the third child. 86% of the families did not take recourse to family planning after the birth of the first child or even the second child. 77.5% did not use family planning devices after the birth of the third child. About 38% of the non-acceptors had a deep-rooted traditional belief that children were the gifts of God. Consequently, they failed to limit their family size by using family planning devices even after the births of consecutive children.

IMMUNISATION OF CHILDREN

Importance of Immunisation

Child health and survival are important aspects of the Family Welfare Programme in India. The National Health Policy (1983) and the National Health Policy (2002) had set the goals of reducing the Infant Mortality Rate to 60 by the year 2000 and 45 by the year 2010. Immunisation is one of the important programme interventions, which aims at reduction in mortality and morbidity due to preventable causes among young children.

Recent surveys and studies UNICEF (United Nations Children Emergency Fund) 1998, RCH (Reproductive and Child Health) Household Survey 1998-99 in India have brought out that only about 50% of the children born each year are fully immunised in the first year of life and are therefore unprotected during their most vulnerable months and are susceptible to disease for which they have not been immunised. Further there are significant drops from the highest to the lowest covered dose. Drop out rates varies from about 6% in Goa to 33.8% in Meghalaya leading to low overall coverage. Measles has come out to be the lowest covered antigen.

In this background, the implications for immunisation profile of the children under 5 years of age in the non intervened slums of the Kolkata Metropolitan area has been studied and analysed to ascertain the beliefs and practices associated with the same. This study wishes to study the following in the context of children in non intervened slums:

- Proportion of children between 1 to 2 years by religion and literacy
- Proportion of children with complete and incomplete immunisation.
- Social factors influencing knowledge on vaccination.
- Reasons for believing in or not believing in immunisation
- Factors affecting acceptance of specific antigens.

Proportion of mothers having children between 1 to 2 years by religion and literacy

At the outset, while examining the immunisation profile of children of the age group 1 year to 2 years against the six killer diseases of 4 types of vaccines (BCG*, DPT*, Polio, Measles) the proportions of eligible couples who have the cohort of children need to be identified for demographic value. It is seen that there are only 36 eligible couples (34.3%) out of 105 of both religious groups with children between 1 year and 2 years. Of them 24 (27.9%) are Hindu and 12 (63.2%) are Muslim eligible couples who have children between 1 year to 2 years (both inclusive in the cohort). (See Table 43)

Table No 43

Proportion of mothers having children between 1 to 2 years by religion and literacy.

Religion/Literacy		Illiterate	Primary	Secondary and above	Total
Hindu	Eligible couples with children of 1-2 years	16 (28.1%)	2 (33.3%)	6 (27.3%)	24 (27.9%)
Muslim	Eligible couples with children of 1-2 years	8 (61.6%)	-	4 (80.0%)	12 (63.2%)
Combined	Eligible couples with children of 1-2 years	24 (34.3%)	2 (28.6%)	10 (37.0%)	36 (34.3%)

*DPT—Diphtheria, Pertuissis and Tetanus

*BCG—Bacillae Camette Guerin after the name of the inventor of the Vaccine of Tuberculosis

Children with complete and incomplete immunisation

As an alternative approach of inference, outcome of immunisation would be said to be complete when the child receives Measles vaccine on or before attaining the age of 24 months. The data shows that the Hindu children have been administered with higher proportion (58.3%) of complete immunisation as compared to those of the Muslims (16.7%). Muslim parents either do not have the requisite information on immunisation or have failed to participate in the immunisation programme as would be evident from the very high percentage of incomplete immunisation of Muslim children that is, 83.3%, as compared with 41.7% of the Hindus. From this glaringly low profile of immunisation of both the communities it may be inferred that a proper and enabling environment for complete immunisation has not been established and consequently the community at large has failed to come forward to derive the benefits of the programme. No child is found to be "Non Immunised." This implies that at least 1 antigen has been administered to all the children but a very few have completed the profile of all antigens and hence the children have failed to be covered with the desired immunity. Overall proportion of incomplete immunisation is to the extent of 55.6%. (See Table 44)

Table No 44

Children with complete and incomplete immunisation

Levels of Literacy of respondent mother	No. of children (1-2y)	HINDU				No. of children (1-2years)	MUSLIM				No. of children (1-2years)	BOTH THE RELIGIONS			
		Complete		Incomplete			Complete		Incomplete			Complete		Incomplete	
		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%
Illiterate	16	10	62.5	6	37.5	8	1	12.5	7	87.5	24	11	45.8	13	54.2
Primary	2	1	50.0	1	50.0	----	----	----	----	----	2	1	50.0	1	50.0
Secondary	6	3	50.0	3	50.0	4	1	25.0	3	75.0	10	4	40.0	6	60.0
TOTAL	24	14	58.3	10	41.7	12	2	16.7	10	83.3	36	16	44.4	20	55.6

Social factors influencing mother's knowledge of vaccination

The hypotheses that were tested are as follows:

- The economic status of the family of respondent mothers has no direct relation with the access to the immunisation centres.
- Literacy may have some minor influence on the mother's knowledge of the importance of immunisation.

An analysis has been made of the social factors influencing the knowledge of the respondent mothers about the facilities offering immunisation services through different organisations in the area. It is seen that the economic status of the family of the respondent mothers has no direct relation with the location of the immunisation centres. Literacy may have some minor influence on the mother's knowledge of the importance of immunisation activities as conducted by the various facilities of this area. The State General Hospital is the most popular where most of the mothers take their children for immunisation. However, a large number of mothers have gone to the General Hospital or Municipal hospitals or even the centers run by the Non Government Organizations. A very small percentage of the mothers have visited the Integrated Child Development Centers to immunise their children.

Table No 45

Respondent mothers attending different immunisation centers by literacy

	Illiterate (%)	Primary (%)	Secondary (%)	Higher secondary and above (%)	Total (%)
State Govt. hospital	48 84.2%	5 83.3%	17 77.3%	1 100%	71 82.6%
Municipal hospital	36 63.2%	6 100%	13 59.1%	1 100%	56 65.1%
Non Govt. treatment centre	5 8.8%	3 50.0%	4 18.2%	1 100%	13 15.1%
NGOs	4 7.0%	- 0%	2 9.1%	1 100%	7 8.1%
ICDS	7 12.3%	1 16.7%	2 9.1%	- 0%	10 11.6%

Note: Figures below indicate the proportion of respondent mothers taking their children to various facilities,

The above (See Table 45) configuration of percentages in respect of literacy of the respondent mothers establishes very poor association both with the knowledge as well as availing of services from the different centres. This is true in the case of both religious groups. The highest percentage of mothers has mentioned the name of the State General Hospital and the second highest preference is for the Municipal Hospital. Attendance to the other three centres has not been given any importance by the respondent mothers.

Because most (60%) of the 1st to the 3rd births are being delivered in the hospitals and BCG vaccines are to be given to the new born in the Maternity wards, awareness of immunisation has developed only among those mothers who have delivered their children in the hospitals. This is possibly because very little extension work has been done by Health workers among the urban poor in this non intervened area.

The following conclusions emerge from the above.

- There is very poor association of knowledge and accessing of services from different sources with levels of economic status and literacy.
- Awareness of immunisation had developed only among those mothers who had delivered their children in the hospitals. This could probably be because health-workers in the non intervened slums have done very little extension work.

The above validates both the hypotheses tested.

Belief in Immunisation:

Apparently a high percentage of mothers affirm the belief in prevention of the 6 killer diseases by immunising their children between the ages of 1 year to 2 years. This apparent picture of awareness created, however, is contradicted by a staggering 55% of children who have been only partially immunised. Such incidence of incomplete immunisation has been found amongst 20 out of a cohort of 24 children in the sample of 105 respondent mothers. This is quite an indication of the non-application of the awareness into actual practice by the respondent mothers and points to the social reality that mere awareness is not a sufficiently strong motivating factor to ensure that families take resort to the scientific methods of preventive health care. Social inertia overcomes the short-lived euphoria created by awareness generation.

Of the mothers interviewed, only Hindu mothers educated up to the secondary level has objected to the practice of immunisation to prevent 6 killer diseases. Hence, literacy of the mothers have no significance in the decision of the respondent mothers to immunise their children. Especially, the reluctance of the mothers educated up to the secondary level to believe in immunisation corroborates this. Almost all the respondent mothers believe in immunisation. About 60% of mothers with a cohort of children of 1 year to 2 years of age have not immunised the children. Hence there is an apparent contradiction in the awareness as stated by the mothers and the actual application of such awareness.

Reasons of believing in immunisation

Respondent mothers having faith in immunising their children either have ascribed such faith due to the reason that they actually believe that such immunisation provides immunity to their children. Alternatively media influences them more by its hype rather than the depth of the messages advocated by such publicity.

The data show that 26.5% of the Hindu mothers have agreed that there is a necessity of immunising their children of ages between 1 year and 2 year for the prevention of Tuberculosis, Diphtheria, Tetanus, Polio and Measles. None of the Muslims mothers, however, prefer such an opinion. It is hence therefore seen that the awareness of protecting

their children from the 6 killer diseases by immunisation has been created more in the Hindu respondent mothers.

Development of health awareness of the respondent mothers on the aspect of the importance of immunisation has been deeply influenced by the media. 75% of the Hindu mothers and 100% of the Muslim mothers have stated that, on being influenced by the media, they have become aware of the need to immunise their children. Despite such awareness, however, 41.7% of Hindu Children 83.3% of the children are only partially immunised. This possibly leads us to believe that extension work, as well as suitable health infrastructure, is vitally necessary to translate awareness into actual practice.

The following conclusions emerge;

- The literacy of mothers has no significance in the decision of the respondent mothers to immunise their children. The reluctance of the mothers educated upto the secondary level to believe in immunisation corroborates this.
- Almost all the respondent mothers believed in immunisation, but about 55% of mothers with a cohort of children of 1 to 2 years did not immunise their children completely. Hence, there is an apparent contradiction in the awareness as stated by the mothers and the actual application of such awareness.

Factors influencing vaccinations

The income status of the family to which the respondent mothers belong does not reflect much on the responses to specific vaccinations; religion, however, does have some influence as will be apparent from the percentage of respondent mothers opining about the prevention of three diseases by immunisation. (See Table 46)

Table No 46

Responses of mothers with respect to specific antigens

Hindu	Polio	Diphtheria	Measles
Affirming (%)	96.5%	96.5%	65.1%
Negating(%)	2.3%	2.3%	33.7%
Muslim			
Affirming (%)	100%	94.7%	47.4%
Negating(%)	0%	5.3%	52.6%
Combined Religion			
Affirming (%)	97.1%	96.2%	61.9%
Negating(%)	1.9%	2.9%	37.1%

Polio

A very high proportion of mothers of both the religious groups indicate that nearly all of them know that Oral Polio Vaccine prevents polio. This mere statement of knowing seems inconsistent with the actual coverage of immunisation wherein only 36 mothers out of a total of 105 eligible couples have completely immunised their children. The balance 68 mothers who have not immunised their children of the age group 1 year to 2 years have only partial knowledge of the Oral Polio Vaccine to combat polio on account of the hype created by the media.

Diphtheria

Exactly the same picture prevails as in the case of polio vaccination in the case of Hindu mothers. The same two mothers, 1 illiterate and the other educated up to the secondary level negated the necessity of immunising their children. The extent of knowledge of immunisation to protect the children against Diphtheria is about 97%. Media has contributed to creating partial awareness among 74% of the respondents, comprising 27% of the Hindus and 100% of the Muslims. Once again, the respondents of both religious groups have not translated this awareness into practice as the actual coverage of complete immunisation by DPT(Diphtheria, Pertussis, Tetanus) vaccinations remains low. It appears that media has created an overall image but the rationale of immunisation not having been understood, and most mothers have remained content with single but incomplete doses of immunisation only.

Measles

In the case of Measles, 39 mothers of both the communities, namely 29 Hindus (33.7%) and 10 Muslims (52.9%) have mostly negated the necessity of Measles immunisation. Again the proportion of affirmation by both the communities was inconsistent as Hindus acknowledged 65% of the need and Muslims acknowledged 47.4% of the same. 62% and 37% of the mothers affirmed and negated the need for immunisation respectively.

Examining the traditional beliefs of the respondents, it is seen that, certain beliefs, such as offering puja to *Sitala Mata*(Local Goddess) to keep Measles at bay, application of a balm of

mustard oil, tamarind powder and bay leaves to appease the Goddess is prevalent. Even the Muslims of the area offer puja to *Sitala Mata* for prevention of Measles.

Findings on immunisation from non intervened slums:

Upon summarising the findings of the present study, it is seen that there is a very high proportion of incomplete immunisation in these non intervened slums and 55.6% children have received partial immunisation only. 41.7% of the Muslim respondents and 83.3% of the Hindu respondents have immunised their children. There is practically no association among literacy levels, knowledge of health facilities and actual immunisation. The decision to immunise children is found to be neutral to income effect. Mothers who have given birth to children in hospitals have developed some awareness due to BCG vaccinations, which is administered to children at birth. Limited awareness as created by the media has not been translated into actual practice as evidenced by the low proportion of completely immunised children. 26.5% of Hindu mothers and none of the Muslim mothers have agreed that immunisation would protect their children from the 6 killer diseases. Deep-rooted social and cultural beliefs have pervaded both communities. Members of both communities have believed in appeasing goddess *Sitala* and offered mustard oil, bay leaves and tamarind powder to the goddess to protect their children from Measles.

MALNUTRITION

The concept and causes of malnutrition

Nutrition is important for proper growth and development of the child. The term “malnutrition” is defined by the Oxford Dictionary as “insufficient nutrition”, a condition where diet omits some of the foods necessary for health.

The prevalence of malnutrition varies from country to country. The developing countries have very high prevalence, ranging from 52% in Nepal to 84% in Bangladesh. This load of malnourished children has been labeled as “silent emergency”. Malnutrition is estimated to claim 2,80,000 lives of children every week. The UNICEF (United Nations Children’s Emergency Fund) report for India mentioned malnutrition for children below 5 years of age to be estimated at 38% with severe malnutrition estimated at 5%.

The recent trend of urbanisation had also contributed to the increased prevalence of malnutrition. Low socio economic status, slum inhabitations, broken homes or overcrowded families have very high prevalence of malnutrition. Adopting new habits and depending mainly on staples may lead to malnutrition. The rapid growth of slums and the shanty towns may be associated with problems of sanitation, water supply and other demands are leading to rapid increase of children with malnutrition.

Coming to the factors influencing malnutrition, different classes of mothers, depending on their educational and economic status as well as diverse socio cultural milieu have different problems in identifying and treating malnutrition. Some of the factors are poverty, lack of proper knowledge, apathy to complementary food and pressures of daily domestic chores and performance of certain religious ceremonies before administering solid food to children. Individual growth monitoring of each child below 5 years of age has been done for every household interviewed and recorded in a chart prescribed by the World Health Organization. In this present study of non intervened slums the following has been studied.

- Knowledge of mothers on malnutrition
- Traditional beliefs associated with malnutrition
- Knowledge of preservation of nutrients in cooking
- Satisfaction with cooking procedures at homes
- Gender bias in feeding children
- Virtual incidence of malnutrition.

Knowledge of mothers about malnutrition

At the very outset, mothers in the non intervened slums were interviewed to ascertain the level of their knowledge in recognizing malnutrition in their children below 5 years of age. A fundamental requirement in the treatment of malnutrition is that mothers must be aware of the symptoms of malnutrition in their children. This is vital so that the children suffering from severe malnutrition is recognized and is provided with proper referral treatments. The hypothesis that has been posed for the study is that the awareness regarding malnutrition is low among the mothers in the non intervened slums. From the present study, it is observed that mothers of both religious groups irrespective of the levels of literacy have very poor knowledge about malnutrition of children. 79.08% of the mothers have no knowledge about the symptoms of malnutrition which has affected children. Of this 77.9% of mothers belong to the Hindu community while 84.2% of mothers are from the Muslim community. Hence,

ignorance is more intense in the latter community. This ignorance is also literacy neutral, as almost similar proportions of mothers, irrespective of literacy levels are unaware of the symptoms of malnutrition in their children. Further, a lone graduate mother of the highest income group has also stated that she is completely ignorant about the symptoms of malnutrition (See Table 47).

Table No 47

Knowledge of mothers about malnutrition

Religion	Knowledge of malnutrition	Illiterate	Literate	Total
Hindu	Yes	19.3	27.6	22.1
	No	80.7	72.4	77.9
Muslim	Yes	23.1	0	15.8
	No	76.9	100.0	84.2
Combined	Yes	20.0	22.9	20.95
	No	80.0	77.1	79.05

The following conclusions emerge:

- It is observed that mothers of both religions irrespective of the levels of literacy have very poor knowledge about the malnutrition of children. 79.05% of the mothers have no knowledge about the symptoms of malnutrition, which has affected their children.
- This ignorance is also literacy neutral, as almost similar proportion of mothers; irrespective of levels literacy levels are unaware of the symptoms of malnutrition in their children.

This confirms the hypothesis. It is essential however that the awareness be increased regarding symptoms of malnutrition among the mothers of non intervened slum.

Traditional beliefs associated with malnutrition

It has been hypothesised in this study that lack of proper awareness of the causes of symptoms of malnutrition are often due to ignorance and influence of social prejudices as well as cultural taboos.

Lack of proper awareness of the causes and symptoms of malnutrition are often due to ignorance and influence of social prejudices as well as cultural taboos among the respondents of this slum. 6 Hindu mothers, that is 6.97% of the total of 86 Hindu respondents believe that ghosts or evil spirits led to malnutrition of children. Of these 6 mothers, 3 are illiterate and 2 are educated up to the secondary level. They further believe that an exorcist is required to drive away the evil influences caused by the spirits. 1 mother of the primary level believes that displeasure of the God's causes malnutrition of children. Of the mothers believing in evil spirits 2 were from the lowest income group and 1 was from the highest income group. The other 2 mothers were educated up to the secondary level

and belonged to the third income group. 1 mother who believed in the wrath of God is educated up to the primary level and belongs to the lowest income group. These mothers also advocate the use of exorcism to drive away the evil influences. Among the Muslim mothers, none has supported beliefs in cultural taboos, but only 15.8% had any awareness on malnutrition.

Other causes of malnutrition

1 illiterate and 2 literate mothers stated that disease causes malnutrition. 2 literate and 2 illiterate mothers stated that poverty and inability to feed the family with adequate food causes malnutrition. Disease and poor intake of food are indeed significant contributory factors towards malnutrition. It is seen, however, that only 10(9.52%) mothers out of a sample of 105 could identify such factors. None of the respondent mothers could relate malnutrition to the lack of essential nutrients in diet. In all, 20% of Hindu mothers and 10.53% of Muslim mothers believed that disease economic stringencies and recurrent illness caused malnutrition. This comprises 18.18% of the sample population. Again, 6.25% Hindu mothers from the above category did not have any knowledge of factors, which caused malnutrition. The balance 82% of the respondents of both religion ascribed superstitious factors and evil influence to be the cause of malnutrition in children. Hence respondent mothers hardly have any knowledge on the causes of malnutrition. Surprisingly, none of the mothers could associate malnutrition to the lack of food items in the diet.

The following conclusion emerge

- Beliefs that malnutrition is caused by evil influences exist among Hindu mothers.
- Hindu mothers also believe in exorcism to get rid of evil influences.
- No such beliefs exist in Muslim community
- Only 18% of the mothers who did not believe in exorcism could rationally explain the causes of malnutrition.

This further confirms the hypothesis.

Nutrition and cooking procedure

Nutrition may be considerably preserved through appropriate cooking procedures. Mothers, however, need to know whether the procedures they adopt for cooking is appropriate in preserving nutrition. The opinion of the respondent mothers has been taken to ascertain the appropriateness of the cooking procedure in preserving nutrition in the non intervened slums. The data shows very poor level of knowledge of mothers of both religious groups about the preservation of nutrients through the cooking procedure. Only about 23.8% of the respondents had any knowledge on the same. Again the illiterate Hindus seem to have little or no knowledge at all, with 67% of them pleading ignorance to the preservation of nutrition through cooking. It is not only enough to know that appropriate cooking procedures can help to preserve nutrition but mothers should actually be satisfied that such cooking procedures are being followed in households under survey.

It is seen that 58.6% of the Hindu literate mothers are happy with the nutrient preservation in food items as cooked in their households. 38% of illiterate mothers are satisfied with the cooking procedure in their households. In the case of the Muslims, 46.2% of the illiterates have reported satisfaction with the cooking procedure as compared to the literates. The overall proportion of satisfaction is recorded as 45% of the sample population. 7% of the Hindus and 5.3% of the Muslims have not answered the specific question. 61.4 % and 41.4% respectively of the Hindu and Muslim mothers have answered with a definite no. 64.7% and 58% of the Hindus and Muslims respectively have stated that they are not satisfied with the process by which food was cooked in their households.

The dissatisfied mothers replied as follows:

1 illiterate respondent mother has cooked under the directions of her mother-in-law and hence has no idea of preservation of nutrients while cooking. 1 mother, each from the illiterate and secondary group, think that it is necessary to spend more money to cook food while preserving nutrients and lack of purchasing power prevent them from purchasing more expensive food items. 1 mother educated up to the primary level has stated that she is guided by divine grace while cooking food for her family. Belief in social factors such as the domination of the mother in law and cultural factors such as divine influence have influenced mothers while preparing food for the family irrespective of the preservation of nutritional contents in the food. It can be concluded that there is poor knowledge among mothers of both religions about the preservation of nutrients through cooking procedures. Only 23.8% of the respondents had any knowledge of the same.

Knowledge regarding the presence of nutrients in food

To be able to prepare nutritious meals and enable their children to have simple, homemade, yet nutritious food, mothers need to have knowledge about inherent nutrients in various items of food. Interview with mothers with varying educational backgrounds and different religious groups tried to ascertain this knowledge. It appears that the Muslim mothers appear to be marginally more knowledgeable as compared to those of the Hindus. On the whole, however, only about 45.4% of the Hindus and 47.4% of the Muslim mothers of the non intervened slums seem to have some knowledge about inherent nutrients in foodstuff.

Basic principles of preservation of nutrition in cooking

There are certain basic principles of preservation of nutrition in cooking, namely, preserving the starch after boiling of rice, mixing of pulses, slicing of vegetables in big pieces and chopping of vegetables only after washing the same. The mothers of non intervened slums were interviewed to opine as to whether such basic rules are followed in their everyday cooking. Nearly 90%(comprising 92% of illiterate mothers of each religious group and 86.2% of Hindu literates and 100% Muslim literates) mothers of each of the literacy groups of each religion supported decanting of starch. This proves gross ignorance of this simple and effective home-based method of preservation of nutrition. Regarding mixing of pulses, however, 81.40% and 89.47% of the Hindu and Muslim mothers respectively support this method of cooking which help preservation of nutrition. 66% of the mothers did not agree to chop vegetables into big pieces prior to cooking, 26.32% Hindus and 46.15% of the Muslims only agree with this procedure. This shows ignorance of this method of preservation of nutrition while cooking at home. 87% of the respondents do not agree to chop vegetables

after a thorough wash. This further indicates the lack of knowledge of the respondent mothers of the area about the fundamentals of how to preserve nutrition in everyday cooking process at home.

Opinion of respondent mothers on Nutritious food items

There is often a misconception that only expensive food items such as fish, meat, eggs, ghee and fruits provide nutrition to children. This is largely misconceived as simple cereals and pulses can be sufficiently and equally nutritious. Among 86 Hindu mothers, 2 illiterate and 3 secondary educated mothers have not answered. Mothers mostly reply on the first 2 priorities and thereafter the scope of answers decrease. Ranking is done in decreasing order of proportions of mothers selecting different food articles in each level of priority. Fish and meat are preferred by about 20% of the respondent mothers among the first four order of preferences with minor variations in ranking orders. (See Table 48)

Table No 48

Prioritisation of nutritious food items (percentage) in proportions of responses

Rank	1 st	2 nd	3 rd	4 th	5 th
1	Fish 27.2	Meat 23.5	Fish 18.2	Pulses 20.0	Eggs 28.6
2	Rice and roti 21.0	Pulses 18.5	Meat 16.9	Meat 18.6	Rice etc 17.9
3	Meat and milk 12.3	Fish 16.0	Pulses and eggs 15.6	Fish 17.1	Pulses and fruits 10.7
4	Pulses 11.1	Rice and milk 14.8	Milk 10.4	Milk 15.7	Meat and fish 7.1
5	Fruits 8.6	Fruits 4.9	Fruits 9.1	Eggs 10.0	-
6	Veg 6.2	Egg 3.7	Rice etc 5.2	Rice 8.6	-
7	Egg 1.2	Curd and ghee 2.5	Chhana 3.9	Veg 5.7	-
No. of mothers opined	81	81	77	70	28

All the respondent mothers of either religious groups agree that there is a need to give either animal protein or vegetables to their children for the purpose of nutrition. Nearly 10% and 5% of the Hindus and the Muslim mothers respectively advocate that meat and fish should be given to their children. Of these, 9%, 16.67% 13.64% and 7.69% belong to the Hindu illiterate, Hindu primary, Hindu secondary and Muslim illiterates respectively. None of the Muslim mothers agree to administer only vegetable products to their children but 5.81% of the Hindu mothers agree to the same. More than 75% of mothers of each religious group, that is 75.58% of the Hindus and 89.47% of the Muslims prescribe balanced combination of both animal protein and vegetables for the growth of their children.

Gender bias

Except 1 Hindu mother of the primary level of education, who has a distinct preference for the male child, all other mothers agree to give balanced food to their sons and daughters without any discrimination. The lone Hindu mother of the primary level belong to the lowest level of education and desires to feed the male child with more nutritious products as the son will grow up to take care of the family in future.

Virtual Incidence of malnutrition in the non intervened slums

It has been earlier seen that a very few mothers have any knowledge on the causes and symptoms of malnutrition. This has been evidenced in the actual replies of mothers interviewed during the survey. The proportion of knowledge about malnutrition of children is very low, only 25% in all religion and literacy groups combined. Among the Muslims, the proportion is only about 16% and it is about 27% among the Hindu mothers. It is hence, proved that about 84% Of the Muslim and 74% of the Hindu mothers have no knowledge of this significant factor which affect the health of the children.

Incidence of malnutrition in the non intervened slums

Some of the features in children under the age of 5 years, which prove that such children are suffering from malnutrition, are as follows:

There would be retardation in the growth of the child, the child would suffer from recurrent illness, the children would have rickets, and the belly of the child would bulge. The children suffer from weight losses, loss of appetite and would be crying frequently. When the mothers of the non intervened slums were questioned, only 23 Hindu mothers and 3 Muslim mothers, that is, a total of 26 mothers could identify the above symptoms of malnutrition.

Out of 128 children, 68 were male and 60 were female. Among them, only 4 children were identified as malnourished by the mothers according to their knowledge manifestations of symptoms in their children.

Hence, the proportion of malnourishment, as stated by mothers is:

$$\frac{\text{No. of malnourished children below 5 years of age identified}}{\text{Total No. of children below 5 years of age}} \times 100$$

$$= \frac{4}{128} \times 100$$
$$= 3.125\%$$

Of these malnourished children, 1 male child belong to a illiterate mother belonging to the income group Rs 1001/ - Rs 1500/-. The other 2 belong to mothers educated up to the level of secondary standard belonging to the income group of Rs 2001/- and above. The 3rd child is a female belonging to parents of the lowest income group. All these children are of the third order of birth in their families.

An exorcist is treating the female child belonging to the Muslim family to cure the symptoms of malnutrition.

Findings on malnutrition from non intervened slums:

Summarising the results of the present study the findings on the malnutrition profile of the non intervened slums is quite interesting. The mothers have a very poor knowledge of the concept of malnutrition itself. Nearly 80% of the mothers have no knowledge at all, irrespective of religion and literacy levels. 6 Hindu mothers believe that malnutrition is caused by the influence of evil spirits and 1 mother thinks that it has resulted out of God's wrath. Those that do not believe in evil spirits and other cultural taboos also cannot furnish coherent and correct replies to the causes of malnutrition. This indicates that in the community, in general, there is very little scientific thinking on the concept of malnutrition. On the other hand, social and cultural influences are quite strong, along with faith in taboos and superstitions. The mothers of the non intervened area also have a very poor knowledge of preservation of nutrients prior to the actual cooking process. Only 24% of the mothers demonstrate any awareness towards the same. Dictation by mothers in law towards cooking processes, economic hardships and a sense of fatalism prevents the negating mothers from associating cooking with preservation of nutrition. Only 45.71% of the mothers have any knowledge about the inherent nutrients in foodstuff. Only 18% of the mothers have any knowledge of preservation of nutrients in food items even after specific cooking preparations. 90% of mothers are unaware of the necessity to preserve the starch after boiling rice, 66% of the mothers do not agree to slice vegetables in big pieces. 87% mothers rejected the idea of chopping vegetables after washing the same. 1 Hindu mother while apportioning nutritious food to her son exhibits minor gender preferences. Only 25% of the mothers have any knowledge about malnutrition of children below 5 years of age. According to the mothers' statements, percentage of undernourished children of the area is 3.125%. This is an understatement as because the mothers do not have a clear conception of malnutrition in general and malnutrition of their under 5 children in particular.

On actually conducting the growth monitoring exercise among the under 5 children, the following has transpired: 68 children, namely 37 males and 31 females suffer from Grade 1 malnutrition. Of these, 52 are from the Hindu and 16 from Muslim families respectively, 47 children suffer from grade II Malnutrition comprising 24 males and 23 females, 37 of these children are Hindus and 10 are Muslims. Shockingly, 4 children suffer from Grade III Malnutrition, comprising 1 male and 3 females. Of these, 3 are Hindus and 1 is a Muslim. Findings reveal that in this slum area, there is a lone Hindu girl suffering from Grade IV Malnutrition. Thus, the percentage of undernourished children in the non intervened slum area is as high as 31.32%. This is much higher than 3.125% as projected by the mothers of the children because the mothers are unaware of the symptoms of malnutrition.

DIARRHOEA

The concept of diarrhoea

Each year, more than 11 million children die from the effects of disease and inadequate malnutrition. In some countries more than 1 in 5 children die before they reach their fifth birthday, and many of them who do survive are unable to grow and develop to their full potential. 7 out of 10 childhood deaths in developing countries can be attributed to 5 main causes or often to a combination of them; of these, 2 primary causes are diarrhoea and malnutrition. About 2 million children die each year in developing countries from diarrhoeal diseases making it the second most serious killer of children below 5 years of age worldwide. Diarrhoea in most cases, however, may be prevented or treated. Correct management of diarrhoea could save lives of up to 90% of children who currently die from the effects of the disease. Some of the effective methods are prompt recognition and treatment of conditions that occur in association with diarrhoea and improved home management.

This chapter is based on the studies conducted in the non intervened slums on the behaviour patterns of the respondent mothers on diarrhoea. The study intends to establish the following:

- Knowledge of the mothers about incidence of diarrhoea,
- Knowledge of the mothers about the causes of diarrhoea,
- The opinion of the respondent mothers on continuing lactation during diarrhoea,
- Whether mothers opt to fast their children during diarrhoea,
- Knowledge of mothers on the remedial measures to be adopted during diarrhoea,
- The actual practice of withholding breast feeding during diarrhoea during the last three months preceding the survey,
- The actual incidence of diarrhoea,
- Whether mothers resort to social practices and cultural taboos such as exorcism to cure diarrhoea,
- Knowledge of mothers on how to control dehydration during diarrhoea,
- Influence of media in improving knowledge on the treatment of diarrhoea, and analyse the results arrived there from.

Knowledge of respondent mothers on diarrhoea

Diarrhoea is very rampant in the slum areas on account of the poor hygienic conditions that prevail in such slums. Unplanned shanties, congestion, lack of potable drinking water, open drains, lack of proper system of disposal of garbage as well as lack of sanitation facilities leading to open defecation by children are some of the important environmental factors that lead to the high incidence of diarrhoea in the slums. The most important factor causing diarrhoea is the quality of drinking water. It is important that mothers of young children understand this to ensure recognition and treatment of diarrhoea most of which is curable through home treatment. When questioned specifically, none of the respondent mothers have used the term diarrhoea or gastroenteritis. They have judged the malaise according to the number of times watery stool is passed. The study reveals that only 22.9% of mothers could identify the occurrence of diarrhoea. (See Table 49)

Table No 49

Proportion of respondents having any knowledge about diarrhoea

	Passing water stool	Passing water stool
Religion	2 or 3 times	3 times or more
Hindu	24.4	75.6
Muslim	15.8	84.2
Combined	22.9	77.1

The study has further found that 95% of the Hindus and 85% of the Muslim mothers related the incidence of diarrhoea to food. On the other hand, a very small percentage, namely, 9.5% could associate diarrhoea to its actual cause that is, drinking water. Between the two religious groups, however, more mothers of the Muslim community are able to relate drinking water as the cause of diarrhoea. About 18% of the respondents of both communities associate diarrhoea with indigestion due to seasonal variations. Analysing the influence of cultural taboos and social beliefs, 3.5% attribute the occurrence of diarrhoea to people's curse and God's wrath proving thereby that these cultural taboos do have an influence in the thinking of respondent mothers when they try to ascertain the causes of diarrhoea. Interestingly, however, none of the respondent mothers relate the cause of diarrhoea to the lack of personal hygiene.

Breast feeding during diarrhoea

It is known that diarrhoea is treated best by home treatment. The World Health Organization prescribes that infants suffering from diarrhoea must be breast fed at all times. Social practices, direction of mothers-in-laws, ignorance as well as the work pressure of domestic chores as well as jobs that slum women do outside their homes often stand in the way of mothers breast feeding infants suffering from diarrhoea. The responses received from the mothers of the non intervened slums are here as follows:

It appears that mothers of both religious groups, irrespective of their levels of literacy are highly aware of the need to continue the breast-feeding of their children during diarrhoea. This awareness appears to be more pronounced in the case of the Muslims as 95% of the Muslim mothers appear to be aware as compared to 85% of the Hindu mothers. Another way of interpreting the findings is that 72.22% of the Muslim Mothers are better placed as far as actual practice is concerned as only 67.12% of the Hindus mothers support the process. About 15% of the Hindu mothers and 5% of the Muslim mothers do not support continuing lactation during diarrhoea. These respondent mothers are mostly influenced by the social prejudice that lactation is harmful during diarrhoea not realising that the colostrum is a beneficial remedy. This ignorance indicates the influence of social beliefs in withholding breastfeeding during diarrhoea.

Fasting during diarrhoea

Social practices often dictate that infants suffering from diarrhoea should be kept on fast. This goes against all good health practices because the resultant dehydration caused by diarrhoea and accentuated by fasting will have fatal consequences for the infants.

Unlike the findings on breast-feeding, the proportion of mothers who do not wish to fast their children during diarrhoea is more among the Hindus than among the Muslims the proportions being 60.46% and 52.63% respectively. In this section the analysis concludes that the Hindu mothers, in general, are more aware than their Muslim counterparts of the necessity to feed their children during diarrhoea. Nearly 40% of the Hindu mothers support fasting whereas only 15% have negated the need of breast-feeding. The corresponding proportions among the Muslim community are 48% and 5% respectively. The findings of this section may be summarised to conclude that mothers of both religious groups are not significantly aware of the need to protect their children from dehydration during diarrhoea. This is the result of the influence of social beliefs as opposed to rational thinking.

Incidences of diarrhoea

It is expected that given the unhygienic conditions and the prevalence of social practices in the non-intervened slums, the incidence of diarrhoea may be quite high.

Among the Muslims, 48% has occurred on an average and 66% of diarrhoea has occurred to children in the higher income group. Among the Hindus, however, there is an average of nearly 27% occurrence in both income groups. Amongst the Hindus, the incidence of diarrhoea is consistent with the income status being higher in the lower income groups. The incidences are higher in the cases of mothers with 1 child rather than those with two or more children. This is true when considered separately for each religious group. Lack of health awareness combined with dirty environment and hazardous living conditions are perhaps responsible for such high incidence of diarrhoea among the children in these slums. This establishes that the role of social factors such as lack of civic consciousness and economic factors such as poverty leads to hazardous and unhygienic living conditions in creating situations leading to diarrhoeal incidences among the inhabitants' especially young children.

Impact of literacy in home treatment of diarrhoea

In this section, an attempt has been made to analyse the influence of literacy, if any, on the use of remedies, especially home based, during diarrhoea of the children. The proportion of mothers who have resorted to treatment with decanted water, rice and pulse mandi, green banana and normal diet evidence poor knowledge of diarrhoea control. Especially damaging are the opinion of 23.1% and 16.7% of illiterate and literate Muslims as well as 4.8% and 3.7% of illiterate and literate Hindus respectively who have offered to treat their children with normal diet during diarrhoea. This application of inappropriate diet during diarrhoea establishes conventional behaviour on part of the respondents as opposed to rational thinking (See Table 50). Hence the incidence of home treatment of diarrhoea is literacy neutral.

Table No 50

Effect of literacy in administering home made remedies during diarrhoea.

Prescription	Hindu			Muslim		
	Illiterate	Literate	Total	Illiterate	Literate	Total
Salt and sugar solutions	83.3	92.6	87.0	84.0	100.0	89.5
Decanted water	7.1	-	4.3	7.7	-	5.3
Rice and pulse mandi	11.9	3.7	8.7	7.7	-	5.3
Oral Rehydration Solution	33.3	44.4	37.7	15.4	-	10.5
Green banana	2.4	3.7	2.9	7.7	16.7	10.5
Normal diet	4.8	3.7	4.3	23.1	16.7	21.1

Impact of media in creating awareness

This section tries to assess the influence of various forms of communication, which have influenced the respondents to resort to varying forms of diarrhoea control. Out of 86 respondents, 80.23% mothers have responded while 19.77% have failed to relate influence of any medium of communication in influencing their responses to treatment of diarrhoea. Of the 69 mothers who have responded 48 mothers have offered multiple choices of communication. Out of respondents offering single choice, 2.08% have referred to the radio, 35.42% to the Television, and 10.42% to ICDS (Integrated Child Development Scheme) workers, 2.92% to neighbours, 27.08% to local doctors and 2% to the hygiene education received at schools.

Upon analysing literacy wise responses on their first choice, the radio has been preferred by 6 illiterate Hindu mothers of the highest income group as a part of their multiple choice. 1 single mother of the illiterate and 1 mother of the second income group have referred to the radio as their only choice of the media of influence. 19 mothers, comprising 12 illiterate, 1 primary, 5 secondary and 1 graduate mother prefer television. 17 mothers chose the radio as their single choice. 3 mothers have preferred the newspaper as their chosen medium of communication, 2 mothers belonging to the lowest income group and 1 graduate mother of the highest income group. The local doctors have advised 3 mothers 1 each of the 3 literacy groups on the treatment of diarrhoea. Coming to the second level of choice, the radio is chosen by 1 illiterate mother of the second income group, the television is chosen by 17 mothers, 9 illiterate and 8 of the secondary level. The local doctors have advised 13 mothers, 9 illiterate and 4 of the secondary level. Only 1 mother of the secondary standard have stated that she has learnt about diarrhoea from the hygiene studies at school.

In the Muslim community, 19 mothers have responded. Of this, 14(26.3%) have preferred single choice and 5(75.7%) have preferred multiple choice. The proportion of single choice is 35.7% for Television, 7.1% for ICDS, 42.9% for the information received from the neighbours and 14.3% have received advice from the local doctors. The first choice is television for 4 mothers and local doctor's advice for 2 illiterate mothers. Upon summarising the ladder of choice, the highest priority has been accorded to television, followed by the local physician, neighbours. Integrated Child Development Scheme workers are of the least influence in this area where health interventions are yet to be institutionalised.

Findings on diarrhoea from non intervened slums

Upon summarising the findings of this study, it is seen that there is no conception of diarrhoea among the mothers of the non intervened slums. Only 9.5% of the respondents relate diarrhoea to drinking water and none to the lack of general hygiene. 3.5% respondents relate diarrhoea to People's curse and God's wrath. 15% of the Hindu mothers and 5% of the Muslim mothers do not support breastfeeding during diarrhoea. 82% of the mothers of all religion have no knowledge on the benefit of administering colostrum to their newborn babies. 70% is influenced by the social practice to press out such milk for the first few days when in reality such milk is vital for immunity and good health of the infants. The incidence of diarrhoea in the non intervened slums has been estimated at 25.30%. The prevalence is higher in the case of lower income groups for Hindus and high-income groups among Muslims. Literacy wise, prevalence rate is high in the case of illiterate Muslims and literate Hindus. 2 illiterate Hindu mothers think that only worship will cure diarrhoea and 1 Muslim mother has resorted to exorcism. All mothers irrespective of income, religion and literacy have very poor knowledge of home treatment of diarrhoea. Whatever little knowledge is there on account of media and television proves to be the most popular source, followed by advice of local doctors and neighbours.

CHAPTER IV

HEALTH PRACTICES IN INTERVENED SLUMS

REPRODUCTIVE HEALTH

In the earlier chapter, the reproductive health practices in slums without health interventions had been studied. It was found that to a large extent the slum residents were guided by social norms and cultural taboos which had influenced their behaviour with respect to age of marriage, pregnancy, childbirth, institutional deliveries, deliveries conducted by male doctors, antenatal and postnatal care as well as contraception and family planning.

The present chapter looks at the reproductive health behaviour of the slum dwellers in four slums of the Kolkata Corporation area, which have been systematically receiving preventive health and family welfare interventions for some time. These analyses would like to compare the results of findings on similar characteristics in the non intervened slums. The present chapter would like to

- Establish to what extent the residents of the intervened slums are still influenced by social factors and cultural taboos in their reproductive health behaviour despite receiving health interventions through various programmes and projects in the area.
- Analyse to what extent the slum dwellers have changed their health care practices where health intervention programmes have been introduced in areas of reproductive health, immunisation, nutrition and diarrhoea.
- Compare the health care practices between the slums without health interventions and slums with interventions.

The study has chosen a sample of 443 households within the slums that have received interventions. These households comprise a total of 1515 men and 1448 women in the intervened areas,

Research findings in the intervened slums.

One of the purposes of this study is to enquire about the levels of literacy in the slums and gender differentials therein.

Eligible couples and their income, religion and literacy

As in the case of the study of non intervened slums, the educational standards of the wives in comparison with that of their husbands have been classified according to income and religion.

Between the Hindu and Muslim respondents who have been considered for the study, 10.52% of Hindus and 23.33% of Muslim are illiterate. 62.30% of the respondents are educated up to the secondary level and above comprising 68.11% Hindus and 46.66% Muslims. 17.02% of Hindus and 28.33% of Muslims are educated up to the primary levels. Looking at the distribution of illiterates among Hindu respondents of different income levels, the highest proportion of 12.41% illiterate Hindus are in the lowest income group. In Muslims the highest proportion of 29.7% illiterates is in the income group Rs. 1000/- to Rs. 1500/- (See Table 51).

Table No 51

Distribution of respondents classified according to monthly income, religion and literacy

Level of monthly income of the family	Religion	Level of literacy of the respondent mother				
		Illiterate	Can read and write	Primary	Secondary and above	Total
Up to Rs.1000/-	Hindu	18 (12.41)	9 (5.66)	31 (21.37)	87 (60.0)	145 (100)
	Muslim	9 (33.33)	2 (7.40)	6 (22.22)	10 (37.03)	27 (100)
Rs.1000 – 1500	Hindu	9 (12.0)	1 (1.33)	13 (17.33)	52 (69.33)	75 (100)
	Muslim	11 (29.7)	0 (0)	9 (24.32)	17 (95.99)	37 (100)
Rs.1501 – 2000	Hindu	1 (1.81)	2 (3.63)	6 (10.90)	46 (83.63)	55 (100)
	Muslim	7 (30.43)	0 (0)	8 (34.7)	8 (34.7)	23 (100)
Rs.2001 and above	Hindu	6 (12.5)	2 (4.16)	5 (10.4)	28 (58.3)	48 (100)
	Muslim	1 (3.03)	0 (0)	11 (33.33)	28 (84.84)	33 (100)
All Income levels	Hindu	34 (10.52)	14 (4.33)	55 (17.02)	220 (68.11)	323 (100)
	Muslim	28 (23.33)	2 (1.66)	34 (28.33)	56 (46.66)	120 (100)
Total		62 (13.99)	16 (3.61)	89 (20.09)	276 (62.30)	443 (100)

Figures in parenthesis indicates % of literacy levels.

Distribution of the level of education of the respondent wife in relation to the level of education of the husband

In contrast with the level of education of the Hindu wives, their husbands have a higher standard of education. As compared to 21.68% of illiterate Hindu wives, there are only 10.52% of illiterate Hindu husbands. Again, as compared to 44.27% of Hindu wives educated up to the secondary level, 52.32% are secondary educated Hindu males. The overall educational standards are better as compared to the non intervened slums where only 39.5% of the Hindu males and 25.58% of the Hindu females are educated up to the secondary level. Similarly, in the non intervened slums, only 1.16% of the Hindu wives and 10.46% of the Hindu husbands are educated up to the higher secondary level and above in the intervened slums, in contrast, 2.78% of Hindu wives and 17.36 % of the Hindu husbands are educated up to the higher secondary standard and above (See Table 52).

Among the Muslim population of the intervened area, 41.67% of the wives and 25.35 % of the husbands are illiterate. 22.50% of the Muslim wives and 45% of the Muslim husbands have studied up to the secondary level. Only 1.65% of the husbands have studied up to the higher secondary level and above, there are no Muslim wives in this category (See Table 52). These standards, however, compare favourably with the educational standards in the non intervened slums where 68.42% of the wives and 42.1% of husbands in the Muslim community are illiterate and only 26.31% of the wives and 42.1% of the husbands are educated up to the secondary level. (See Table 23)

Table No 52
Distribution of the level of education of the respondent wife as compared to her husband

Level of Education of the husband													
Level of monthly income of the family (Rs.)	Level of Education of the Wife	Illiterate		Can read and Write		Primary		Secondary		Higher secondary and above		All levels of education of wives	
		H	M	H	M	H	M	H	M	H	M	H	M
Up to Rs.1000	Illiterate	8	9	5	2	12	5	11	2	-	-	36 (11.14)	18 (15)
	Can read and write	1	-	2	-	2	-	3	1	-	-	8 (2.47)	1 (0.83)
	Primary (I-IV)	8	-	-	-	10	-	28	4	-	-	46 (14.24)	4 (3.3)
	Secondary (V-X)	1	-	1	-	7	1	40	3	4	-	53 (16.4)	4 (3.3)
	Higher secondary and above	-	-	1	-	-	-	-	-	1	-	2 (0.60)	0 (0)
Rs.1001 to Rs.1500	Illiterate	7	10	-	-	12	2	3	-	-	-	22 (6.81)	12 (10)
	Can read and write	-	-	-	-	1	-	2	-	1	-	4 (1.23)	0 (0)
	Primary (I-IV)	1	1	1	-	-	4	8	4	2	1	12 (3.71)	10 (8.33)
	Secondary (V-X)	1	-	-	-	-	3	5	11	28	1	34 (10.52)	15 (12.5)
	Higher secondary and above	-	-	-	-	-	0	1	-	2	-	3 (0.92)	0 (0)
Rs.1501 to Rs.2000	Illiterate	-	7	-	-	1	3	2	-	-	-	3 (3.09)	10 (8.33)
	Can read and write	-	-	1	-	1	-	-	-	-	-	2 (0.61)	0 (0)
	Primary (I-IV)	1	-	-	-	3	4	14	1	-	-	18 (5.57)	5 (4.16)
	Secondary (V-X)	-	-	1	-	1	1	24	7	4	-	30 (9.28)	8 (6.6)
	Higher secondary and above	-	-	-	-	-	-	-	-	2	-	2 (0.61)	0 (0)
Rs.2001 and above	Illiterate	5	-	-	-	3	8	1	2	-	-	9 (2.78)	10 (8.33)
	Can read and write	1	0	1	-	-	-	2	-	-	-	4 (1.23)	0 (0)
	Primary (I-IV)	-	1	-	-	-	2	7	5	-	-	7 (2.16)	8 (6.6)
	Secondary (V-X)	-	-	1	-	2	1	17	14	6	-	26 (8.04)	15 (12.5)
	Higher secondary and above	-	-	-	-	-	-	1	-	1	-	2 (.61)	0 (0)
All income Group	Illiterate	20	26	5	2	28	18	17	4	0	0	70 (21.68)	50 (41.60)
	Can read and write	2	0	4	0	4	0	7	1	1	0	18 (5.57)	1 (.8)
	Primary (I-IV)	10	2	1	0	13	10	57	14	2	1	83 (25.69)	27 (22.5)
	Secondary (V-X)	2	0	3	0	10	6	86	35	42	1	143 (44.27)	42 (35)
	Higher secondary and above	0	0	1	0	0	0	2	0	6	0	9 (2.78)	0 (0)
	All levels of Education of Husband (total-I)	34 (10.52) %	28 (25.35) %	14 (4.33) %	2 (1.66) %	55 (17.02) %	34 (28.33) %	169 (52.32) %	54 (45) %	51 (17.36) %	2 (1.65) %	323 (100) %	120 (100) %

NOTE:- H-HINDU, M-MUSLIM

The following observations emerge with regard to education from an analysis of Table 51 and Table 52.

- Overall educational levels in the intervened slums are better than the non intervened slums.
- Among the Hindus in the intervened slums there is a better level of education among both males and females with higher proportions having been educated up to secondary and higher secondary levels.
- In the intervened slums though the level of education among the Muslims is marginally higher it is lower as compared to that of the Hindus. The education of the women is given a low priority in the Muslim Community
- The educational standards in the non intervened slums and the priority given to women's education are much poorer than those in the intervened slums.

As in Chapter III, where a study was conducted in the non intervened slums, the following factors have been studied

1. Age at marriage
2. Beliefs associated with pregnancy
3. Influence of social and cultural norms and concepts
4. Size of family
5. Age at first child birth
6. Spacing between two successive births
7. Antenatal care seeking behaviour
8. Managing high-risk pregnancy
9. Safe deliveries
10. Acceptance of male doctors
11. Postnatal Care
12. Place of confinements
13. Beliefs and faith in family planning
14. Factors influencing adoption of family planning methods.
15. Factors influencing women to take recourse to permanent family planning methods.

Age of Marriage

As has been assessed from the study of the non intervened slums, age of marriage is an important determining factor in the area of reproductive Health, especially in deciding the total fertility rate and the health conditions for both the mothers and the children.

The present study enquires into the following:

- Whether social and cultural norms govern the actual age of marriage even in slums which have received health interventions.
- The difference between age of marriage as preferred by individuals vis-à-vis the actual age of marriage.
- Whether individual preference for higher age of marriage are dominated by dictates of the community.

The significant observations that arise out of the present study are that in 34 households the respondent mothers have been married at the age below 15 years and in 59 households the mothers have been married at the age of 15. Hence, 93 households represent marriage of women at 15 or below representing a significant proportion of 21%. In 250 of the households the mothers have been married at the age below 18 implying that more than 50% of the mothers have been married below 18 years of age. It can be seen that the illiterate, read and write and primary group contribute significantly to the lower age at marriage. (See Table 53)

The Mean age of marriage of combined religion is 17.15 years for overall income groups, being 17.93 years for Hindus and 16.37 years for Muslims. This is marginally less than the prescribed age of marriage for girls in the country and also marginally less than the Mean age of marriage as derived from the non intervened slums. The present study has found that one contributory factor is that the average age of marriage among the Muslim women in the intervened slums is concentrated mostly around 15 to 17 years and the resultant average is considerably influenced. This establishes that the Muslim community especially originating from Uttar Pradesh has to a large extent retained their tradition of early marriage of girls and also, as seen from the previous section, education of girls in this community is also at a discount in these slums.

Table No. 53

Distribution of respondent mothers according to the ages of marriage, classified by income, religion and literacy

Level of monthly income of the family (Rs.)	Level of literacy	Age at marriage of the respondent mother(Combined)														Total	
		<15 yrs	15	16	17	18	19	20	21	22	23	24	25	26	27		>27
Up to Rs.1000	Illiterate	7	7	4	11	4	1	3	1	-	-	-	-	-	-	-	38
	Can read and write	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
	Primary (I-IV)	2	4	5	2	5	2	2	1	-	-	-	-	-	-	-	23
	Secondary (V-X)	-	1	3	2	7	3	4	1	1	-	-	-	-	-	1	23
	Higher secondary and above	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
	Total	9	12	12	15	17	6	10	3	1	-	-	-	-	-	1	86
Rs.1001 to Rs.1500	Illiterate	6	9	12	7	3	3	4	-	-	-	-	-	-	-	2	46
	Can read and write	1	2	4	2	-	-	1	-	-	-	-	1	-	-	-	11
	Primary (I-IV)	3	6	9	3	5	3	4	1	1	-	-	1	-	-	-	36
	Secondary (V-X)	4	6	10	5	16	5	8	1	4	-	-	-	-	-	-	59
	Higher secondary and above	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
	Total	14	23	35	17	24	12	17	2	5	-	-	2	-	-	2	153
Rs.1501 to Rs.2000	Illiterate	3	3	7	3	4	-	1	-	1	-	-	-	-	-	-	22
	Can read and write	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	3
	Primary (I-IV)	2	6	8	7	7	2	-	-	-	-	-	1	-	-	-	33
	Secondary (V-X)	3	3	9	5	13	3	9	3	2	-	-	-	-	-	1	51
	Higher secondary and above	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
	Total	8	13	24	15	25	5	12	3	5	-	-	1	-	-	1	112
Rs.2001 and above	Illiterate	1	3	4	3	1	1	-	-	-	-	-	-	-	-	-	13
	Can read and write	-	1	1	-	2	-	-	-	-	-	-	-	-	-	-	4
	Primary (I-IV)	1	4	6	4	2	1	-	-	-	-	-	-	-	-	-	18
	Secondary (V-X)	1	4	14	7	7	6	7	1	3	-	1	1	-	-	1	53
	Higher secondary and above	-	-	-	1	1	-	1	-	1	-	-	-	-	-	-	4
	Total	3	12	25	15	13	8	8	1	4	-	1	1	-	-	1	92
All Income Groups	Illiterate	17	22	27	24	12	5	8	1	1	-	-	-	-	1	1	119
	Can read and write	1	4	5	-	6	-	2	-	-	-	-	1	-	-	-	19
	Primary (I-IV)	8	19	29	16	19	8	6	2	1	-	-	2	-	-	-	110
	Secondary (V-X)	8	14	36	19	43	17	28	6	10	-	1	1	-	-	3	186
	Higher secondary and above	-	-	-	1	1	1	1	-	3	-	-	-	-	-	-	7
	Total	34	59	97	60	81	31	47	9	15	-	1	4	-	1	4	443

In the case of the non intervened slums, it was seen that individual opinion of mothers on the suitable age of marriage was overridden by the opinion of the community. A similar exercise has been conducted within the intervened slums to ascertain the response in the same. The predominant opinion among Hindus is that marriage of girls should be solemnised when they are within the age range of 19 to 22 years. Upon calculation of the Mean of the suitable age of marriage, it is found that the individual Hindu mother placed the suitable age of marriage at 19.81 years. In Muslim community, the predominant choice is for marriage of girls within the age range of 15 to 18 years.

The individual Muslim mother has placed the suitable age of marriage at 18.47 years. This conservative view is borne out by actual age of marriage, which is only 16.37 years for Muslim girls in the intervened slums. (See Tables 54 & 55)

Table No 54

Distribution of respondent mothers according to their opinion on the suitable age of marriage

Distribution of respondent giving her opinion to which age the marriage of her daughter should be solemnized according to her level of literacy and religion																		
Level of literacy of Respondent E.C.	Below 15 years			15 - 18 years			19 – 22 yrs			23 - 26 yrs			27 years and above			Total		
	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T
Illiterate	1	1	2	17	20	37	52	29	81	-	-	-	-	-	-	70	50	120
Can read and write	-	-	-	4	0	4	13	1	14	1	-	1	-	-	-	18	1	19
Primary (I-IV)	-	1	1	26	16	42	56	10	66	1	-	1	-	-	-	83	27	110
Secondary (V-X)	-	1	1	32	34	66	111	7	118	-	-	-	-	-	-	143	42	185
Higher secondary and above	-	-	-	3	0	3	5	0	5	1	-	1	-	-	-	9	0	9
Total	1	3	4	82	70	152	237	47	284	3	-	3	-	-	-	323	120	443

H:- Hindu, M:- Muslim, T:- Total

Hence, the following findings may be summarised:

- Individual Hindus have placed the suitable age of marriage at 19.82 years and the Hindu community at 19.30 years.
- The actual age of marriage in Hindu community is 17.93 years.
- Individual Muslims have placed the suitable age of marriage at 18.47 years and the Muslim community at 17.53 years.
- The actual age of marriage in Muslim community is 16.37 years.

The results of the present study as against our hypotheses are as follows:

- Social and cultural factors have continued to influence the Muslim community while preferring the age of marriage of girls in their community.
- There is significant difference between ages preferred for marriage and actual age of marriage in the Hindu community.
- In the Muslim community the age preferred by the community and the actual age of marriage are quite close to each other.
- In the Hindu community, community dictates overrule individual preferences. In the Muslim community, community dictates are predominant and all pervasive. Individual decisions are influenced by the dictates of the community.

Distribution of the mothers opining on the suitable age of marriage as compared with the dictum of the community

The Mean ages of marriage as considered being suitable by respondents of the Hindu community lie within 18.66 years and 20.17 years considering both the intervened and the non intervened areas. For the Muslim community the range lies within 16.44 years to 22.33 years, which surprisingly for the non intervened areas has been placed at quite a high level by the members of this community. In the case of the literate Muslims, the actual Mean age is found to be nearly 4 years less than that stated by respondents as well as by the community in the context of desired age of marriage. This reiterates that the residents hailing from Uttar Pradesh the slums of Garden Reach advocate predominantly a low age of marriage for girls. In the cases of both intervened and non intervened slums, for both illiterate and literate groups, the individuals have placed the age of marriage at a high level than that placed by the community. This shows that in urban slums under survey the dictum on social issues such as the age of marriage overrides the individual's opinion and girls are made to marry at a relatively early age, often earlier than that prescribed by the national law. (See Table 55)

Table No. 55

Table contrasting the individual opinions with that of the community on the suitable age of marriage for girls in the non intervened and intervened slums

	Literacy/ religion	Hindu (age in years)		Muslim (age in years)	
		Opinion of respondent	Community's dictum	Opinion of respondent	Community's dictum
Illiterate	Intervened area	19.91	19.40	16.47	16.44
	Non intervened area	19.89	19.40	19.77	19.15
Literate	Intervened area	19.80	19.28	17.91	16.89
	Non intervened area	20.17	18.66	22.33	21.00
All literacy levels combined	Intervened area	19.82	19.30	18.47	17.53
	Non intervened area	19.23	18.98	20.58	19.74

The significant finding that can be drawn from the above analysis is that both in the non intervened and intervened areas there is a significant difference between the individuals' opinion and that of the community's dictum in the case of Hindu respondents especially in the educated group. The degree to which this holds good in the Muslim community is much less. Hence, religion needs to be taken as a significant factor of segmentation while designing the interventions.

Beliefs associated with pregnancy

In the tradition ridden non intervened slums, it was seen that a number of superstitions, beliefs and taboos guide the individual's mindset on conception. The following hypothesis have been considered:

- Rational beliefs of self-planning of pregnancy would dominate because of knowledge imparted through intervention
- Education and literacy combined with knowledge imparted through the intervention would reinforce the rational beliefs about pregnancy

40% of the Muslim mothers of the intervened area as against 15.47% of the Hindu mothers were firm in their belief that only God's blessings allowed mothers to conceive to beget a child. The corresponding proportion of such believers in the non intervened areas came to about 90% in the community. 50.46% of the overall Hindu mothers of the intervened area explained that self-planning motivated the couples to plan the size of their family. Among Muslims, however, only 7.5% supported this view in the intervened area. The corresponding proportions in the non intervened area were 8.1% of the Hindus and none from the Muslim community respectively. 1.8% of the Hindus and 5.8% of the Muslim mothers of the intervened slums reported that the pregnancies as unplanned, as compared to 5.26% of mothers in the non intervened area. In the intervened area, 32.1 % of the Hindu mothers and 46.5% of the Muslim mothers stated that the desire of the husbands and in laws prompted them towards childbearing. In the non intervened area, however, 3.4% of the Hindus and 5.2% of the Muslims had planned childbirth according to the desires of the husband and other members of the family.

Upon studying the impact of the literacy on the beliefs associated with childbirth, it is observed that higher proportions of Muslim mothers who were either illiterate or were educated up to the primary and secondary levels relied more on God's blessings than on rational reasoning such as self planning or the desire of the husband and other family members. Hindu mothers of all levels of literacy relied more on the rationale of self-planning. In the non intervened areas, only 10.5% of the Hindu illiterate mothers and 1.16% of the Hindu mothers, educated up to the secondary levels, agreed with this view. Unplanned pregnancies were reported by less than 1% of the illiterate mothers, and mothers who were able to read and write only and 0.92% of the Hindu mothers educated up to the secondary level in the intervened areas opined similarly. The corresponding proportions in the mothers of the Muslim community in the intervened area are 0.83% among the illiterates, 0.22% among the primary educated and 4.16% of those educated up to the secondary level. Compared to this, 6.6% of Hindu mothers and 5.26% from the Muslim community in the non intervened area stated that their pregnancies are unplanned. (See Table 56)

Table No. 56

Distribution of respondents classified according to their belief/ knowledge on the causes of pregnancy

Level of literacy of the respondents	Classifications of beliefs on causes of pregnancy											
	God's blessings			Self planning			Without planning			Desire of the husband or of other in-laws		
	H	M	T	H	M	T	H	M	T	H	M	T
Illiterate	15 (4.64)	15 (12.5)	30 (6.77)	32 9.9	4 3.33	36 8.12	1 (.3)	1 (.83)	2 (.45)	22 (6.81)	30	52 (11.73)
Read and Write	2 (.45)	0 (0)	2 (4.96)	9 (2.78)	1 (.83)	10 (2.25)	2 (.61)	0 (0)	2 (.45)	5 (1.59)	0 (0)	5 (1.12)
Primary (I-IV)	11 (3.4)	12 (10)	23 (5.19)	32 (9.9)	1 (.83)	33 (7.44)	0 (0)	1 (.83)	1 (.22)	40 (12.38)	13 (10.8)	53 (11.9)
Secondary (V-X)	22 (6.8)	21 (17.5)	43 (9.7)	81 (25.07)	3 (2.5)	84 (18.9)	3 (.92)	5 (4.16)	8 (1.8)	37 (11.4)	13 (10.8)	50 (11.2)
Higher secondary and above	0	0	0	9 (2.7)	0	9	0	0	0	0	0	0
Total	50 (15.47%)	48 (40%)	98 (22.12%)	163 (50.46%)	9 (7.5%)	172 (38.8%)	6 (1.8%)	7 (5.8%)	13 (2.9%)	104 (32.1%)	56 (46.5%)	160 (36.1%)

The following can be concluded from the study in the intervened area:

- A high proportion of mothers rely on the rationale of self-planning. 50.5% of the mothers of the Hindu religion think rationally on the issues of conception and pregnancy.
- A significant deviation is observed in the case of the Muslim Community wherein 40% of respondents combined for all literacy levels ascribed childbirth to God's blessings. This can be attributed to the ingrained cultural beliefs of the migrant Muslims of Uttar Pradesh believing in early marriage and adhering to traditional beliefs.
- Among the Muslim community even in the intervened slums only 7.5% relied on self-planning while the rest of the mothers adhered to traditions and practices.

The hypothesis in the intervened slums is that rational beliefs of self-planning of pregnancy would dominate. Education and literacy combined with knowledge imparted through the interventions would reinforce the rational beliefs about pregnancy. This hypothesis holds good to a large extent for the Hindu community but only to a very limited extent for the Muslim community. This again reinforces the factor that interventions need to reckon religion as a significant variable.

This contrast becomes all the more glaring when compared with 90% of respondents of all literacy levels and of both religions in the non intervened area who have expressed strong beliefs in traditional norms and practices. Hence, it may be concluded that the interventions have had a significant impact on the Hindus rather than on the Muslims in this study. Education has had a positive impact on Hindu mothers while planning for children in

intervened slums. 25.07% of mothers educated up to the secondary level believed in self planning as against 1.16% of secondary educated mothers in non intervened slums. At all levels of literacy more Hindu mothers advocated self planning towards childbirth as against Muslim mothers both in the intervened and in the non intervened slums. This validates the hypothesis that self-planning of pregnancies would dominate because of knowledge imparted through interventions and programmes though with varying degrees on each community. This also establishes the veracity of the hypothesis that literacy and knowledge introduce rational beliefs on pregnancy but has differential effects on each community.

Influence of social and cultural norms on conception

Associated closely with the traditions guiding individual beliefs towards conceiving children are various social and cultural practices that are often practiced in many societies to beget children. In the non intervened slums, 94.5% Hindus and 78.93% of the Muslim mothers adhere to such practices to beget children. The following hypotheses have been examined in the intervened slums.

- The beliefs regarding conception would be guided by rational thinking
- The beliefs in social and cultural practices leading to faith based practices to beget children would be minimal

In the non intervened area, 89.53% of the Hindu mothers and 78.94 % of the Muslim mothers supported observing of such rituals. Surprisingly, in the intervened area also, 52.94% of the Hindu mothers and ~~72.5%~~^{69.16%} of the Muslim mothers have agreed to support such traditions and rituals to beget children. Interestingly, while illiterate mothers formed the largest proportion in the non intervened slums, mothers educated up to secondary level were in the majority in the intervened slums.

In the non intervened area, 1 illiterate mother and 1 mother educated up to the primary level believed in the practice of exorcism to beget a child. In the intervened slums no mother believed in exorcism to beget children. At the same time, however, in the intervened area, 3.09 % of the Hindu mothers and 2.5 % of the Muslim mothers believed in pacifying planets such as the Saturn in order to beget children. 44.58% of the Hindus and 12.5% of the Muslim mothers prayed to God to beget a child. 5.57% of the Hindu mothers and 58.33% of the Muslim mothers believed in the supernatural powers to beget children.(See Table 57).

Table No 57

Distribution of respondents offering her opinion as to whether she agrees on the need to follow social dicta and cultural norms to beget a child (in %)

Level of Literacy of Respondent (%)	Whether respondent agrees to follow cultural norms / social dictum or not				If yes, nature of norms to be followed									
	Yes		No		To pacify influence of evil planet		Pray to God		Exorcism		Mysticism/ (supernatural) / superstition		Opting for doctor's advice along with socio cultural taboos	
	H	M	H	M	H	M	H	M	H	M	H	M	H	M
Illiterate	34 (10.52)	25 (20.83)	36 (11.14)	25 (7.73)	5 (1.54)	0 (0)	26 (8.04)	7 (5.83)	-	-	4 (1.23)	20 (6.19)	35 (10.83)	27 (22.5)
Can read and Write	11 (3.40)	0 (0)	7 (2.16)	1 (0.83)	0 (0)	0 (0)	9 (2.78)	0 (0)	-	-	3 (.92)	0 (0)	12 (3.71)	0 (0)
Primary (I and IV)	56 (17.33)	22 (18.33)	27 (8.35)	5 (4.16)	3 (.92)	0 (0)	47 (14.55)	0 (0)	-	-	6 (1.85)	14 (4.33)	56 (17.33)	19 (15.8)
Secondary (V to IV)	67 (20.74)	40 (33.33)	76 (23.52)	2 (1.66)	2 (.61)	0 (0)	62 (19.19)	3 (2.5)	-	-	5 (1.54)	36 (11.14)	69 (21.36)	39 (32.5)
Higher secondary and above	3 (.92)	0 (0)	6 (1.86)	0 (0)	0 (0)	3 (2.5)	0 (0)	0 (0)	-	-	0 (0)	0 (0)	3 (.92)	0 (0)
Total	171	87	152	33	10	3	144	15	-	-	18	70	175	85
Percentage	52.9	72.5	49.05	29.5	3.09	2.5	44.58	12.5	-	-	5.57	58.33	54.17	70.83

H – HINDU, M – MUSLIM

The following are the conclusions that can be drawn:

- Certain households even in the intervened slums still remain under the influence of their social, cultural and religious traditions in their beliefs that rituals were required to be followed to beget children
- Policy makers need to take into cognizance such beliefs and practices while advocating interventions in the area of reproductive health.

This to a certain degree, rejects that the hypotheses

- The beliefs regarding conception would be guided by rational thinking and
- The beliefs in social and cultural practices leading to faith-based practices to beget children would be minimal.

Size of the family

As seen in the case of the non intervened slums, average size of the family depends on the age of marriage of the women and also the attitudes families have towards planning for children. It was found that early age of marriage for the girls as well as traditional influences on the concept of childbearing had led to an average number of 3.2 for Hindu households to 3.0 children in the Muslim Households in the non intervened slums.

The following hypotheses have been examined in the intervened slums:

- The number of children in a family would directly correlate with literacy and education
- Age at marriage would considerably influence the number of children

Literacy wise, in the intervened area, the average number of children born to illiterate mothers range from 1.00 to 2.7 in the case of Hindu households. The range in Muslim households is from 1.84 to 2.7 children born to illiterate mothers. Comparing this to the non intervened slums, the average number of children ranged between 3.3 to 3.7 in Hindu illiterate families and from 2.0 to 3.4 in Muslim illiterate families. Clearly interventions had an effect on limiting the family size in the non intervened slums given that both groups compared are from illiterate backgrounds and mothers have been married at a very early age. Among the literates, in the intervened slums, the average number of children ranges from 1.64 to 2.08 in Hindu households and 1.6 to 2.1 in Muslim households. In non intervened slums, the average ranged from 1.0 to 2.75 in Hindus and 1.5 to 3.75 in Muslims. The upper end of the ranges was higher in the illiterate groups in both categories of slums. Hence in both slum areas literacy has had an effect in determining size of the family.

In the case of the income effect, the highest average number of children in the intervened slums is in the highest income group among Hindus. This is similar to the findings in the non intervened slums where the highest average number of children belonged to the highest income group. In the Muslim community in the intervened slums, however, the highest average number of children is found in the lowest income group. Hence children are clearly seen as potential to higher family income in both areas. (See Table 58)

Table No 58

Number of living children per eligible couple classified by income and religion in intervened slums

Average number of living children per eligible couple						
Income group	Hindu			Muslim		
	Illiterate	Literate	Total	Illiterate	Literate	Total
Up to Rs.1000	2.1	1.64	1.78	2.7	2.1	2.6
Rs.1001-1500	1.68	2.08	1.97	1.84	1.7	1.78
Rs.1501-2000	1.0	1.79	1.59	1.84	1.6	1.6
Rs.2501 and above	2.7	1.86	2	2.2	1.64	1.7
All income groups	1.62	1.84	1.83	2.14	1.76	1.92

On comparing the findings of this study with the hypotheses, it is seen as follows:-

The ages of marriage of women in both the intervened and the non intervened areas are broadly compatible. Hence, what has led to the smaller family size among the slum households in the intervened areas is the positive attitude that the families have developed towards family planning.

The above observations clearly establish the hypothesis that in the intervened slums the number of children directly correlates with literacy and education. The hypothesis that the age at marriage would considerably influence the number of children in a family does not hold good in the intervened slums. This implies a favourable effect of interventions on the intervened slum.

Childbirth

In the non intervened slums, mothers interviewed had opined on what they considered to be the suitable age for giving birth to the first child. The hypothesis that has been examined is the influence of social, cultural and religious beliefs on the age at birth of the first child would be considerably low. The Mean ages computed for literacy and religion differentials oscillate within the age group 19 years to 22 years and more specifically between 20.84 years to 21.8 years. The Standard Deviation ranges between 0.79 and 2.17. In the non intervened areas, mothers placed 19 years as the suitable age for bearing the first child. In the intervened area, the desired age ranges between 20.84 years to 21.80 years, which is clearly an improvement over the standards set by the mothers of the non intervened slums. In the non intervened area, 39.5% of the Hindu mothers had supported 19 years to be a reasonable age for childbearing on health grounds; in the intervened slums, 47% of the Hindu mothers supported 20-21 years as the suitable age of childbearing on health grounds. 34.9% of Hindu mothers of the non intervened slums had cited social and religious factors for determining the suitable age of first childbirth. In the intervened slums, only 3.09% had associated the age of childbearing with social issues and 0.3% with customs and taboos.

Similarly, among the Muslim mothers, 47.4% mothers had supported the age of child bearing on social and religious grounds in the non intervened slums. In the intervened slums, none of the mothers from this community supported the age of childbearing with social taboos and customs. In the non intervened area, illiterate mothers formed the predominant opinion group. In the intervened area, literate mothers who had studied up to the secondary level were more strongly represented.

The following emerge from the above analysis:

- Mothers of the intervened area support a higher age of childbearing than their counterparts in the non intervened slums.
- Further, most mothers in the intervened area advanced health of the mothers and children to be the deciding factor rather than social and cultural traditions as cited by the mothers in the non intervened slums.

This clearly establishes the hypothesis that the interventions have an impact in reducing the influence of social, religious and cultural factors on age at first childbirth.

Spacing between two successive births

While in the context of childbearing, mothers were asked to opine on what they felt should be the appropriate interval between two successive births. In the non intervened areas, awareness on birth spacing was rather limited and domestic convenience was cited as the main factor in desiring that the second child may be born when the first child has at least become a toddler. The study summarises the position in the intervened slums. In the Muslim community, the Mean differential interval ranges from 3.96 years to 4.16 years and the Standard Deviation ranges from 0.72 to 0.94. In the case of Hindu mothers the Mean differential ranges from 4.05 to 4.18. (See Table 59)

Table No 59

Mean and Standard Deviation between two successive childbirths (in years except for Standard Deviation)

Religion	Statistic	Illiterate	Primary	Secondary	Combined literacy
Hindu	Mean	4.186	4.12	4.05	4.1
	Standard Deviation	0.993	0.874	0.841	0.892
Muslim	Mean	3.96	4.16	4.11	4.06
	Standard Deviation	0.729	0.942	0.722	0.782
Combined religion	Mean	4.91	4.13	4.06	4.09
	Standard Deviation	0.84	1.043	0.816	0.864

Among the illiterate Hindu mothers, 21.12 % supported the spacing between children on grounds of good health for the mother, 23.07% based their reasoning on domestic advantages, and 10% advocated economic grounds and 64.28% wanted to give adequate care to both children. Among the Muslim mothers, 64.25% quoted domestic advantages to be the predominant factor in supporting spacing between births. Among the literate Hindus, 33.43% quoted domestic advantages and 30.33% wanted to pay more attention to both children. Among the Muslims, 27.47% quoted domestic advantages and 52.17% wanted to take adequate care of both children. Thus literacy has played an important role in influencing mothers' responses towards spacing of their children. More mothers in the intervened area wished to take better care of both their children and had a rational ground for advocating spacing between childbirths.

A T test of significance was conducted to ascertain association, if any, between the Mean ages of marriage and the Mean ages at pregnancy between the two religions. High degree of significance is established at 5 percent level with 441 degrees of freedom for the association between ages of marriage in the intervened slums. A similar high degree of association is established at 5 percent level with 103 degrees of freedom in the non intervened slum and it is found that there is close association between the ages of pregnancy between the two religions.

The following can be concluded from the analysis:

- There is a significant association between the Mean ages of marriage and Mean ages of pregnancy in both slum areas.
- More mothers in the intervened slums could cite better rationale based on health ground for mothers and children for spacing between two children
- Mothers have satisfactory awareness and play an enhanced role in determining family size and spacing of children in intervened slums.

Antenatal Care

In the non intervened slums, 90% of the Hindu mothers and 68% of the Muslim mothers had preferred to avail of antenatal care. While the effect of income was not established, the educated mothers supported the need in higher numbers. In the intervened slums, a similar exercise has been conducted. Awareness of the importance of regular antenatal care of the pregnant mothers has been found almost absolute between both the communities----the proportion being 99.38 % and 97.5 % of the Hindu and the Muslim mothers respectively who have preferred to take recourse to antenatal check ups. Among the 321 out of 323 Hindu mothers who have so preferred, 47.05 % are aware of the health need of pregnant mothers. 85.1% wishes to ascertain status of blood pressure with foetal position. 53.4 % desired to have access to immunisation, pathological examination and nutrition packets. Among the 117 Muslims out of 120 respondents, who preferred antenatal check ups, 95 % were aware of health requirements of a pregnant woman, 1.6% of the need to check blood pressure and foetal position, and 17.5% wished to avail of pathological tests, immunisation and nutrition packets. (See Table 60)

Table No 60

Distribution of respondent mothers supporting the need for antenatal care

Level of Monthly Income of Family	Level of Literacy	Whether ANC is to be sought				Causes for seeking Ante Natal Care									
		Yes		No		Awareness of health		BP with foetal position (antenatal care)		Nutrition packet. Immunisation, Stool, Urine, Blood, exams.		Traditional belief		Fatalism	
		H	M	H	M	H	M	H	M	H	M	H	M	H	M
Upto Rs 1000	Illiterate	18	20	-	-	14	20	8	18	3	13	-	-	-	-
	Can read and write	1	0	-	-	1	0	1	0	1	0	-	-	-	-
	Primary (I-IV)	18	4	-	-	13	4	9	4	6	1	-	-	-	-
	Secondary(V-X)	21	2	-	-	6	2	16	1	4	0	-	-	-	-
	Higher secondary and above	2	0	-	-	0	0	1	0	0	0	-	-	-	-
	Total	60	26	-	-	34	26	35	23	14	14	-	-	-	-
Rs. 1001-1500	Illiterate	32	12	-	-	16	12	20	5	17	8	-	-	-	-
	Can read and write	10	1	1	1	3	1	6	1	7	1	1	0	-	-
	Primary (I-IV)	27	8	-	-	10	8	16	3	12	0	1	2	-	-
	Secondary(V-X)	47	10	0	1	19	10	32	1	23	0	-	-	1	0
	Higher secondary and above	1	0	-	-	1	0	0	0	0	0	-	-	-	-
	Total	117	63	1	2	49	31	74	10	59	9	2	0	1	0
Rs.1501-2000	Illiterate	15	12	1	1	9	11	5	5	2	5	-	-	-	-
	Can read and write	3	0	-	-	2	0	1	0	2	0	-	-	1	1
	Primary (I-IV)	38	5	1	0	22	5	10	0	11	1	-	-	-	-
	Secondary(V-X)	43	8	-	-	31	8	10	0	10	0	-	-	-	-
	Higher secondary and above	3	0	-	-	3	0	0	0	0	0	-	-	-	-
	Total	102	25	2	1	67	24	26	5	25	6	-	-	1	1
Rs. 2001 and above	Illiterate	9	5	-	-	7	5	2	3	2	4	-	-	-	-
	Can read and write	4	0	-	-	2	0	4	0	1	0	-	-	-	-
	Primary (I-IV)	10	7	-	-	6	7	4	0	3	1	-	-	-	-
	Secondary(V-X)	32	20	-	-	24	20	7	0	4	0	-	-	-	-
	Higher secondary and above	4	0	-	-	3	0	1	0	1	0	-	-	-	-
	Total	59	32	0	0	42	32	18	3	11	5	-	-	-	-
All income groups	Illiterate	70	57	0	1	36	48	65	1	24	30	-	-	-	-
	Can read and write	18	2	1	1	15	1	9	1	11	0	1	2	1	1
	Primary (I-IV)	84	24	1	0	48	34	114	0	31	3	1	0	1	0
	Secondary(V-X)	140	34	0	1	46	81	87	0	41	0	-	-	-	-
	Higher secondary and above	9	0	-	-	7	0	0	0	1	0	-	-	-	-
	Total	321	117	2	3	152	114	275	2	108	33	2	2	2	1
	Percentage	99.38	97.5	0.68	2.5	47.05	95.0	85.1	1.6	53.4	17.5	0.61	1.66	0.61	0.83

ANC – Antenatal Care, BP – Blood Pressure

In comparison, in the non intervened area, only 32.05 % and 7.69 % Hindu mothers wished to ascertain blood pressure, weight gain, foetal status, and receipt of nutrients, vitamins, folipher tablets, immunisation and other services respectively. Among Muslim mother of the non intervened area, 53.84% and 23.07% respectively desired to check their blood pressure, weight gain, foetal status, and avail of pathological tests, immunisation and nutrition packets respectively.

In the intervened area, 2 Hindu and 3 Muslim mothers did not prefer to avail of antenatal care. 2 Hindu mothers were traditionally influenced to refrain from taking recourse to any antenatal care. The same 2 Hindu mothers were totally fatalistic who believed that whatever happens is by the grace of God only. Similarly, 2 Muslim mothers held back on traditional grounds and 1 on grounds of fatalism. In the non intervened area, 8 Hindu mothers negated the need to avail of antenatal care on grounds of traditional belief and taboos, while 3 mothers had no knowledge at all of such care. Of the 6 Muslim mothers who had similarly negated, 1 rested on fatalism, and the other 5 had no knowledge of the facilities and benefits of antenatal care.

Clearly, income levels had no impact on the preference for antenatal check ups both in the intervened and in the non intervened areas. Members of both communities of the intervened area had excellent awareness irrespective of literacy and were also aware of specific antenatal issues, which demanded attention.

It is of interest, however, that despite interventions, even in the intervened areas, a certain proportion of mothers, namely, 1.2 % of the Hindus and 2.5 % of the Muslims fell back on traditional beliefs/taboo and fatalism. This implies that while interacting with the urban poor mothers in the area of ante natal care, the policy makers would have to carefully work their way through taboos and beliefs among the urban poor.

The following conclusions emerge:

- Awareness among the mothers in the intervened slums regarding requirements of antenatal check ups and the issues involved are higher than in the non intervened slums
- Income levels had no impact on preference for antenatal check ups
- The awareness levels are higher irrespective of the literacy levels
- The preference of antenatal check ups has been established as neutral to income and literacy effects in the non intervened slums also.
- There are certain pockets of beliefs regarding tradition/taboo/fatalism that needs to be intensively worked upon

Management of high risk pregnancies

One of the factors leading to maternal deaths is eclampsia which leads to epileptic outbursts from would be mothers. In tradition-ridden societies, these outbursts are often associated with superstitions and often exorcists are called in to remove the so-called evil influence at a great peril to mothers and children. In the non intervened slums very few mothers were aware of this complication causing high-risk pregnancies; further a few mothers also believed in exorcism as a remedy. Studying the above configuration of data in the intervened slums for each stratum of individual literacy, it appears that 72.85 % of the illiterate, 59.03 % of the primary and 59.44 % of the secondary educated Hindu mothers affirmed such knowledge. On the whole, 61.91% of Hindu mothers of all literacy levels appear to have knowledge of eclampsia during pregnancy. This is in sharp contrast with the non intervened area, wherein 75.6 % of Hindu mothers have no idea of this particular hazardous obstetrical complication, which may occur during child bearing. Similarly, in the intervened areas, 76.52% of Muslim mothers have knowledge of eclampsia of pregnancy as compared to a proportion of 73.7% of mothers in the non intervened area that had no knowledge of the same. 70% of the illiterates, 81.48% of the primary and 78.57% of the secondary level respondents of the Muslim community had knowledge of eclampsia of pregnancy. In both the religious groups, illiterate mothers tended to be well aware of eclampsia proving that in the intervened areas, sufficient awareness on this issue had developed among the urban poor. 5 Hindu mothers and 2 Muslim mothers, forming 1.54% and 1.66% of the sample population respectively, admitted their faith on the influence of evil spirits. In the non intervened area, no Muslim mother believed in such superstitions.

This demonstrates that even in the intervened area, there is the persistence of social and cultural taboos, although much less than that of the non intervened area. 4 of the 5 Hindu mothers and 2 of the Muslim mothers who relied on the evil spirits in the intervened area agreed that an exorcist should be brought in to drive away such evil spirits. Hence, universal awareness of the cause and treatment of eclampsia during pregnancy is necessary even in intervened areas to combat the influence of exorcists which is sure to have unfavourable effect on would be mothers.

Safe deliveries

This section attempts to look at the responses of the mothers in the intervened slums to assess whether the mothers support home deliveries with the assistance of trained *dais*. Only 5.88% of Hindus and 6.66% of Muslims supported the service of *dais* during delivery. In other words, 94.11% ^{of Hindus} and 93.33% of Muslims desired to avail of institutional facilities to ensure safe delivery. This is in contrast to the responses analysed in the context of the non intervened area, wherein 32.55% of Hindus and 26.31% of Muslims supported the services of *dais* during delivery. A religion wise comparison of the proportion of affirming respondents is given below. (See Table 61)

Table No 61

Respondents supporting delivery by a *dai* (local birth attendant)

Literacy	No of respondents justifying delivery by a <i>dai</i>			
	Yes		No	
	Hindu	Muslim	Hindu	Muslim
Illiterate	10 (14.28)	5 (10.00)	24 (70.58)	23 (82.14)
Read and write	0 (0)	0 (0)	14 (100)	2 (100)
Primary	4 (4.81)	2 (7.4)	51 (92.92)	32 (94.11)
Secondary	5 (3.43)	1 (2.38)	164 (97.04)	53 (98.14)
Higher secondary	0 (0)	0 (0)	51 (100)	2 (100)
Total	19(5.88)	8(6.66)	303(93.80)	112(93.33)

Figures in parenthesis indicate % of response.

The proportion is almost similar in both religions. A very nominal 5.88% of Hindus and 6.66% of Muslims respectively support home deliveries through *dais*. This is in sharp contrast to the analysis derived from the responses in the non intervened area wherein 32.55% of Hindu mothers and 26.31% of the Muslim respondents supported the idea in the intervened areas. Even among the various literate groups, home delivery is supported only by 3.43% secondary and 14.28% illiterate Hindus. The corresponding proportions among the Muslim community are 2.38% among the secondary educated and 10% among the illiterates. Of those mothers supporting home delivery, 14 out of 19 Hindu and 2 out of 8 Muslim mothers insisted that the *dai* should be a trained one.

Hence, in the intervened area, there is general awareness of the need to have safe delivery in a health facility such as a hospital. Even while supporting home delivery by a *dai*, the respondents mostly prefer to avail of the services of a trained *dai*. In the non intervened area, in comparison, 29.43% of both communities justified home delivery by a *dai*, but only 66.7% of this group supported that the *dai* should be a trained one. In the non intervened area, the preference is for home deliveries and not always by a trained *dai*. In the intervened area, the preference is clearly towards institutional deliveries, whether in a hospital or in other health facilities. The necessity for intervention is clearly established for bringing about the behavioural changes in the attitude to increase institutional deliveries.

Acceptability of male doctors

Our hypotheses in this section are

- Mothers are more agreeable to avail of services by male doctors.
- Rational thinking influenced by interventions has overridden social permissiveness.

93.80% of Hindus had objected to home deliveries by a *dai* (See Table 61). 94.73% of Hindus agreed to hospital delivery by a male doctor. (See Table 62)

Among the Muslims, 93.33 % had refused to avail of home delivery by a *dai* (Table 61). 83.33% of this group, however, had agreed to hospital delivery by a male doctor. (See Table 62)

Table No 62

Opinion of respondent mothers regarding delivery by a male doctor with reasons

Level of Literacy of the respondent mothers	Number of respondent mothers						Reasons for negative opinion								
	Yes			No			No Response			Personal shyness			Social hindrance		
	H	M	T	H	M	T	H	M	T	H	M	T	H	M	T
Illiterate	63	45	108	6	4	10	1	1	2	5	4	9	1	0	1
Can read and write	45	1	46	2	0	2	-	-	-	2	0	2	0	0	0
Primary (I-IV)	110	20	130	3	4	7	-	-	-	3	0	3	4	0	4
Secondary (V-X)	85	34	119	2	7	9	-	-	-	2	0	2	7	0	7
Higher secondary and above	3	0	3	1	0	1	-	-	-	1	0	1	1	0	1
Total	306	100	406	14	15	29	1	1	2	13	4	17	12	-	13
(%)	94.73	83.33	91.64	4.33	12.5	6.54	0.30	0.83	0.45	4.02	3.33	3.83	3.71	-	2.93

H – Hindu, M – Muslim, T-Total

In the non intervened area, 67.44% of the Hindu respondents objected to home delivery by a *dai* and 82.65% had agreed to hospital delivery by a male doctor. 73.68% of the Muslim respondents objected to home delivery by a *dai* and 63.15% supported hospital delivery.

Hence, it may be concluded that both in the intervened and non intervened areas, Hindus are more comfortable with the pregnant mothers being treated by male doctors than the Muslim community. This observation holds good for the latter community in all literacy and income groups. Analysing the reasons of the reluctance to be treated by a male doctor, 13 Hindu mothers withheld on account of personal shyness and 12 on account of social hindrances. 4 Muslim mothers withheld on grounds of personal shyness. Except the illiterate group, Hindus have responded more favourably towards hospital delivery as well as treatment by a male doctor. In the Muslim group there is more positive response on behalf of illiterate Muslims in an interesting contrast to the non intervened area namely 45/120(37.5%) of Muslims supported hospital delivery as against 4/10 (21.0%) in the non intervened area. It may be concluded that, in the intervened area greater proportion of respondents prefer both hospital delivery and services of male doctors. This confirms that interventions have created awareness and demand for hospital delivery. This also confirms our hypotheses that

- Mothers in intervened slums are more agreeable to service by male doctors
- Rational thinking has overcome social permissiveness
- The mothers of the Hindu community are more agreeable to hospital delivery and accepting services of male doctors as compared to those of the Muslim community.

Post Natal Care

This section analyses the responses of the sample population that is proportion of individual response to total in the intervened area of the necessity of availing of postnatal services. It is seen that 95% of illiterate mothers comprising 95.71% illiterate Hindu and 94% illiterate Muslim mothers have appreciated the need of postnatal care. This agreement is literacy neutral and an overall 97.06% mothers including 98.76% Hindu and 96.38% Muslim mothers are very positive towards availing of postnatal care. (See Table 63)

Table No 63

Proportion of responses towards post natal facilities by religion and literacy

Category	Religion		
	Hindu	Muslim	Combined
	Proportion affirming	Proportion affirming	Proportion affirming
Illiterate	95.71	94.00	95.00
Read and Write	88.88	100.0	89.47
Primary	97.59	96.29	97.27
Secondary	99.30	95.23	98.37
Higher secondary and above	100.0	0	100.0
Total	98.76	96.38	97.06

At all levels of literacy, mothers have a high level of understanding of the need to avail of various types of postnatal services towards mother's care and infant's care such as child development, immunisation, growth monitoring and administration of nutritious food. Of the illiterate mothers, 83.58% wish to seek postnatal advice on health grounds, 44 % want advice on infant's food, 50.74 % sought advice on immunisation and 49.22% on nutrition. Among illiterate Muslim mothers, the corresponding percentages are 59.57, 0, 25.53, and 8.9 percent respectively. The corresponding proportions among primary level Hindu mothers are 77.7, 22.2, 32.09, 17.30 and those for Muslims are 69.5, 0, 13.04 and 17.39 respectively. Corresponding proportions for secondary level Hindu mothers are 71.03, 14.48, 40.68 and 36.55 respectively. Those for Muslim mothers are 75, 0, 7.5, and 17.5 percent respectively. 1 illiterate Hindu mother refused to avail of such postnatal advice. Similarly, 1 illiterate Hindu mother and three illiterate Muslim mothers had no knowledge of such postnatal services and benefits.

The following conclusions emerge:

- As compared to the non intervened area, higher proportion of both communities had expressed desire to avail of such postnatal services in the intervened area.
- In the intervened area, the respondents are more aware of and desirous of availing of postnatal services for better health of mother and child. The fact that there are still some elements of reluctance and ignorance among the mothers of the intervened area indicates that there is still greater need to interact with the mothers and families of the urban poor to convince the household of the need to avail of post natal care.

Reproductive health Services actually availed of by mothers of intervened slums

The present analysis examines the antenatal medical consultations actually availed of by the respondent mothers in the intervened slums during their previous pregnancies. The hypothesis that is examined here is that the health seeking behaviour for accessing antenatal care would be considerably high as compared to the intervened slums.

It is seen that 96.90% of the Hindu mothers, that is nearly 10 % more than their counterparts in the non intervened area have actually availed of antenatal services prior to delivery. For the Muslim community, the proportion is 95.83%. This compares very favourably with 78.9% Muslim mothers who had actually availed of antenatal facilities in the non intervened area. In the intervened area, almost the same proportion of Hindus and Muslims availed of antenatal care. In the non intervened area, however, 8.3 % more Hindus had availed of such services. In the intervened area, almost all the literacy groups had favourable responses ranging from 92.85% to 100 %. (See Table 64)

Table No 64

Proportions of mothers actually availing of antenatal services during the last pregnancy of the mother

Literacy	Hindu	Muslim	Combined
Illiterate	92.85	98.00	95.00
Read and Write	94.44	100.0	94.73
Primary	96.38	88.88	94.54
Secondary	99.30	97.61	98.91
Higher secondary and above	100.0	-	100.0
Total	96.90	95.83	96.61

In the non intervened area, the illiterate groups dominated the responses. Of the Hindu mothers of the intervened area who had availed of the antenatal medical care 51 went to hospitals, 3 went to private doctors, 1 went to a nursing home, 10 went to various municipal clinics. 5 Hindu mothers who did not avail of antenatal care did not advance any reasons for

the same. In the non intervened area, Hindu mothers not availing of antenatal care had either not ascribed any reason or had preferred not to go to a hospital due to apathetic attitude of the hospital staff. In the non intervened areas 45 Muslim mothers visited hospitals, 1 went to a private doctor, 1 went to a nursing home, and 2 to municipal clinics. 1 Muslim mother refrained from using any services. Similarly, Muslim mothers of the non intervened area had shied away from the difficult atmosphere in hospitals or had pleaded economic stringencies to pay for visits or transport.

It may be concluded that apart from creating awareness, it is necessary to build a user friendly atmosphere in institutions such as hospitals to encourage the urban poor to avail of such care and services at a reasonable cost.

Coverage by Tetanus Toxoid:

One of the important components of antenatal care is the administration of Tetanus Toxoid immunisation to the pregnant mothers. 98.76 % of the Hindu mothers and 99.16 % of the respondent Muslim mothers were so immunised. 99.16 % of all mothers received the first dose of Tetanus Toxoid immunisation. Of these, 82.61% received the second dose and 13.38% received the booster dose. Religion wise, the finding is almost uniform. 4 Hindu mothers and 1 Muslim mother had not received any Tetanus Toxoid immunisation. While the Muslim mother stated that she did not have an escort to travel to the clinic, the Hindu mothers did not offer any explanation. In the non intervened area, though a high number of mothers had received the first doze of immunisation, very few completed the immunisation process thereby diluting the quality of antenatal care. In the intervened area, however, the follow up especially at the level of acceptance of second doze on Tetanus immunisation, has been quite satisfactory indicating that the quality of antenatal care has been good. Hence, it can be concluded that the health seeking behaviour for Reproductive Health services is higher in the intervened slums as indicated by a higher proportion of people receiving the second course of Tetanus Toxoid thus confirming the hypothesis.

Places of delivery

In the non intervened area, 79.06% of the Hindu mothers had been admitted to the hospitals for 67.40% of the total births. For Muslim mothers, the corresponding proportions are 63.15% and 56.14% respectively. It is observed that 93.49% of Hindu mothers were admitted to hospitals for delivery of 89.66 % of the total births. The corresponding proportions for Muslim mothers are 88.33% and 80.56% respectively. It transpires, therefore, that, mothers of both religions of the intervened areas are increasingly taking recourse to hospitals for the birth of their children. Another feature that has been observed is that an equal proportion of confinements at hospitals occurred to the mothers of both religions, that is, 92.09% of the total mothers favoured the hospitals for giving birth to 86.38% of the total births. Each mother had to have nearly two confinements on an average in the hospital to give birth to a child. On the other hand, though the average of 3.94 of confinements at home is higher than average confinements at hospitals, the percentage of home deliveries is only 13.61% of the total deliveries. The significant differences of proportional confinements in hospitals and at home by each mother by religion are possibly being influenced by variables of the order of births and frequency of confinements

particularly at home, though the number of mothers and their deliveries in the hospital are much higher than those at home. (See Table 65)

Table No 65
Proportion of deliveries according to places of confinement

Place of delivery	Hindu			Muslim			Total		
	Number of Mothers	No. of deliveries	Proportion of confinement	Number of mothers	No. of deliveries	Proportion of confinement	Number of mothers	No. of deliveries	Proportion of confinement
Hospital	302 (93.49)	564 (89.66)	1.86	106 (88.33)	286 (80.56)	2.69	408 (92.09)	850 (86.38)	2.08
Home	21 (6.50)	65 (20.12)	2.95	14 (11.66)	69 (19.43)	4.92	35 (7.90)	134 (13.61)	3.94
Total	323 (100.0)	629 (100.0)	1.94	120 (100.0)	355 (100.0)	2.95	443 (100.0)	984 (100.0)	2.22

This is tested statistically by Chi-square to ascertain any association between hospital and home confinements of the mothers of two religions and conclusion is that there seems to be no association between the two categories of places of confinements and the religion of the mothers.

Factors leading to choice of place for delivery

60.59% of the Hindu mothers and 42.45% of Muslim mothers respectively had gone to hospitals on their accord. Thus, the most important factor, which had influenced hospitalisation, is the own accord of the respondent mothers. This indicates significant awareness among the mothers who have decided on their own to take recourse to institutional deliveries for delivery of their children. This also underscores another significant development in the intervened area, namely, that the women have come to occupy a decision making position for themselves in their families.

The next determining factor is the opinion of the family members, especially that of the husband and the in laws accounting for 16.55% of Hindu mothers and 25.47% of Muslim mothers to go to a hospital for delivery. This proves to how necessary it is to educate the family members of the prospective mothers to ensure hospitalisation for safe delivery especially among the Muslim community. (See Table 66)

Table No 66**Factors leading to hospital confinements**

Factors	Hindu (%)	Muslim (%)
Own accord	60.59	42.45
Advice of husband, in-laws, etc.	16.55	25.47
Husband's advice	9.60	18.86
Joint advice of husband, family neighbours/health workers	11.58	6.60
Total	100.0	100.0

Factor leading to home deliveries

The following factors, on the other hand, have prompted the mothers to deliver their children at home. The major determining factor here is sudden labour pain. This is true of both communities. Economic factors such as lack of money and family apathy or negative attitude of mothers in law, though not significant in a quantitative sense, are nevertheless, important social issues, which have stood in the way of institutional deliveries despite the introduction of health and family welfare facilities by the policy makers. An interesting observation made here is that negative attitude of mothers in laws have only been reported in the case of Hindus and not in the case of Muslim community. (See Table 67)

Table No 67**Factors leading to home confinements**

Factors	Hindus (%)	Muslims (%)
Apathy	4.47	8.33
Dominating or negative attitude of mothers in law	4.47	0
Sudden labour pain	79.43	83.33
Lack of money and escort	10.44	8.33
Total	100.0	100.0

The following conclusions can be drawn regarding choice of the place of delivery in the intervened slums.

- Women in the intervened slums have been able to themselves decide regarding the place of delivery
- Social and other associated factors play a limited role in determining the place of delivery in the intervened slums.

Family Planning Practices

In the non intervened slums, eligible couples showed little faith on the acceptance of family planning methods. The present analysis is based on responses from mothers on the attitudes of the eligible couples on family planning methods and contraception in the intervened slums. The hypothesis that has been tested here is that social factors do not influence the adoption of family planning behaviour. Chi-Square tests were conducted for both communities to ascertain the influence of literacy on family planning. Both results proved insignificant thereby establishing that literacy has had no effect in reliance or otherwise of respondents on family planning methods. These results are similar to the findings in the case of the non intervened slums also where literacy was not established as a significant factor of consequence in determining the attitudes of the eligible couples towards family planning.

In the non intervened slums, 75.58% of the Hindu families and 68.42% of the Muslim families showed total indifference towards family planning and contraception. In the intervened area, 96.90% of the Hindu respondents and 95.83% of Muslim respondents affirmed their faith in family planning. This confirms the hypotheses that social factors have not influenced family planning behaviour in the intervened slums. The present study has shown that 38% of illiterate Hindu mothers accepted permanent methods of family planning because they had no faith in the temporary methods. 36% had no desire to have more children and were willing to take recourse to permanent methods of family planning. 14% adopted family planning to space the births of their children. Only 2% associated family planning with the choice of having a child. Hence, it may be concluded that illiterate Hindu mothers have resorted to family planning, especially to the permanent methods more as a compulsion to avoid births of more children rather than using family planning to guide their choice of determining family size.

In the ^{Hindu} ~~Muslim~~ community among the literate Hindu mothers, 40% of the mothers had no reliance on temporary methods, 30% wished to avoid further childbirths, 30% wished to space the births of their children, 22% wished to use it a method to determine family size.

It is interesting to observe that the educated mothers used family planning methods as much as a choice and for spacing as for avoidance of child births. This is in contrast with the behaviour of the illiterate mothers who used family planning almost on compulsion.

In the case of the Muslims, only 10% of secondary level mothers used family planning as a method of choice. Others failed to advance reasons, perhaps due to personal shyness. Illiterate Muslim mothers, however, were more forthcoming. Majority of them, unlike their Hindu counterparts, did not rely on temporary methods. 18% wished to avoid further childbirths. 12% wished to space the births of their children, 14% used family planning as an instrument of their choice. The Muslim illiterates, however, unlike their Hindu counterparts, used family planning both as instruments of choice as well as avoiding further births.

The above analysis clearly establishes the hypothesis that in the intervened slums the social factors do not have a significant influence on family planning acceptance. However, it needs to be noted that women are adopting it more as a limiting method than as a spacing method.

In the non intervened area, however, influence of in laws, apathy towards the concept of family planning, faith in God's blessings, and economic compulsions held back 75.58% of the Hindus and 68.42% of the Muslim mothers and their spouses from adopting family planning methods.

The analysis of this section, hence, leads to the following conclusions:

1. 97% of the Hindu mothers and 96% of the Muslim mothers believe in family planning. This belief is literacy neutral that is mothers of all literacy uniformly share this belief.
2. There was no predominant social and cultural influence in not believing in family planning.

The results derived from the intervened area as compared with the non intervened area contrasts sharply in the non intervened area, where about 75.58% and 68.42% of Hindus and Muslims did not believe in family planning respectively. In the intervened areas, 97% and 96% of the Hindus and Muslims believed in such programmes. This proves that the effect of interventions have surely prompted the respondent population to undergo a behavioural change so as to believe in the scientific methods of family planning. There were no social or cultural influences in this area.

Choice of contraceptives

The hypothesis that has been tested is that social and cultural practices would have lesser influence in adoption of contraceptive practices in the intervened slums. Further, another hypothesis that is tested here emerges is that women are predominant acceptors of permanent methods of family planning practices.

This section has looked at the contraceptive behaviour of the respondent population in the intervened area and has tried to ascertain the influence of literacy, if any, on the choice of contraceptives. A Chi-square test has been conducted and it has been found that the choice of different family planning methods by the Hindus and Muslims has no relationship with the educational levels of the respondent. Hence, it is observed that there is no relationship between literacy levels and the contraceptive behaviour of the respondent population of the intervened area. One factor, which has led to the acceptance of family planning methods in the intervened areas, is primarily acceptance of the small family norm by the eligible couples. This factor itself has accounted for 96.62% of the families in accepting modern methods of family planning to restrict the size of the family. This clearly establishes the first part of the hypothesis that the social and cultural factors have lesser influence in an intervened slum. (See Table 68)

Table No 68**Factors influencing eligible couples to use family planning methods (in %)**

Literacy	Social pressure	Reliance on methods	Health economics	Small family norm
Illiterate	3.99	35.69	9.85	98.60
Read and write	.63	5.63	1.55	95.52
Primary	3.64	32.56	8.99	93.80
Secondary and Higher secondary and above	6.72	60.11	16.59	98.56
Combined	3.79	33.49	9.24	96.62

Proportion of wives as acceptors of family planning methods

In most societies there is a feeling that it is the women who need to adopt permanent method of contraception such as Tubectomy. It is further felt that husbands should under no circumstance be made to accept permanent methods such as Vasectomy as the health and the working prowess of the men as principal earners in the family may be affected thereby. In the intervened areas, 70% of the illiterate Hindu mothers and 66.7% of the illiterate Muslim mothers agreed that only wives should accept permanent methods. The corresponding proportions of mothers educated up to the secondary level and assenting to the same are 26.7% and 30.5% among the Hindus and Muslims respectively.

An analysis has been made of the percentage distribution of the respondent mothers by religion and their levels of literacy on the basis of the opinion of the wives who would be adopting permanent methods of family planning. It is seen that the largest acceptors of permanent methods are the mothers educated up to the secondary level in both religious communities. This reflects the attitude of the more educated mothers among the urban poor. They clearly seem to have decided that they wish to have a small family and do not want more children. (See Table 69)

Table No 69**Proportion of wives agreeable to adopt permanent methods of family planning**

Literary	Hindu	Muslim	Combined
Illiterate	22.22	43.36	27.80
Read and write	5.71	2.65	4.90
Primary	25.71	19.46	24.06
Secondary	43.49	34.51	41.12
Higher secondary and above	0	0	2.10
Combined	97.13	99.98	99.98

Reasons influencing wives to take recourse to permanent methods

Among husbands, the majority of 32.38% adopted permanent methods to have a small family. Similarly for wives, 40% adopted permanent methods to limit the size of the family. 36.20% of the wives, however, were concerned about the earning power of their husbands and hence volunteered to undergo sterilisation themselves. In the non intervened area, 67.7% of the wives were concerned with the earning power of their husbands. Only 6.5% wished to adhere to the small family norm. The misconception of the adverse effects of male sterilisations is deeply rooted among the beliefs of the respondents of the non intervened area. In the intervened area also, this fear is present, although to a lesser degree. This proves the hypothesis that in the intervened slums the wives are to a lesser extent the only acceptors of family planning methods. However, the fear of wage earning capacity of males is still predominant even in the intervened slums. Hence, any attempt at introducing or popularising male sterilisations will have to take care of eliminating the misconceptions in the target areas.

Actual contraception practices

In the non- intervened areas, it was found that only 22.5% of the eligible couples were availing of family planning practices even after the birth of the third child; of this, 24.6% were from the Hindus and only 10.6% was from the Muslim community.

The hypothesis is to test whether social and cultural factors influence eligible couples to accept family planning up to the birth of the third child.

The contraceptive users among Hindus have improved from 79.51% to 87.67 % between the births of the first and the third child. Among the Muslim community, the proportion has improved from 66.66% to 75.64%. It is also of interest that 34 Hindu and 9 Muslim mothers have resorted to ligation after the birth of the third child and of these, 1 Hindu mother has undergone ligation after the birth of the first child itself. In comparison, it was seen in the non intervened area that 14.3%, 14% and 22.5% of the mothers of both communities combined, resorted to acceptance of contraception after the birth of the first, second and third child respectively. In the intervened area, the proportions are 76.06%, 79.93% and 81.45% respectively. This indicates a clear edge over the non intervened areas indicating thereby that eligible couples of intervened areas have consciously adopted family planning practices to limit their family size.

- The deep-rooted traditional beliefs do not have much influence in the intervened slums.
- Son preference prevails to a much lesser degree
- Social and cultural influences play a much lesser role in determining acceptance of family planning in intervened slums.

This confirms our hypothesis.

Findings on reproductive health:

The present study of the characteristics of reproductive health of the mothers of the two sets of slums reveals the following:

The levels of education of the husbands in general are superior as compared to that of the wives in both the sets of slums. The overall standards of education of the slums with interventions are superior as compared to that of the non intervened slums. In the non intervened slums, the proportion of illiterate males is 44.2% and that of females is 66.28% among the Hindus as compared to a proportion of 10.53% illiterate males and 21.67% illiterate females Hindus in the intervened slums. Similarly, among the Muslims in the non intervened slums, 68.4% of the females and 42% of the males are illiterate. In the intervened slums, 41.67% females and 23.33% males form the illiterate group.

The suitable Mean age at marriage as opined by the respondent mothers and as desired by the community in the intervened slums lies within the range of 18.66 years to 20.17 years for the Hindus and between 16.47 years to 22.33 years for the Muslims. In the case of non intervened slums, the individual opinion of mothers on the suitable age of marriage was overridden by the community. In the intervened slums also, there was a significant difference in the ages preferred for marriage and the actual age of marriage in the Hindu community. In the Muslim community, however, the community closely guides the individual opinion. While conducting a statistical T-test between the Mean age at marriage and the age at first pregnancies, the association is found to be highly significant between both religions. In the intervened slums, about 90% of mothers of both communities believe in God's blessings in order to be able to conceive a child. In the intervened slums, the corresponding proportions are 15.47% of the Hindus and 40% of the Muslims. While 50.5% of the Hindus and 7.5% of the Muslims have stated that their pregnancies resulted out of self-planning, in the non intervened slums, 8.1% of the Hindus and none of the Muslims have subscribed to such a view. Further, in the non-intervened slums, 32.22% Hindus and 46.7% of the Muslims have stated that the desire of their in-laws is an important social factor influencing the birth of their children. Hence, in the intervened slums, 50.5% of the mothers of the Hindus are more prone to rational and scientific thinking on the issues of conception and pregnancy. This difference becomes all the more palpable when compared with 90% of the respondents of all literacy levels and of both religious groups in the non intervened slums who have expressed faith and belief in traditional social dictates as against rational thinking. The corresponding proportion among the Muslims, however, even in the intervened slum attributing to self-planning is only 7.5%.

In the non intervened slums, nearly 90% of the Hindus and 79% of the Muslims have reported their faith in social and religious dicta to get a child. In the intervened slums, the

proportions are 52.63% of the Hindus and 69.16% of the Muslims respectively. In another interesting contrast, 11% more Hindus of the non intervened slums believe in such dicta as compared to their Muslim counterparts. In the intervened slums, 17% more of the Muslims believe in the dicta as compared to the Hindus. Hence, despite health interventions and creation of awareness, majority of the urban slum dwellers of both the intervened and the non intervened slums believe in the social, religious and cultural practices to beget a child. In the non intervened slums, the average number of living children, born to illiterate Hindu mothers of different income levels ranges from 3.3 to 3.7 for the Hindus. In the intervened slums, the average number of living children ranges from 1.0 to 2.7 for the same community. For Muslims, the average ranges between 2.0 to 3.4 and between 1.84 and 2.7 in the non intervened and intervened slums respectively. Hence, family planning interventions have had a favourable impact in reducing and stabilizing the family size between both religious communities in intervened slums.

In the non intervened slums, there is 35.1% greater preference for the male child among illiterates and 27.3% more preference for the male child among the secondary educated. In the intervened slums, the predominant choice is for 1 child of each sex.

The opinion of the likely Mean age as to when the mother should have the first child has been computed for the intervened slums and it oscillates between 20.84 years and 21.8 years. This is at a higher level than 19 years as opined by the mothers, in general of both religious groups, of the non intervened slums. While advancing various reasons for justifying the age for childbirth, mothers of the intervened slums mostly advocate physiological and health grounds (47% Hindus and 78.33% Muslims) as against their counterparts of the non intervened slums who have mostly advanced social, religious grounds and domestic convenience.

In the intervened slums, mothers of all religious groups have prescribed a reasonable interval of 3 to 4 years between 2 consecutive childbirths. They have justified this concept of spacing on grounds of health, social and economic reasons as well as domestic advantages and the desire to take appropriate care of each child.

The statistical T-tests prove strong association between the Mean ages at marriage between both religious groups but insignificant association between age at first pregnancy between them.

Among the eligible couples 99.38% of the Hindu mother and 97.5% of the Muslim mothers have preferred to take recourse to antenatal care in the intervened slums. Of this proportion, 47.35% have wanted to ascertain the needs of pregnant mothers, 85.66% have wished to ascertain the status of blood pressure with the foetal position. About 33% have wished to have access to immunisation, pathological examinations and nutrition packets. Among the Muslims, the proportion of mothers is 95%, 1.7% and 28.20% respectively. The

corresponding proportions for Hindu and Muslim mothers in the non intervened slums are 32.05%, 7.69% and 53.8% and 23.1% respectively. In the non intervened slums, 8 Hindu mothers believe in traditional beliefs and taboos and hence have rejected the scope of antenatal care. 2 Hindu mothers are totally fatalistic. 1 Muslim mother shares this faith in fatalism also. 5 Muslim mothers believe in traditional beliefs. Surprisingly, even in the intervened slums, 2 Hindu and 1 Muslim mother fell back on fatalism. 2 mothers, each from either religious group have wished to adhere to the traditional concepts. In the intervened slums, 94.11% of the Hindu and 93.33% of the Muslims mothers have desired to avail of institutional facilities to ensure safe delivery. This is in contrast to 32.6% of the Hindu and 26.3% of the Muslim mothers of the non intervened slums. Hence, while in the non intervened slums, there is significant dependence on home deliveries, in the intervened slums, the eligible couples prefer institutional deliveries, showing better awareness and greater access to health infrastructure.

In the intervened slums, a greater proportion of respondents prefers hospital delivery and agrees to services of male doctors. While 94.73% of the Hindu mothers agree to the services of male doctors, among the Muslim respondent mothers, only 83.33% of those agreeing to hospital delivery have assented to the services of male doctors. This shows greater permissiveness especially in the latter society. In the non intervened slums, while 67.4% of Hindu mothers have agreed to hospital delivery, 82.6% have agreed to the services of male doctors. 73.7% of the Muslims mothers have agreed to hospital delivery but only 63.2% have agreed to the services of male doctors.

In the intervened slums, respondent mothers are more aware of and more desirous of availing of post-natal services for better health of mother and child. There are, however, nevertheless some elements of reluctance as well as ignorance with the sample population. 97% of the Hindu mothers of the intervened slums, 10% more than their counterparts in the non intervened area and 96% of the Muslim mothers, 17% more than their counterparts in the non intervened areas have actually availed of antenatal services. While similar proportions of the Hindu and Muslim mothers have availed of antenatal care in the intervened slums, 8.3% more of the Hindu mothers have availed of such services. Mothers shying away from visiting hospitals for ante natal and postnatal care facilities have stated that they are thwarted by the apathetic attitude of the hospital staff, lack of transport as well as want of escorts to the hospitals.

In the intervened slums, 93.49% of the Hindu mothers and 88.33% of the Muslim mothers have visited the hospitals to give birth to 89.66% and 80.56% of their children. In the non intervened slums, 79.1% of the Hindu mothers and 63.2% of the Muslim mothers have taken admission in the hospitals to deliver their children. Those visiting hospitals have an average of 2.08 confinements; those giving birth at homes have an average of 3.94

confinements, proving thereby that institutional deliveries encourage the eligible couples to have smaller families. Chi-square tests statistically prove that there is no association between the places of confinement on the basis of the religion of the communities. Coming to the rationale underlying home deliveries, such deliveries have been prompted by apathy, dominating attitude of the mothers-in-law (for Hindu respondents only), sudden labour pain as well as lack of escorts and money to attend hospitals. Hospital deliveries, on the other hand, have been prompted by the decisions of the eligible couples themselves, advice of husband, in laws and neighbours. In the intervened slums, most mothers have decided on their own to attend the hospitals for delivery, which indicates stronger decision-making position in the family for these women of the intervened slums. In the non intervened slums, on the other hand, social issues have stood in the way of the would-be mothers from taking recourse to hospital services.

Statistically speaking, literacy has not proved to have any effect on the communities on their decision making process on family planning. Illiterate Hindu mothers have resorted to family planning more as a compulsive measure to avoid further childbirths. Literate Hindu mothers, on the other hand have used family planning more as an instrument of choice. The Muslim mothers, even illiterate respondents have used family planning both on compulsion as well as choice. In the intervened slums, only 1.23% of the Hindu mothers and 2.5% of the Muslim mothers of the sample population do not believe in family planning. No rationale is forwarded to support the negative attitude either. In the non intervened slums, the proportion of non believers is as high as 75.58% and 68.42% in the Hindu and Muslim communities respectively. Social grounds such as apathy towards the concept of family planning, faith in God's blessings and sometimes economic reasons as expenses on contraceptives explain such hostility towards adoption of family planning.

Misconception about adverse effects of male sterilisations prevail both in the intervened and non intervened slums. This has led the women in the families to take recourse to tubectomy.

As in the non intervened slums, choice of family planning methods is literacy neutral.

In the non intervened slums, 86% of respondent mothers have not accepted family planning after the birth of the first child. This is in sharp contrast to the intervened slums, where 76.74% have accepted family planning after the birth of the first child. In the non intervened slums, even after the birth of the third child, 88% have failed to accept contraception. This shows that while there are conscious efforts on the part of the eligible couples of the intervened slum to accept family planning, in the non intervened slums, deep rooted traditional beliefs prevent such scientific and rational thinking.

IMMUNISATION OF CHILDREN

Importance of Immunisation

As in chapter III, this study intends to examine the following in the context of children in intervened slums.

- Proportion of children between 1 to 2 years by religion and literacy
- Proportion of children with complete and incomplete immunisation.
- Social factors influencing knowledge on vaccination.
- Reasons for believing in or not believing in immunisation
- Factors affecting acceptance of specific antigens.

As in the case of the non intervened slums, the number of children of the cohort aged 1 year to 2 years is tabulated in the case of the intervened slums to arrive at the cohort of children eligible for immunisation.

It is seen that 35.31% of Hindu eligible couples and 49.21% of Muslim eligible couples have children in the age group 1 year to 2 years. These constitute 175 eligible couples out of a total of 443, that is, 39.24% of the eligible couples from both religious groups. In the non intervened areas, 27.9% Hindu eligible couples and 63.2% of Muslim eligible couples, that is 34.3% of eligible couples from both religious groups have children in the age group 1 year to 2 years. (See Table 70)

Table No 70

Proportion of mothers having children between 1 to 2 years by religion and literacy.

Religion	Literacy	Illiterate	Read and Write	Primary	Secondary and above	Total
Hindu	Eligible couples with children of 1-2 years	19 (55.88)	5 (31.25)	36 (55.95)	53 (24.09)	113 (35.31%)
Muslim	Eligible couples with children of 1-2 years	17 (60.71)	1 (7.14)	12 (35.29)	29 (51.78)	62 (49.21%)
Combined	Eligible couples with children of 1-2 years	39 (62.90)	6 (37.5)	48 (53.93)	82 (29.71)	175 (39.24%)

Children with complete and incomplete immunisation

It is found from the present study that nearly 94.7% Hindu and 90.3% Muslim children respectively were immunised completely whereas only 2.3% children of the combined religious cohort was incompletely immunised. Only 8 children out of 175 that is 4.57% were left out or not immunised. Of them, 5 were Hindus that is, 4.4% of the total Hindu eligible couples (with the cohort of children aged 1 to 2 years) and 3 were Muslims that is 4.8% of the total Muslim eligible couples (with the cohort of children aged 1 to 2 years). In the non intervened area, none was found in the left out category.

High percentage of complete immunisation in the intervened area indicates that optimum health awareness had been developed overtime amongst eligible couples so that 93.1% of all children of the age group 1 year to 2 years were immunised completely in the intervened slums. This compares favourably with the non intervened slum where only 44.4% of the children of the age group 1 year to 2 years were completely immunised. (See Table 71).

Table No 71

Children with complete and incomplete immunisation

Level of Literacy of the mother.	Hindu					Muslim					Both Religions				
	No. of children (1-2yrs)	Complete		Incomplete		No. of children (1-2yrs)	Complete		Incomplete		No. of children (1-2yrs)	Complete		Incomplete	
		No.	%	No.	%		No.	%	No.	%		No.	%	No.	%
Illiterate	19	15	78.9%	1	5.3%	20	17	85.0%	2	10.0%	39	32	82%	3	7.7%
Can Read and Write	5	5	100%	-	-	1	1	100%	-	-	6	6	100%	-	-
Primary	36	34	94.4%	-	-	12	10	83.3%	1	8.33%	48	44	91.7%	1	2.1%
Secondary and Higher secondary	53	53	100%	-	-	29	28	96.5	-	-	82	81	98.8%	-	-
Total	113	107	94.7%	1	0.09	62	56	90.3%	3	4.8%	175	163	93.1%	4	2.3%

Belief in Immunisation

It is found that nearly all the eligible couples that is almost 100% of all categories of literacy levels are found to be firm believers of immunisation of their children of 1-2 years cohort to protect them from 6 killer diseases. In the non intervened area, the percentage of such belief is to the extent of 26.5 % only for Hindus. No Muslim mother of the non intervened area has supported the belief that immunisation protects their children from 6 killer diseases. (See Table 72)

Table No 72

Reasons for believing in immunisation

Religion	Reasons	Illiterate	Read and Write	Primary	Secondary	Higher secondary and above	Total
Hindu	Protect the children from six killer diseases	93.1	100	97.5	100.0	100	97.8
Muslim	-Do-	98.0	100	93.3	95.6	-	96.0
Combined	-Do-	95.1	100	96.4	98.9	100	97.3

Mothers of both the communities of all literacy levels are found to be well aware of the knowledge of health benefits of immunisation. About 95% of mothers of the intervened area have very good knowledge on immunisation. In actual practice, number of children actually immunised in the non intervened areas is very low in the non intervened area because the hype created by media has failed to translate into actual practice as health facilities are mostly inaccessible and the presence of extension workers is not available to the inmates of the slums. The presence of these two factors, on the other hand, has improved the performance in the intervened slums to an appreciable extent.

Factors influencing vaccinations

An analysis is made of the income effect and the influence of literacy, if any on the respondents of the intervened slums in their beliefs and practices with respect to specific vaccinations such as Polio, Measles, BCG(Bacillae Camitte Guerin) and DPT(Diphtheria Pertussis and Tetanus).

Table No 73

Responses of mothers with respect to specific antigens.

	Polio	Diphtheria	Measles
Hindu			
Affirming(%)	99.7	99.7	95.3
Negating(%)	0.3	0.3	4.7
Muslim			
Affirming(%)	100.0	100.0	99.2
Negating(%)	0.0	0.0	0.8
Combined			
Affirming(%)	99.2	99.8	93.4
Negating(%)	0.8	0.2	6.6

Polio

99.2% eligible couples of all literacy levels of both religion affirmed that Polio could be prevented by immunisation as corroborated by the outcome of actual performance of immunisation. Only 1 illiterate Hindu mother opposed this. This compares favourably with respect to the non intervened area. Mothers of the intervened area affirmed the beneficial concept of Polio immunisation to protect their children. (See Table 73)

In the non intervened areas, however, only 34.28% of the children were administered Polio vaccine as compared to the inmates of the intervened areas. (See Table 73)

Diphtheria

99.8% of eligible couples of both religions have supported the idea that Diphtheria can be prevented through immunisation. In the non intervened area, 55.6% of the children have received Diphtheria vaccinations as compared to 99.8% in the intervened area establishing thereby that the awareness created by media and health extension workers has been translated into practice in the intervened area. (See Table 73)

Measles

About 95.3% of eligible couples of overall literacy level of Hindu religion and 99.2% of Muslim eligible couples affirmed the immunisation benefit of Measles. Only 4.7% of Hindus and 0.8% Muslims in the intervened area rejected the need of Measles immunisation. (See Table 73)

The corresponding overall percentages in the non intervened areas were found to be 65% and 47.4% the Hindus and Muslims respectively, showing low health knowledge of the importance of Immunisation of Measles in the non intervened area. 33.6% and 52.6% Hindus and Muslims (of all literacy combined) in the non intervened area rejected the need of Measles immunisation.

No palpable contribution of the effect of Income has been observed towards immunising the children between the age of 1 to 2 years of the respondent mothers because intervention of prolonged health services and promotion of health awareness has been well generated among the eligible couples in the area of all income groups. This has presumably absorbed the income effect. Hence, it is seen that the level of awareness in the intervened areas is very high with a strong belief in the rationale of immunisation, which has been converted into actual practice. In the non intervened area, certain hype has been created by media but the same has not been translated itself into actual practice as the hype has not translated into the rationale of immunisation. The effect of religion differentials has been established but there is no distinct income effect. In both areas, there are believers of cultural taboos and superstitions in varying degrees. Mothers believe in appeasing Goddess *Sitala* to cure Measles and in tying a thread around holy trees and in praying before tombs and religious symbols to cure disease of children especially Measles.

The overall findings from the present study on immunisation is as follows:

In the intervened slums, the cohort of children aged between 1 year and 2 years is 5% more than the cohort of children in the non intervened slums. The proportion of children who have undergone complete immunisation in the intervened slums is as high as 94.7% among the Hindus and 90.3% among the Muslims. In the intervened slums, only 4.4% of the Hindu children and 4.8% of the Muslim children are incompletely immunised. In the non intervened slums, on the other hand, the proportions of incomplete immunisation among the Hindus and Muslims are 41.75% and 83.3% respectively.

In the intervened area, 100% of the eligible couples of all literacy levels and from both religious groups are found to be firm believers in the immunisation of their children. More than 93% of the mothers of all literacy levels of both religious groups believe that immunisation protects the child from 6 killer diseases. In the non intervened slums, only 26.5% of the Hindu mothers and none of the Muslim mothers believe that immunisation protects their children from the 6 killer diseases.

Analysing antigen wise, 100% of the eligible couples of both religious groups affirm that immunisation protects the child from developing Polio. In the non intervened slums also, there is some belief in the Polio immunisation, thanks to the effect of the media. The reality, is however, is that only 44.4% of the children are immunised completely in the non intervened slums. Hence, possibly there is more hype than rationale in the influence of media in as much as the information generated is not translated into practice in the non intervened slums. Similarly, in the case of diphtheria, awareness has been generated in both areas. In the intervened slums, such awareness has led to complete immunisation of 93% of the infants. In the non intervened slums, 44.4% of the children have received such

complete immunisation. Measles vaccination presents an interesting picture. In the intervened slums, the proportions of actual immunisation in the Hindu and the Muslim community are 95.3% and 99.2% respectively. In the non intervened slums, the proportions are 33.7% and 52.6% respectively.

Even in the intervened slums, however, 15 Hindus and 1 Muslim respondent have refused to immunise their children. 11 Hindu respondent mothers believe in '*Sitala Puja*' (worship of local goddess) along with traditional herbal treatment. Other 4 mothers rely on homeopathy and *kabiraji* (indigenous treatment) treatment. One of the mothers wishes to tie a thread on the holy tree around the tomb of the *Fakir baba* (Holy man of Muslim community).

Hence, it may be concluded that in the intervened slums, extension and outreach services have generated both belief and demand for immunisation and there is almost universal immunisation of children. In the non intervened slums, however, there have been some responses to the initial rounds of immunisation thanks to the effect of media. This influence, however, has not been sustained and the process of immunisation has not been completed for majority of the children. Social beliefs and cultural taboos have held their sway over the mothers of non intervened slums and there has not been much rational thinking in this area. There have been a large number of drop outs among the infants who should have received immunisation in the non intervened slums. Lack of facilities and lack of regular contacts by health workers have led to gradual lack of interest in the immunisation process by the slum households in the non intervened slums.

MALNUTRITION

The malnutrition profile of the children of the non intervened slums has been studied to ascertain the social factors which influence the incidence, causes and knowledge of malnutrition. The present section proposes to conduct a similar analysis into the malnutrition profile of the intervened slums. A comparison of the levels of knowledge, recognition, treatment and incidence of malnutrition between the two categories of slums would follow.

As in the case of non intervened slums, individual growth monitoring has been done for each child under 5 years of age for each household in the intervened slums also. The results have been compared at the end of the section.

The study of intervened slums has looked at the following:

- Knowledge of mothers on malnutrition
- Traditional beliefs associated with malnutrition
- Knowledge of preservation of nutrients in cooking
- Satisfaction with cooking procedures at homes
- Gender bias in feeding children
- Virtual incidence of malnutrition.

Knowledge of mothers about malnutrition

Respondent mothers of the intervened slums have almost universal knowledge about malnutrition of children. This excludes 2 Hindu respondent mothers, 1 illiterate and the other educated up to primary level. The overall percentages of mothers of both religions who know about malnutrition are 99.37% and 99.99% respectively in the intervened area. (See Table 74) This is in contrast with 22.1% and 15.8% of mothers belonging to the two religions in the non intervened area. Out of total 443 respondents of both religions, 0.62% [2 Hindu] respondent mothers have no knowledge about malnutrition in the intervened area. About 79.05% of mothers interviewed in the non intervened area did not have any knowledge on malnutrition.

Table No 74

Knowledge of mothers about malnutrition

Religion	Knowledge Of Malnutrition	Illiterate	Literate	Total
Hindu	Yes	21.98	77.39	99.37
	No	0.31	0.31	0.62
Muslim	Yes	40.83	59.16	99.99
	No	-	-	-
Combined	Yes	31.40	68.27	99.67

Traditional beliefs associated with malnutrition

The hypothesis in this study is that interventions and awareness created through such interventions have developed objective rationale among mothers of intervened slums regarding causes and cure of malnutrition. A further hypothesis is that mothers of intervened area are less influenced by traditional belief than mothers in non intervened slums.

In the intervened area, 2 mothers of which 1 was an illiterate Hindu mother and the other Hindu mother who was educated up to the primary level, gave an indication that malnutrition may be caused by the influence of ghosts and evil spirits. This is only 0.62% of the mothers of both religions out of the 443 total respondent mothers of the intervened area. 6.97% of Hindu mothers in the non intervened area believed in such taboos and superstitions. The other respondent mother of Hindu religion educated up to primary level affirmed the influence of evil-planet for which the mother thought that the planetary influence had to be appeased through various rituals. 99.67% of the mothers of both religions had knowledge of malnutrition in the intervened area.

In the non intervened area literacy appears to have no impact because the literates outnumbered the illiterates in their prejudices and superstitious beliefs. Religion too is not a significant factor influencing respondent behaviour as mothers of both communities have poor knowledge on the causes of malnutrition. Muslim mothers in both areas did not believe in social prejudices and cultural taboos but mothers, irrespective of religious groups failed to relate malnutrition to its actual cause. Hence, religion is not a significant factor in influencing the causes of malnutrition. Comparing the awareness patterns between the non intervened and intervened areas, it is seen that as compared to 6.82% of the illiterate Hindu couples in the non intervened area, 22.7% of illiterate Hindu couples in the intervened area have been made aware by health workers on the causes and symptoms of malnutrition. The corresponding proportions for the Muslim population are 15.38% and 33.0% for the non intervened and intervened areas respectively. 74.9 % of the literate respondent couples of both religions have significant health awareness on malnutrition in the intervened area as compared to 12.5% of the literates in the non intervened area. Hence, the proportion of health awareness of the literates in the non intervened area on the concept of malnutrition is 63% less than that of the intervened area.

In the intervened area, out of 18 Muslim mothers, 14 from the illiterate and 4 mothers from the literate group cited that economic stringencies and lack of purchasing power of nutritious food caused malnutrition in children. No Hindu mother from the intervened area, however, cited economic stringencies as the cause of malnutrition. In the non intervened area, 4 Hindu mothers had stated that the cause of malnutrition is due to economic stringencies. The position is reversed in the intervened area where only the Muslim community and the illiterate couples in particular cited economic factors to be the underlying cause of malnutrition. In the intervened area, 95.92% of mothers were aware of the causes and diagnosis of malnutrition as compared to only 14.14% of mothers in the non intervened area. In the intervened area, 99.37% of mothers, that is almost all the mothers rejected the proposition that ghosts or evil spirits cause malnutrition of their children. This validates our hypotheses that awareness created through interventions has helped in developing rationale thinking in mothers regarding causes and cure of malnutrition. This also validates

the hypothesis that mothers in intervened slums are hardly influenced by traditional beliefs as compared to mothers of non intervened slums who are highly influenced by such beliefs.

Nutrition and cooking procedure:

In the intervened area our hypothesis is that mothers have developed good knowledge in preserving nutrition while cooking for their families.

The present study found that 99.8% of the respondent mothers of the intervened area have good knowledge on the quality and quantity of retaining nutrients of the foodstuff in the procedure of cooking. This compares favorably against 23.8% of similar respondents of the non intervened area. The entire literate group of each religion of the intervened area had good knowledge while only 41.4% and 33.3% of the literate respondents of the two religions of the non intervened area, possessed such knowledge. Only 1.4% of the illiterate Hindu mothers of the intervened area did not have the necessary knowledge. In the non intervened area, 12.3% Hindu and 30.8% Muslim mothers did not know how to preserve nutrition in the cooking procedure. It is found that respondent mothers of the intervened area have acquired almost perfect knowledge on the correct procedure of cooking while retaining nutrients in the foodstuff. This is due to longstanding health interventions by the different health programmes in the intervened area.

Respondent mothers of both illiterate and literate groups of the two religions in the intervened area were found very much satisfied and aware of the cooking procedures so as to preserve the nutrients in the foodstuff, in comparison to the mothers of the non intervened area. This attitude was found common to both religions. The proportion of mothers expressing such satisfaction in the non intervened slums is 45% of the sample population of both religious groups. 64.7% Hindu and 58.0% of Muslim mothers of non intervened slums have expressed dissatisfaction with cooking procedures followed in their households. In comparison only 0.9% of Hindus and 2.6% Muslim mothers of the intervened areas were dissatisfied with cooking procedures followed in their households.

On being asked as to why the mothers were dissatisfied with the cooking procedures, 4 Hindu mothers of the non intervened area stated that directions of mothers in law, lack of money for purchase of good food, and the influence of divine grace were some of the factors which influenced the cooking procedures being followed in their households. In the intervened area, 6 mothers, 3 from each religion were dissatisfied with the process of preservation of nutrition in cooking procedure. 2 illiterate and 1 mother educated up to the secondary level of the Muslim religion stated that the cooking in their homes was being done under directions of their mothers in law and hence there was little scope of preserving nutrition in the food cooked in their homes. Hence directions of mothers in law remain an important influence while deciding the cooking procedure in the households of both categories of slums.

Knowledge regarding presence of nutrients in foods

Knowledge of all the eligible couples of the intervened area about the nutrient value of the food is almost absolute. In the non intervened area only Muslim mothers transpired to be more knowledgeable as compared to the Hindus regarding the knowledge of nutrient value in food. 100% of both Hindu and Muslim mothers of the intervened area have such knowledge. Only 45.4% Hindu and 47.4% of the Muslim mothers in the non intervened area have such knowledge. All the 9 Hindu mothers that is, 100% of mothers educated up to Higher secondary levels and above in the intervened area had this knowledge. The only Graduate Hindu mother of the non intervened area, however, did not have any knowledge of nutrients inherent in the foodstuff. This confirms the hypothesis that interventions have created enough awareness and good knowledge among mothers to preserve nutrition while cooking for their families.

Basic principles of preservation of nutrition in cooking

The hypothesis in the present study is that while cooking for their families in intervened slums, mothers follow the basic principles of preserving starch, mixing of pulses, slicing the pieces of vegetable and chopping vegetables only after washing the same.

Only 23.3% of respondent mothers of both literacy groups of combined religion in intervened slums favoured throwing away starch from boiled rice as against 90% of respondents of the non intervened area. The proportions of mothers of Hindu and Muslim illiterate groups of mothers who favoured throwing away of such starch are 28.4% and 23.4% respectively in the intervened area (Muslim are better placed than Hindus) in comparison to about 92% of both religions of illiterate group of mothers of the non intervened area who show very poor knowledge about preserving nutrition even in cooking basic food items such as rice. 86.2% and 100% of the literate groups of both religions in the non intervened area also had very poor knowledge as compared to mothers of the intervened area. Respondents of both literacy groups of either religion in the two areas were found to be very conscious about the preparation of pulses by mixing two or more varieties, which ensures nutrition. Very high proportions of mothers of the two literacy groups of either religion of the intervened area followed the correct procedure of slicing vegetables before cooking. In the non intervened areas mothers of both literacy groups of either religion show very low proportion of awareness. Nearly 50% mothers are less knowledgeable as compared to mothers in the intervened area.

Excepting 1 illiterate Hindu mother of income level Rs. 1001/- to 1500/- mothers of all literacy levels of both religions of the intervened area opined exclusively for administering "both" varieties – animal proteins and vegetables to their children for nutrition. The comparison of prescribing such mixed nutrients (animal protein and vegetables) to the children of the mothers of different levels of literacy of both religions between the two areas – intervened and non intervened, were found highly significant in favor of the intervened area. (See Table 75)

Table No 75

Proportion of mothers opining on the need to include animal protein and vegetable in food (in %)

Literacy Levels	Hindu			Muslim			Combined Religion		
	Animal Protein	Vegetables	Both	Animal Protein	Vegetables	Both	Animal Protein	Vegetables	Both
Illiterate	-	1.4%	98.6%	-	-	100%	-	0.8%	99.2%
Can Read and Write	-	100%	-	-	-	-	-	-	100%
Primary	-	-	100%	-	-	100%	-	-	100%
Secondary	-	-	100%	-	-	100%	-	-	100%
Higher secondary and above	-	-	100%	-	-	-	-	-	100%
Total	-	0.31%	99.69%	-	-	100%	-	0.2%	99.8%

Figures in brackets indicate absolute numbers.

Gender bias

All the mothers of all literacy levels of the two religions in the intervened area (except 4 of illiterate and 1 of secondary level of Hindu religion) agreed to give nutritious food to their children irrespective of gender. Among the 4 illiterate Hindu mothers, 2 mothers each from the economic groups Rs. 1001/- to 1500/- and above Rs. 2000/- indicated preferences for male and female child respectively. Both in the non intervened and in the intervened area, Muslim mothers were not partial to children of either gender while administering nutritious food to their children. In both areas, however, some Hindu mothers unlike their Muslim counterparts stated that sons deserved more nutritious food as compared to the daughters as they will take care of the family in future.

Attitude to gender bias.

Varied reasons are given by the mothers of all literacy and economic groups for their attitude to gender bias. Out of total respondents in the intervened area 23.5% of Hindu mothers cited social reasons to justify as to why nutritious food is to be given only to their sons. Hindu mothers in the non intervened area stated that the male children will take care of parents in their old age and hence deserved better nutrition in their growing years. 96.6% of the Muslim mothers and 89.6% of the Hindu mothers in the intervened area did not agree to any gender bias in feeding their children, as they were conscious that all children needed to be healthy. Hence, in the intervened area 7% more Muslim mothers disapproved of gender discrimination as compared to the Hindu mothers. Nearly the same proportion of

mothers (2.8% Hindu and 2.6% Muslim) of either religion in the intervened area stated that daughters should be better fed as they will be future mothers. No mothers held such opinion in the non intervened area. Mothers of both religions gave multiple reasons for prescribing nutritious food to their children in the intervened area, which needs to be seen in the light of literacy specific proportions of mothers.

'Health Awareness' influenced about 63.9% of Hindu mothers (all literacy levels combined) and 87.1% of the Muslim mothers, which is 23.2% more than the Hindu mothers. In the non intervened area, no mothers appeared to be influenced by health awareness. Only about 3% [Hindu-2.8%; Muslim-2.6%] of mothers in the intervened area reasoned for 'Preference for the daughter as she would be a future mother'. None of the mothers in the non intervened area supported this view. (See Table 76.)

Table No 76
Reasons for gender bias

Level of literacy	Hindu					Muslim				
	Social	Socio-Economic	Health Awareness	No sex Bias	Preference for daughter as she would be future mother	Social	Socio-Econ	Health Awareness	No sex Bias	Preference for daughter as she would be future mother
Illiterate	17.6% (13)	18.9% (14)	64.9% (48)	94.6% (70)	4.1% (3)	17.0% (8)	17.0% (8)	89.4% (42)	100% (47)	4.3% (2)
CR andW	-	21.1% (4)	73.7% (14)	84.2% (16)	5.3% (1)	-	-	-	-	-
Primary	19.3% (16)	26.5% (22)	66.3% (55)	94.0% (78)	1.2% (1)	-	7.4% (2)	85.2% (23)	88.9% (24)	3.7% (1)
Secondary	33.8% (48)	12.7% (18)	59.9% (85)	86.6% (123)	2.8% (4)	9.5% (4)	4.8% (2)	85.7% (36)	97.6% (41)	-
Higher secondary and above	-	-	77.8% (7)	66.7% (6)	-	-	-	-	-	-
Total	23.5% (77)	17.7% (58)	63.9% (209)	89.6% (293)	2.8% (9)	10.3% (12)	10.3% (12)	87.1% (101)	96.6% (112)	2.6% (3)

Figures in parenthesis indicate absolute numbers

Incidence of malnutrition in the intervened area:

This section analyses the incidence of Malnutrition as actually found in the intervened areas and compares the same with the incidence of malnutrition in the non intervened areas.

Out of 443 eligible couples in the intervened area, there are in all 616 children under the age of 5 years which is in the ratio of 1.39 (children under the age of 5 years): 1 (Respondent mother) corresponding to 1.58 (children under the age of 5 years): 1 (Respondent mother) of the non intervened area. The proportion of children under the age of 5 years per respondent mother in the intervened area is found to be 13.67% lower than of those in the non intervened area. In the intervened area, 616 children of below 5 years of age were available to 443 mothers at the time of survey and amongst them 347 were male and 269 female. Out of 616 children of below 5 years only 102 comprising 59 Males and 43 females had been identified as "Malnourished" by their mothers on the basis of probable prescribed symptoms. Hence the proportion of children under 5 years of age found malnourished in the intervened area is 16.56% which appear to be much higher than the percentage of incidence – 3.125% as affirmed by the mothers in non intervened area. This is because in the non intervened area, respondent mothers had not acquired good

knowledge about the symptoms of manifestation of the malnutrition of their children like the mothers in the intervened area and were not able to correctly identify that their children were actually malnourished.

All the children under 5 years of age in the households interviewed in the intervened and the non intervened areas were actually weighed and their grades of malnutrition, if any, was recorded through growth monitoring charts based on techniques prescribed by World Health Organization.

All the children who had been identified as falling in the category of Grade-I malnutrition by their age and weight may subsequently be upgraded to 'Normal' on maintenance of nutrient and medical treatment very quickly and hence Grade-I may not be considered here as malnourished. Only Grade-II, III and IV together come under malnourished and the Incidence Rate is calculated accordingly.

Incidence of Malnutrition (%) in the Intervened area

Number of malnourished children found in Grade II to IV x 100

Total number of children up to 5 years (Growth chart accounted for up to the age 5 years)

$$= \frac{46}{616} \text{ (only found in Grade - II)}$$

$$= 7.47\%$$

Whereas in the non intervened area it is = $52/166 \times 100 = 31.33\%$ which is nearly 4.19 times higher than that of the covered areas.

As compared to the non intervened area, the respondent mothers of the intervened area were found fairly knowledgeable in offering their views in respect of their children who have suffered or are now suffering from malnutrition based on the prescribed symptoms of the schedule. In the non intervened area, all the 4 malnourished children as identified by their mothers, 2 each of either sex, were of 3rd order while out of 102 malnourished children as identified by the mothers of the intervened area, the number of males and females respectively are 59 and 43. In intervened area, according to the mothers of both religions, sons were more malnourished than their daughters. The income and literacy levels of the respondent mothers have not influenced the incidence, as affirmed by the mothers of malnourished children in the intervened area. The growth chart that establishes the real status of malnutrition firmly proving that the incidence of malnutrition is much higher in the non intervened area as compared to intervened areas. Amongst 102 malnourished children, 38 (37.25%) were of 1st order and 32 (31.37%) children each in 2nd and 3rd order. All the boys, comparing three orders of birth appear more undernourished than their sisters to the extent of 55.6%. No male Muslim child was found undernourished. Even female Hindu children (28% - 44.4%) were more malnourished than that of the Muslim girls. All the 102 malnourished children of both religions were advised for nutrient management by the health

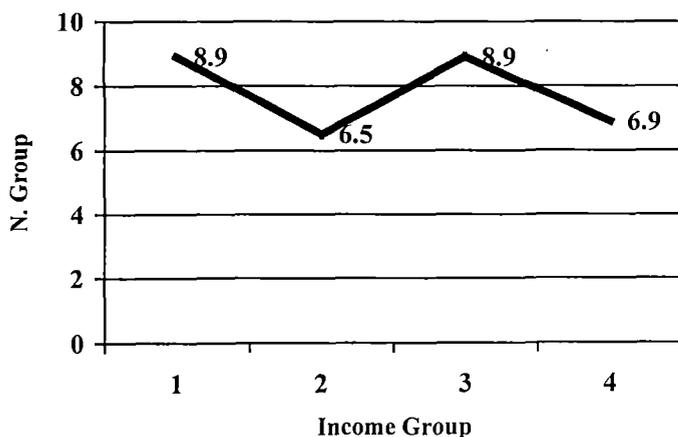
extension workers as reported by the mothers Only 1 illiterate Hindu male child of the highest income group was attempted to be cured by calling for an 'exorcist'. This is similar to the case of alone female child of an illiterate mother of lowest income group in the non intervened area who was attempted to be cured by calling in an exorcist.

An analysis of the nutritional growth chart

The proportional comparison of the nutritional status of the children up to the age of 5 years between the non intervened areas and the intervened areas (combined religion) for different income groups establish the following:

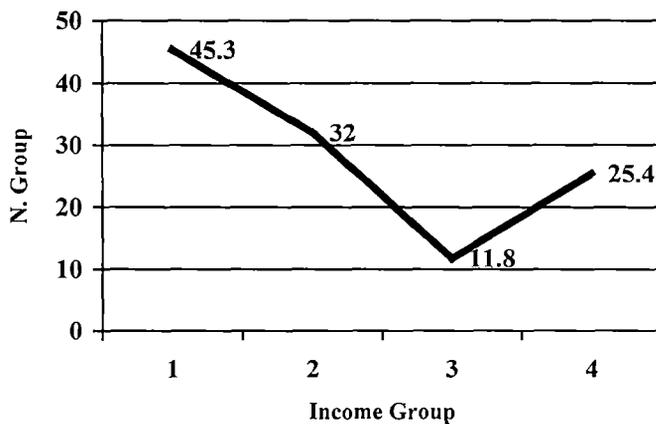
Percentage of undernourished children in the non intervened area is the highest in the 1st income Group. Male and female children are nearly equally placed (44.4% and 46.4%) and about half of children are undernourished and 5 times more malnourished than those of the intervened area. In the 2nd income group, though the percentage of malnourished children in the non intervened area is to the extent of 13.3% as compared to the 1st income group, it is nearly 5 times higher than that of the intervened area. In the 3rd income group, the percentage of the malnourished children in the non intervened area is 1.33 times higher than those of the intervened area. The nutritional growth profile (%) in the non intervened area of the highest income group (Rs.2001 and above) has suddenly increased by an amount of 13.6% with respect to 3rd income group, which seems unexpected for the so-called better off income group. As compared to the non intervened area, the nutritional profile of the children of the intervened area of all income groups at a glance appears to be to some extent erratic in its movement through the 1st to 4th income groups as will be revealed from the following diagrams.

Intervened Slums



1st Income group	- 8.9%
2nd Income group	- 6.5%
3rd Income group	- 8.9%
4th Income group	- 6.9%

Non intervened Slums



1 st Income group	- 45.3%
2 nd Income group	- 32.0%
3 rd Income group	- 11.8%
4 th Income group	- 25.4%

In general the incidence of malnutrition in the non intervened slums is much higher in all income groups as compared to the incidence of malnutrition in the intervened slums. Interestingly, the sudden spurt in the incidence of malnutrition in the children of parents with the highest range of income in the non intervened slums prove that income effect is absorbed by the overall lack of awareness and apathy of the eligible couples towards malnourished children in their households.

In the non intervened area, the nutrition profile is not similar to that of the intervened area with regular declines from the 1st to 3rd income group and a sharp rise in 4th income group by more than double the amount. The children up to the age of 5 years in the non intervened area were found to be 4.2 times more undernourished as compared to the children of the intervened areas. The incidence of malnourishment among the girl children in the non intervened areas is quite severe. It is however, inverse in the intervened area where the extension work of Health Workers and proper care by the mothers found no children in the Grade-III and IV categories due to prolonged and routine interventions. Both male and female children of either religion in the non intervened area are equally deficient in their nutritional growth marked in grade-II, Muslim male children are better nourished than Hindu boys but this is reversed in the case of females. Only 3 Hindu and 1 Muslim child were of Grade-III degree of malnutrition but a lone Hindu girl child was recorded as suffering from Grade – IV degree of malnutrition. Compared to the non intervened area, in the case of the Muslim children of the intervened area, the nutritional growth is better as compared to that of the children in the Hindu families.

Findings in the context of malnutrition

The present study establishes the following findings in the context of malnutrition:

Sample respondent mothers of both the religious groups of the intervened slums have almost complete knowledge of the malnutrition of children under the age of 5 years. About 100% of the Muslim and 99.37% of the Hindu mothers in the intervened slums have this knowledge as compared to 20.95% and 22.1% of the corresponding respondents of the non intervened area.

About 6.97% of the Hindu respondent mothers of the non intervened slums ascribe the causes of malnutrition to the influence of ghosts and evil spirits. In the intervened area, the

proportion of respondents believing in ghosts and evil spirits is 0.62% only. 1 Hindu mother educated up to the primary level and 1 illiterate Hindu mother belonging to the intervened area subscribes to this social taboo.

Upon analysing those factors which have led to the awareness of the respondent mothers regarding knowledge of malnutrition, 74.9% of the literate respondents of the intervened area and 12.5% of the literate respondents of the non intervened area have stated that health awareness is the motivating factor which has helped in developing the knowledge on malnutrition. 11.7% of the illiterate and 1.2% of the literate respondent mothers of the intervened slums and 2.98% of the illiterate and 6.25% of the respondent mothers of the non intervened slums have stated that due to economic stringency, their children could not be administered nutritious food thereby leading to malnutrition.

99.8% of the respondents in the intervened slums have sufficient knowledge of how to retain nutrition in food in the process of cooking as against 23.8% respondents of the non intervened slums who have such knowledge. 76.2% of the respondents have not have any knowledge regarding preservation of nutrients in the cooking process in the non intervened slums.

Nearly 98% of the mothers of both religious groups are satisfied with the cooking procedure followed in their kitchens. In the non intervened area, 45% of mothers have reported that they are satisfied with the cooking procedure in their homes. In the non intervened slums, the reasons for dissatisfaction are mainly on account of social causes, namely, that mothers in law dictates the cooking procedures, there is not enough money to buy nutritious food and a section of the respondents believe that God's grace on the household will prevent malnutrition. In the intervened slums, three mothers of the Muslim community have stated that as the cooking procedure is being followed under the directions of their mothers in law, it is not possible to preserve nutrition in the prescribed fashion.

In the intervened slums, 99.3% of the mothers of all literacy levels and both religious groups have perfect knowledge about preservation of nutrition in foodstuff even after specific methods of cooking. In the non intervened area, only 45.4% of Hindu mothers and 47.4% of the Muslim mothers have this knowledge.

There are four basic cooking procedures which help to preserve nutrition in cooking, namely, retaining the starch of boiled rice, preparing pulses by mixing a few varieties, slicing vegetables in big pieces and chopping vegetables after washing the same. The proportion of respondents in the intervened area who have this knowledge are 76.7%, 86.9%, 89.6% and 93.2% respectively. In the non intervened areas, the proportions are 9.52%, 82.9%, 34.3% and 13.3% respectively, that is, the mothers of the non intervened areas believe in mixing of pulses during cooking but they do not believe in the other nutrition preserving cooking procedures.

In the intervened slums, 100% of the Muslim mothers and 99.69 % of the Hindu mothers, and in the non intervened slums, 89.47% of the Muslim mothers and 75.58% of the Hindu mothers believe that both animal protein and vegetables are to be administered to their children's food to administer nutritious food to their children. 89.5% of the Hindu and 100% of the Muslim mothers in the non intervened slums and 89.6% of Hindu mothers and 96.6% of the Muslim mothers in the intervened slums do not support any "gender discrimination" while administering nutritious food to their children.

Health awareness has influenced 63.9% of the Hindu mothers and 87.1% of the Muslim respondent mothers in the intervened slums who agree to provide nutritious food to their children irrespective of gender. No mother of the non intervened slums, however, agree to the proposition that health awareness is a motivating factor. 3% of the mothers of the intervened slums want to administer more nutritious food to their daughters, as they were the would-be mothers. No mother in the non intervened area subscribe to this view.

In the intervened slums, there are 443 mothers with 616 children under the age of 5 years. The ratio of children under 5 years to mothers is 1.39:1 in the intervened slums as compared to 1.58:1 in the non intervened slums. Hence, the proportion of children under 5 years of age is 13.67% lower than that of the non intervened area. In the intervened slums mothers have identified 59 male and 43 female children as malnourished on the basis of identifiable symptoms. The incidence of malnourished children in the intervened slums among children under the age of 5 years as derived by actually analyzing the growth chart of children is 7.46%. In the non intervened slums, the incidence of malnutrition as derived from an analysis of the growth charts of children under 5 years of age is 31.33%. This is 4.19 times higher than that of the intervened slums. When the mothers of the non intervened slums, however, are asked to identify malnutrition in their children, only 3.125% malnourished children have been identified by the respondent mothers. This is because the mothers of the non intervened slums, having very poor knowledge of malnutrition of children under the age of 5 years, fail to identify the symptoms of malnutrition. The correct incidence of malnutrition could be deciphered from the nutritional growth charts. Hence, it is concluded that the cases of malnutrition is 4.19 times higher among the children under the gap of 5 years in the non intervened slums as compared to the children under the age of 5 years in the intervened slums. The high proportion of malnutrition in the non intervened slums is based on ignorance, lack of health awareness, domination of mothers in law, economic stringency, lack of knowledge of preservation of nutrition in cooking and influence of taboos and superstition.

DIARRHOEA

Knowledge of mothers on diarrhoea

In the non intervened area, the concept of "Diarrhoea" or "Gastro enteritis" was not very clear to the respondents. In the intervened slums, however, there was clear understanding of the malaise, which will be evident from the proportion of knowledge of respondents about diarrhoea.

This study intends to establish the following :

- Knowledge of mothers about the incidence of diarrhoea,
- Knowledge of mothers about the causes of diarrhoea,
- The opinion of the respondent mothers on continuing lactation during diarrhoea,
- Whether mothers opt to fast their children during diarrhoea,
- Knowledge of mothers on the remedial measures to be adopted during diarrhoea,
- The actual practice of withholding breast feeding during diarrhoea during the last three months preceding the survey,
- The actual incidence of diarrhoea,
- Whether mothers resort to social practices and cultural taboos such as exorcism to cure diarrhoea,
- Knowledge of mothers on how to control dehydration during diarrhoea,
- Influence of media in improving knowledge on the treatment of diarrhoea, and analyse the results arrived there from.

More than 40.40% mothers were able to recognise the symptoms of diarrhoea, which compares favourably with the mothers of the non intervened area of whom only 22.9% were able to identify the same. (See Table 77)

Table No 77

Proportion of respondents having any knowledge about diarrhoea

Religion	Passing watery stool 2 or 3 times	Passing watery stool 3 times or more
Hindu	42.72	57.27
Muslim	34.16	65.83
Combined	40.40	59.59

Knowledge of the causes of diarrhoea

Though literacy, as in the case of the non intervened area has some influence regarding the knowledge of the respondents on the causes of diarrhoea, apparently there is not much significant variation in responses of mothers from different literacy levels. In the non intervened area, 7% illiterate Hindus ascribed diarrhoea to drinking water and interestingly 18.2% of secondary level Hindus responded similarly. In the intervened area, the difference between secondary level respondents and the illiterates was 6% as compared to 11% in the

non intervened area. In the non intervened area, 15.4% illiterate Muslim mothers ascribed the cause of diarrhoea to drinking water but none at secondary level could identify the same. In the intervened area, 100% Muslim mothers of both literacy groups responded similarly, ascribing drinking water to be the main cause of diarrhoea. Hence no significant relation could be established even in the intervened area between literacy and awareness.

In an interesting contrast with respondents of the non intervened area, a high proportion of illiterate respondent of both religions (81.42% in the case of Hindus, 100% in the case of Muslims and 89.16% of total respondents) has ascribed the incidence of diarrhoea to drinking water. This indicates the high level of knowledge that the respondents in the intervened area have with respect to the principal source of contamination causing diarrhoea. This is in sharp contrast to the respondents from the non intervened area who could relate diarrhoea to drinking water. Only 9.5% of the total respondents in the non intervened area could associate diarrhoea with the quality of drinking water. Again, none of the respondents believe in the intervened area that God's Wrath or Evil eye/ People's curse causes diarrhoea. In the non intervened area, however, 3.5% of Hindu mothers did ascribe such taboos/superstitions such as "Someone's curse"/ "Evil eye" or "God's Wrath" to the incidence of diarrhoea of children. 80% of Hindu and 90% of Muslim respondents in the intervened areas ascribed contaminated food to diarrhoea. 95% of Hindu mothers and 85% of Muslim mothers in the non intervened areas also hold a similar view. 45% respondents from the intervened areas ascribed dirty environment, open, cut fruit etc. to diarrhoea. (See Table 78) 18% of respondents from the non intervened areas related diarrhoea with seasonal variations.

Table No. 78

**Response of mothers regarding causes of diarrhoea in the intervened area
(In percentage)**

Religion/ Causes	From Drinking water	Evil eye/ People' s Curse	God's Wrath	From Food	Others stale/cu t fruit etc.	Indigestion/ seasonal effects	No knowledge
Hindu	81.42	-	-	80.00	27.14	5.71	-
Muslim	100.00	-	-	90.00	70.00	-	-
Combined	89.16	-	-	84.16	45.00	3.33	-

Hence, it is concluded that in the intervened areas, the respondents of all literacy and religion are well informed and correctly aware of the causes of diarrhoea. Particularly speaking, mothers of the Muslim community seemed to have complete knowledge of the causes as compared to their Hindu counterparts.

Breast-feeding during diarrhoea

In the non intervened area, 15% of the Hindu mothers and 5% of the Muslim mothers did not support breast feeding during diarrhoea. The following response has been ascertained from the intervened slums.

Mothers of both religions irrespective of their levels of literacy are highly aware of the necessity of breastfeeding their children during diarrhoea. The Muslims are better exponents among the illiterate group especially as 98% Muslims support this view as compared to 84.28% of Hindus.

To ascertain the literacy effect on the Hindu mothers for continuance of breast feeding/other food to the ailing children up to the age of 5 years, a statistical T test is resorted to and it is found that the effect of literacy is insignificant that is breastfeeding of children during diarrhoea is universally accepted in the intervened area by both literate and illiterate groups of mothers. The same insignificance of literacy effect was also observed in the cases of Hindu mothers in the non intervened area.

Similarly for Muslim mothers in the intervened area, a significance test was conducted to ascertain the influence of literacy and it was found that literacy effect is insignificant. It is hence concluded that in both areas that is intervened as well as in non intervened areas, the mothers universally advocated breastfeeding and administration of other food to children during diarrhoea. For the combined religion also, $T = 1.2141$ and p is greater than 0.05. This indicates that the significance test failed between literate and illiterate mothers indicating that mothers of all literacy levels uniformly advocated breastfeeding.

The same process has been adopted between the two broad literacy groups (eliminating income levels) to examine the behaviour of mothers in their proportion of advocating "colostrums" to newborn babies just after birth. Colostrums available in the breast-milk of mothers with newly born children are vital to the immunity of infants. In many societies, however, tradition and social customs dictate that mothers reject these colostrums as polluted and unhealthy for their children. It is seen that more than 80% of the mothers of the intervened slums, irrespective of their religion and literacy levels, have advocated administration of colostrums to their infants. The rationale of such behaviour is analysed below. 95.65% of literate Hindu mothers had advocated administration of colostrums because it is the only nutritious food for the child and another 82% advocated it on grounds of immunity. 100% realized that it was easily available. Among Muslims, 90% agreed on its nutrition content and 3 were advised lactation. The awareness of illiterate mothers of both the religions, even in the intervened areas, however, was poor. In the intervened area, however, 27% Hindu mothers and 18.7% Muslim mothers associated colostrums to the occurrence of diarrhoea in children and 4.2% illiterate Hindus to indigestion. Most interestingly, in the non intervened area, 70% of all 86 mothers of both religions refused to suckle their newborns as they had traditionally acquired wrong perceptions that such yellow milk, which has bad odor, is indigestible and hence breast milk is pressed out for the first few days after the birth of their children. This traditional misconception however has not influenced the behaviour of mothers in the intervened areas.

Fasting during diarrhoea

In the non intervened area, nearly 40% of the Hindu mothers and 48% of the Muslim mothers supported fasting of their children during diarrhoea.

Among illiterate Hindus, awareness is 2.88% more than in the intervened area as compared to that in the non intervened area. Among the Muslim illiterates, in the intervened area, however, the percentage of awareness is 15.85% more than in the non intervened area. Literate Hindus in intervened areas, however, surpass their counterparts in non intervened areas by 13% whereas the Muslims do so by nearly 26.18%. Hence the level of awareness in the non intervened areas among the Muslim population compares rather unfavourably with that of the intervened area. Upon comparing with practices on lactation during diarrhoea, the responses on lactation were stronger for Hindu and Muslim illiterates. Muslim literates exhibited better awareness in not fasting their children during diarrhoea. As expected, literates, irrespective of religion, have exhibited strong awareness as compared to their illiterate counterparts. This awareness is about 60% stronger for Hindus and 35% higher for Muslims respectively when they have rejected the traditional concept of fasting during diarrhoea.

Incidence of diarrhoea

In the non intervened area, the incidence of diarrhoea had affected 48% of the children among the Muslim households and 27% of the Hindu households.

In intervened areas the proportion of children suffering / suffered from diarrhoea is only 18.57% and 17.78% in the case of illiterate and literate Hindus respectively. In the case of Muslims, the proportions are 22% and 24.85% respectively. These percentages are considerably lower in the intervened areas as compared to non intervened areas. The proportion of incidence of diarrhoea was 24% more in non intervened area, as far as illiterate Hindu respondents are concerned. Similarly for illiterate Muslims, in the non intervened area, 22% of respondents reported attacks of diarrhoea as compared to 30% in the non intervened area. Treating statistically the occurrence of ailments by religion (overall) on the total of each, it is found that the disease occurrence among the religions is significant at 95% confidence limit. The proportion test yields $T = 3.508$ which is much higher than 1.96 hence $p < 0.05$. There is thus strong evidence that there is significant occurrence of diarrhoea among the Muslim community in the non intervened area. In the intervened area the disease occurrence is non-significant between both communities.

Upon studying the methods of treatment of diarrhoea by different religious groups based on the overall literacy of mothers whose children had suffered from diarrhoea, it is obvious that the mothers are well-equipped and knowledgeable enough to resort to home treatment. A very high proportion of 91.83% for Hindus and 66.03% Muslims have resorted effectively to treatment at home. This is followed by local treatment and as a final recourse, the hospital. Only 0.98% of Hindu mothers have relied upon "praying to God". 3.77% of Muslims reported to have faith in "exorcism". In the non intervened area, however, only 17.1% of Hindu mothers and 50% of Muslim mothers were competent enough to cure diarrhoea through

home treatment. A majority of 51.4% Hindus and 50% Muslims resorted to hospital treatment which may only happen when the basic treatments of diarrhoea have not been resorted to and the patients are so neglected that patients have to be rushed to hospitals for administration of Intra venous fluids. 5.7% Hindus prayed to God and 16.7% of Muslims as well as 5.7% Hindus believed in "Exorcism" to cure diarrhoea. It may be concluded that as a result of health interventions, the households have acquired enough expertise to competently conduct diarrhoea treatment at home. Households restoring to socio cultural practices are very few in number. Respondents of both religions in the intervened area have mostly adopted the scientific approach.

Impact of literacy in administering home made remedies during diarrhoea

Literacy has been an important determinant in creating knowledge in the respondents to diagnose and treat diarrhoea in the intervened slums. (See Table 79)

Table No 79

Different methods of treatment of diarrhoea in the intervened slums

Management of dehydration	Hindu			Muslim		
	Illiterate	Literate	Total	Illiterate	Literate	Total
ORS etc.	19.0	59.30	78.30	25.0	50.0	75.0
Soaked rice etc.	6.58	30.62	37.20	35.41	52.29	87.70
Mixture of common salt etc.	17.44	75.96	93.40	31.23	58.76	89.99
Breast milk	-	33.48	33.48	25.0	25.0	50.00
Green coconut	7.36	30.23	37.59	19.11	55.05	74.16
Private practitioner/hospitals	-	-	-	-	-	-
No conception	-	-	-	-	-	-
No action taken	-	-	-	-	-	-
No opinion	-	-	-	-	-	-

ORS:-Oral re-hydration solution

In the intervened area out of 323 Hindu respondents, all mothers possessed very good knowledge of taking recourse to appropriate measures to control dehydration caused by diarrhoea. Among them 78.30% of mothers had given ORS/Glucose/Electoral water. 37.20% mothers gave water of soaked puffed / pressed rice or barley water. 93.40% dispensed with solution of mixture of common salt, sugar or molasses as alternative to ORS. 33.48% mothers relied on breast milk. 37.59% mothers relied on tender coconut water. None resorted to the private practitioners or hospitals. No mothers have a misconception nor failed to adopt corrective measures. This shows that Hindu respondents have proper conception on the cure of diarrhoea. Similarly for Muslim mothers, 75% resorted to ORS, 87.70% to soaked rice in various forms, 89.99% upon mixture of common salt etc. as alternative to ORS, 50.00% on breast milk and 74.16% on tender coconut. As in the case of the Hindu mothers, Muslim mothers did not take recourse to hospitals and were able to treat the affected children adequately at home. Hence, both Hindus and Muslims irrespective of literacy had perfect knowledge of the home-based remedies to cure diarrhoea and, it may be concluded that an environment of health awareness had developed overriding all traditional concepts in the intervened areas.

Influence of media in creating awareness.

The analysis of this section deals with various types of communication media, which influenced the respondents in acquiring knowledge of treating diarrhoea at home. In contrast with the non intervened areas, wherein only 69% of Hindu mothers and 100% all Muslim mothers had responded, all the mothers in the intervened slums responded. All respondents had offered multiple choices of media. 100 out of 323 Hindu mothers had stated that radio was their first choice. This shows a fair level of preference for this popular and easily available means of communication. 77 out of 120 Muslim respondents had favored this media that is, 64% of Muslim mothers had favored this media as compared to 31% of their Hindu counterparts. 224 mothers watched and viewed that the television was the most popular media indicating that television is an important source for educating respondents from varied literary levels and income. 118 out of 120 Muslims that is nearly 100% favored television as their favorite media as compared to 34% of Hindus. 32 out of 323 that is 10% Hindu respondent opted for the newspaper – this is possibly because of illiteracy and poor level overall literacy of the respondents. Further, although a television may be viewed in common by slum dwellers, affording newspaper by individual slum dwellers is a luxury. Further it is the men folk who have the advantage of reading newspapers at their places of work – women do not have that opportunity. 61 % of Hindus and only 24.16% had opted for this media among the Muslim population.

236 out of 323 households have stated that their source of awareness have been the Health Workers. The Health workers visit every household to spread awareness on hygiene and preventive health. This house-to-house contact, according to the respondents, has had the greatest impact. 119 out 120 that is, nearly 100% of Muslim found the influence of extension workers to be effective. Hence, we may conclude that in the non intervened areas, television and radio are the limited sources of awareness created in the areas; in the intervened areas health workers and televisions are the important sources of awareness.

Findings on diarrhoea

The present study has found the following while studying the issue of diarrhoea in the two categories of slums:

Undoubtedly, awareness is greatly developed in intervened areas as compared to the non intervened areas. Mothers, irrespective of religion, are mostly able to diagnose diarrhoea correctly in intervened areas as compared to non intervened areas. Mothers, irrespective of religion, are absolutely competent in curing diarrhoea at home with home made solutions unlike their counterparts in non intervened areas who have to rush to hospital for treatment because of serious condition of their children. Mothers in intervened areas are also aware of the benefits of colostrums. Those of non intervened areas have a very poor knowledge. Mothers of intervened areas have derived their awareness from health workers visiting their households and media such as television and radio. Those in non intervened areas rely mostly on television and radio and whatever awareness has developed is on that account. Income effect has not been established as a determining factor in respondent behaviour. Literacy effects have been found of importance in influencing knowledge of recognition and treatment of diarrhoea. The influence of social factors is high in non intervened slums, but these do not have much perceptible influence in the intervened slums.

CHAPTER V

SUMMARY AND CONCLUSION

Two sets of urban slums have been selected for comparing the health practices of the slum dwellers in the areas of reproductive health of the mother, immunisation, diarrhoea and malnutrition of children under 5 years of age. Such eligible couples have been selected in the sample as those who have children below 5 years of age. The first group of slums is those where no health projects/ programmes have been specially introduced until the period of the study. The second group of slums is those where health and family welfare programmes and projects have been particularly introduced over a period of time. The purpose of the study was to look at the health and family welfare practices of the dwellers of these two sets of slums and to compare their health practices relating to the areas of reproductive health, immunisation, malnutrition and diarrhoea. The main basis of comparison was the influence of social parameters such as literacy, income, religion, origin of domicile, influence of family members and adherence to social traditions, rituals, social and cultural practices, cultural taboos and superstitions. The study has led to certain findings, which are summarily presented here, with a comparative perspective.

Reproductive Health:

The levels of education of the husbands in general are superior as compared to that of the wives of both the sets of slums. Again, the overall standards of education in the intervened slums are superior as compared to that of the non-intervened slums. In the non intervened slums, the proportion of illiterate males are ~~44.2%~~^{41.55%} and that of illiterate females are 66.28% among the Hindus. In comparison, the proportions are 10.53% illiterate Hindu males and 21.67% illiterate Hindu females in the intervened slums. Similarly, among the Muslims in the non intervened slums, 68.4% of the females and 42.10% of the males are illiterate. In the intervened slums 23.33% males and 41.67% females form the illiterate group.

The suitable Mean age at marriage as opined by the respondent mothers and as desired by the community in the intervened slums lies in the range of 18.66 years to 20.17 years for the Hindus and between 16.89 years to 22.33 years for the Muslims. In the case of non intervened slums, the individual opinion of mothers on the suitable age of marriage was overridden by the community. In the intervened slums also, there was a significant difference in the ages preferred for marriage and the actual age of marriage in the Hindu community. In the Muslim community, however, the community closely guides the individual opinion. While conducting the statistical T-test between the Mean age at marriage and the age at first pregnancies, the association is found to be highly significant between both religions.

In the non intervened slums, 90% of mothers of both communities believe in God's blessings in order to be able to conceive a child. In the intervened slums, the corresponding proportions are 15.5% of the Hindus and 40% of the Muslims. While 50.5% of the Hindus and 7.5% of the Muslims have stated that their pregnancies resulted out of self planning, in the non intervened slums, 8.1% of the Hindus and none of the Muslims have subscribed to such a view. Further, in the non intervened slums, 32.22% Hindus and 46.7% of the

Muslims have stated that the desire of their in-laws is an important social factor influencing the birth of their children. Hence, in the intervened slums, 50.5% of the mothers of the Hindus are more prone to rational and scientific thinking on the issues of conception and pregnancy. This difference becomes all the more palpable when compared with 90% of the respondents of all literacy levels and of both religious groups in the non intervened slums who have expressed faith and belief in traditional social dictates as against rational thinking. The corresponding proportion among the Muslims, however, even in the intervened slum, is only 7.5%.

In the non intervened slums, nearly 90% of the Hindus and 79% of the Muslims have reported their faith in social and religious dicta to get a child. In the intervened slums, the proportions are 52.63% of the Hindus and 69.16% of the Muslims respectively. In another interesting contrast, 11% more Hindus of the non intervened slum believe in such dicta as compared to their Muslim counterparts. In the intervened slums, 17% more of the Muslims believes in the dicta as compared to the Hindus. Hence, despite health interventions and creation of awareness, majority of the urban slum dwellers of both the intervened and the non intervened slums believe in the social, religious and cultural practices to beget a child.

In the non intervened slums, the average number of living children, born to illiterate Hindu mothers of different income levels ranges from 3.3 to 3.7 for the Hindus. In the intervened slums, the average number of living children ranges from 1.0 to 2.7 for the same community. For Muslims, the average ranges between 2.0 to 3.4 and between 1.84 and 2.7 in the non intervened and intervened slums respectively. Hence, family planning interventions have had a favourable impact in reducing and stabilising the family size between both religious communities in intervened slums. In the non intervened slums, there is 35.1% greater preference for the male child among illiterates and 27.3% more preference for the male child among the secondary educated. In the intervened slums, the predominant choice is for one child of each sex.

The opinion of the likely Mean age as to when the mother should have the first child has been computed for the intervened slums and it oscillates between 20.84 years and 21.8 years. This is at a higher level than 19 years as opined by the mothers, in general of both religious groups of the non intervened slums. While advancing various reasons for justifying the age for childbirth, mothers of the intervened slums mostly advocate physiological and health grounds (47% Hindus and 78.33% Muslims) as against their counterparts of the non intervened slums who have mostly advanced social and religious grounds.

In the intervened slums, mothers of all religious groups have prescribed a reasonable interval of 3 to 4 years between two consecutive childbirths. They have justified this concept of spacing on grounds of health, social and economic reasons as well as domestic advantages and the desire to take appropriate care of each child. The statistical T-tests prove strong association between the Mean ages at marriage between both religious groups but insignificant association between the age at first pregnancy between them. Among the eligible couples 99.38% of the Hindu mothers and 97.5% of the Muslim mothers have preferred to take recourse to antenatal care in the intervened slums. Of this proportion, 47.35% have wanted to ascertain the needs of pregnant mothers, 85.66% have wished to ascertain the status of blood pressure with the foetal position. About 33% have wished to have access to immunisation, pathological examinations and nutrition packets. Among the

Muslims, the proportion of mothers are 95%, 1.7% and 28.20% respectively. The corresponding proportions for Hindu and Muslim mothers in the non intervened slums are 32.05%, 7.69%, 53.8% and 23.1% respectively. In the non intervened slums, 8 Hindu mothers believe in traditional beliefs and taboos and hence have rejected the scope of antenatal care. 2 Hindu mothers are totally fatalistic. This faith in fatalism is shared by 1 Muslim mother also. 5 Muslim mothers believe in traditional beliefs. Surprisingly, even in the intervened slums, 2 Hindu and 1 Muslim mothers fell back on fatalism. 2 mothers, each from either religious group have wished to adhere to the traditional concepts. In the intervened slums, 94.11% of the Hindu and 93.33% of the Muslim mothers have desired to avail of institutional facilities to ensure safe delivery. This is in contrast to 32.6% of the Hindu and 26.3% of the Muslim mothers of the non intervened slums. Hence, while in the non intervened slums, there is significant dependence on home deliveries, in the intervened slums, the eligible couples prefer institutional deliveries, showing better awareness and greater access to health infrastructure.

In the intervened slums, a greater proportion of respondents prefers hospital delivery and agrees to services of male doctors. While 94.73% of the Hindu mothers agree to the services of male doctors, among the Muslim respondent mothers, only 83.33% of those agreeing to hospital delivery have assented to the services of male doctors. This shows greater permissiveness especially in the latter society. In the non intervened slums, while 67.4% of Hindu mothers have agreed to hospital delivery, 82.6% have agreed to the services of male doctors, 73.7% of the Muslims mothers have agreed to hospital delivery but only 63.2% have agreed to the services of male doctors.

In the intervened slums, respondent mothers are more aware of and more desirous of availing of postnatal services for better health of mother and child. There are, however, nevertheless some elements of reluctance as well as ignorance with the sample population. 97% of the Hindu mothers of the intervened slums, 10% more than their counterparts in the non intervened area and 96% of the Muslim mothers, 17% more than their counterparts in the non intervened areas have actually availed of antenatal services. While similar proportions of the Hindu and Muslim mothers have availed of antenatal care in the intervened slums, 8.3% more of the Hindu mothers have availed of such services. Mothers shying away from visiting hospitals for antenatal and postnatal care facilities have stated that they are thwarted by the apathetic attitude of the hospital staff, lack of transport as well as want of escorts to the hospitals.

In the intervened slums, 93.49% of the Hindu mothers and 88.33% of the Muslim mothers have visited the hospitals to give birth to 89.66% and 80.56% of their children. In the non intervened slums, 79.1% of the Hindu mothers and 63.2% of the Muslim mothers have taken admission in the hospitals to deliver their children. Those visiting hospitals have an average of 2.08 confinements; those giving birth at homes have an average of 3.94 confinements, proving thereby that institutional deliveries encourage eligible couples to have smaller families. Chi-square tests statistically prove that there is no association between the two places of confinement on the basis of the religion of the two communities. Coming to the rationale underlying home deliveries, such deliveries have been prompted by apathy, dominating attitude of the mothers in law (for Hindu respondents only), sudden labour pain as well as lack of escorts and money to attend hospitals. Hospital deliveries, on the other hand, have been prompted by the decisions of the eligible couple themselves,

advice of husband, in laws and neighbours. In the intervened slums, most mothers have decided on their own to attend the hospitals for delivery, which indicates stronger decision-making position in the family for these women of the intervened slums. In the non intervened slum, on the other hand, social issues have stood in the way of the would-be mothers from taking recourse to hospital services.

Statistically speaking, literacy has not proved to have any effect on the communities on their decision making process on family planning. Illiterate Hindu mothers have resorted to family planning more as a compulsive measure to avoid further childbirths. Literate Hindu mothers, on the other hand, have used family planning more as an instrument of choice. Among the Muslim mothers, even illiterate respondents have used family planning both on compulsion as well as choice. In the intervened slums, only 1.23% of the Hindu mothers and 2.5% of the Muslim mothers of the sample population do not believe in family planning. No rationale is forwarded to support the negative attitude either. In the non intervened slums, the proportion of non believers is as high as 75.5% and 68.42% in the Hindu and Muslim communities respectively. Social grounds such as apathy towards the concept of family planning, faith in God's blessings and sometimes, economic reasons as expenses on contraceptives explain such reluctance towards adoption of family planning. Misconception about adverse effects of male sterilisations prevail both in the intervened and non intervened slums. This has led the women in the families to take recourse to tubectomy. As in the non intervened slums, choice of family planning methods is literacy neutral.

In the non intervened slums 86% of respondent mothers have not accepted family planning after the birth of the first child. This is in sharp contrast to the intervened slums, where 76.74% have accepted family planning after the birth of the first child. In the non intervened slums, even after the birth of the third child, 88% have failed to accept contraception. This shows that while there are conscious efforts on the part of the eligible couples of the intervened slums to accept family planning, in the non intervened slums, deep rooted traditional beliefs prevent such scientific and rational thinking.

Immunisation of Children

In the intervened slums, the cohort of children aged between 1 year and 2 years is 5% more than the cohort of children in the non intervened slums. The proportion of children who have undergone complete immunisation in the intervened slums is as high as 94.7% among the Hindus and 90.3% among the Muslims. In the intervened slums, only 4.4% of the Hindu children and 4.8% of the Muslim children are incompletely immunised. In the non intervened slums, on the other hand, the proportions of incomplete immunisation among the Hindus and Muslims are 41.75% and 83.3% respectively.

In the intervened area, 100% of the eligible couples of all literacy levels and from both religious groups are found to be firm believers in the immunisation of their children. More than 93% of the mothers of all literacy levels of both religious groups believe that immunisation protects the child from 6 killer diseases. In the non intervened slums, only 26.5% of the Hindu mothers and none of the Muslim mothers believe that immunisation protects their children from the 6 killer diseases.

Analysing disease wise, 100% of the eligible couples of both religious groups affirm that immunisation protects the child from developing Polio. In the non intervened slums also, there is some belief in the Polio immunisation, thanks to the effect of the media. The reality, however, is that 55.6% of the children are not immunised completely in the non intervened slums. Hence, possibly there is more hype than rationale in the influence of media in as much as the information generated is not translated into practice in the non intervened slums. Similarly, in the case of Diphtheria, awareness has been generated in both areas. In the intervened slums, such awareness has led to complete immunisation of 93% of the infants. In the non intervened slums, 44.4% of the children have received such complete immunisation. Measles vaccination presents an interesting picture. In the intervened slums, the proportions of actual immunisation in the Hindu and the Muslim community are 95.3% and 99.2% respectively. In the non intervened slums, the proportions are 33.6% and 52.6% respectively.

Even in the intervened slums, 15 Hindus and 1 Muslim respondent have refused to immunise their children. 11 Hindu respondent mothers believe in '*Sitala Puja*' (worship of local goddess) along with traditional herbal treatment. Other 4 mothers rely on homeopathy and *kabiraji* (indigenous method of treatment) treatment. One of the mothers wishes to tie a thread on the holy tree around the tomb of the *Fakir baba* (Holyman of Muslim community).

Hence, it may be concluded that in the intervened slums, extension and outreach services have generated both belief and demand for immunisation and there is almost universal immunisation of children. In the non intervened slums, there has been some responses to the initial rounds of immunisation thanks to the effect of media. This influence, however, has not been sustained and the process of immunisation has not been completed for majority of the children. Social beliefs and cultural taboos have held their sway over the mothers of the non intervened slums and there has not been much rational thinking in this area. There have been a large number of drop outs among the infants who should have received immunisation in the non intervened slums. Lack of facilities and lack of contacts by health workers have led to non sustenance of the interest of the community in the process of immunisation.

Malnutrition

The sample respondent mothers of both the religious groups of the intervened slums have almost complete knowledge of the malnutrition of children under the age of 5 years. About 100% of the Muslim and 99.37% of the Hindu mothers in the intervened slums have this knowledge as compared to 20.95% and 22.1% of the corresponding respondents of the non intervened area.

About 6.97% of the Hindu respondent mothers of the non intervened slums ascribe the causes of malnutrition to the influence of ghosts and evil spirits. In the intervened area, the proportion of respondents believing in ghosts and evil spirits is 0.62% only. One Hindu mother educated up to the primary level and one illiterate Hindu mother belonging to the intervened area subscribes to this social taboo.

Upon analysing those factors which have led to the awareness of the respondent mothers regarding knowledge of malnutrition, 74.9% of the literate respondents of the intervened area and 12.5% of the literate respondents of the non intervened area have stated that health awareness is the motivating factor which has subsequently ~~caused~~^{prevented} malnutrition. 11.7% of the illiterate and 1.2% of the literate respondent mothers of the intervened slums and 2.98% of the illiterate and 6.25% of the respondent mothers of the non intervened slums have stated that due to economic stringency, their children could not be administered nutritious food which has subsequently caused malnutrition.

99.8% of the respondents in the intervened slums have sufficient knowledge of how to retain nutrition in food in the process of cooking as against 23.8% respondents of the non intervened slums who have such knowledge. 76.2% of the respondents have not have any knowledge regarding preservation of nutrients in the cooking process in the non intervened slums. Nearly 98% of the mothers of both religious groups in the intervened are satisfied with the cooking procedure followed in their kitchens. In the non intervened area, the proportion of satisfaction is 45% of the sample respondents of combined religious groups. In the non intervened slums, the reasons for dissatisfaction are mainly on account of social causes, namely, that mothers in law dictates the cooking procedures, there is not enough money to buy nutritious food and a section of the respondents believe that God's grace on the household will prevent malnutrition. In the intervened slums, three mothers of the Muslim community have stated that as the cooking procedure is being followed under the directions of their mothers in law, it is not possible to preserve nutrition in the prescribed fashion.

In the intervened slums, 99.3% of the mothers of all literacy levels and both religious groups have perfect knowledge about preservation of nutrition in foodstuff even after specific methods of cooking. In the non intervened area, 45.4% of Hindu mothers and 47.4% of Muslim mothers have this knowledge. There are four basic cooking procedures which help to preserve nutrition in cooking, namely, retaining the starch of boiled rice, preparing pulses by mixing a few varieties, slicing vegetables in big pieces and chopping vegetables after washing the same. The proportions of respondents in the intervened area who have this knowledge are 76.7%, 86.9%, 89.6% and 93.2% respectively. In the non intervened areas, the proportions are 9.52%, 82.9%, 34.3% and 13.3% respectively, that is, the mothers of the non intervened areas believe in mixing of pulses during cooking but they do not believe in the other nutrition preserving cooking procedures.

In the intervened slums, 100% of the Muslim and 99.6% of the Hindu mothers, and in the non intervened slums, 89.47% of the Muslim mothers and 75.58% of the Hindu mothers believe that both animal protein and vegetables are to be administered to their children's food to administer nutritious food to their children. 89.6% of Hindu mothers and 96.6% of the Muslim mothers in the intervened slums and 89.5% of the Hindu and 100% of the Muslim mothers in the non intervened slums do not support any "gender discrimination" while administering nutritious food to their children. Health awareness has influenced 63.9% of the Hindu mothers and 87.1% of the Muslim respondent mothers in the intervened slums. They have accordingly agreed to provide nutritious food to their children irrespective of gender. No mother of the non intervened slums, however, has been motivated by health awareness. 3% of the mothers of the intervened slums want to administer more nutritious

food to their daughters, as they were the would-be mothers. No mother in the non intervened area subscribe to this view.

In the intervened slums, there are 443 mothers with 616 children under the age of five years. The ratio of children under five years to mothers is 1.39:1 in the intervened slums as compared to 1.58:1 in the non intervened slums. Hence, the proportion of children under 5 years of age is 13.67% lower than that of the non intervened area. Mothers of the 347 males and 269 female children in the intervened slums have identified 59 male children and 43 female children as malnourished on the basis of identifiable symptoms. The incidence of malnourished children in the intervened slums among children under the age of 5 years as derived by actually analysing the growth chart of children is 7.46%. In the non intervened slums, the incidence of malnutrition as derived from an analysis of the growth charts of children under 5 years of age is 31.33%. This is 4.19 times higher than that of the intervened slums. When the mothers of the non intervened slums, however, were asked to identify malnutrition in their children, they could identify only 3.125% children as malnourished. This is because the mothers of the non intervened slums, have very poor knowledge of malnutrition of children under the age of 5 years and hence have failed to identify the symptoms of malnutrition in their children. The correct incidence of malnutrition could be deciphered from the nutritional growth charts. Hence, it is concluded that the incidence of malnutrition is 4.19 times higher among the children under the gap of 5 years in the non intervened slums as compared to the children under the age of 5 years in the intervened slums. The high proportion of malnutrition in the non intervened slums is based on ignorance, lack of health awareness, domination of mothers in law, economic stringency, lack of knowledge of preservation of nutrition in cooking and influence of taboos and superstition.

Diarrhoea

Undoubtedly, awareness of the causes and symptoms of diarrhoea is more in the intervened slums as compared to that in the non intervened slums. The respondent mothers, irrespective of their religion, are able to diagnose diarrhoea in the intervened slums. The mothers in the non intervened slums do not have this knowledge. The mothers in the intervened slums, irrespective of religion, are totally competent to cure diarrhoea at homes with Oral rehydration solution or home made remedies. In the non intervened slums, most children suffering from diarrhoea are rushed to the hospitals for treatment because of lack of proper knowledge of their mother to treat them at homes. As a result of this ignorance diarrhoea becomes acute and condition of children's health becomes serious. The mothers of the intervened slums, unlike their counterparts in the non intervened slums, are also aware of the benefit of colostrums. Mothers of the intervened slums have derived their awareness from the health workers and popular media such as the television and the radio. The mothers in the non intervened slums have depended on whatever knowledge they have received from the media. Income effect has not been established as a determining factor in influencing respondent behaviour in either category of the slum settlements.

General observations

The main determinants of social behaviour relating to health practices in the urban slums which were selected in this study were levels of literacy, religion, income, influence of family members, social beliefs, prejudices, taboos and superstitions. Some of these determinants have been established as significantly influencing health care seeking behaviour of the slum dwellers selected for this study.

Religion has been established as an important factor in deciding on the age of marriage, childbirth, and family size, availing of services of male doctors, acceptance of immunisation, detecting malnutrition and resisting diarrhoea. Literacy levels were better in the intervened slums as compared to that in the non intervened slums. Hindus, on an average, were found to be more educated than their Muslim counterparts. Male members (husbands) were found to be more educated than the female members (wives). Belief in God's blessings as against self-planning was universal and literacy neutral in the non intervened slums. Illiterate mothers have been found to have higher average number of children. Literacy has not been proved to be a determinant in influencing decision-making process of family planning. Choice of family planning methods is also literacy neutral. Decision to immunise children in intervened slums has been proved to be literacy neutral. Practice of home treatment of diarrhoea was established as literacy neutral but in the intervened slums, literacy has been established as an important determinant in influencing and knowledge of and treatment of diarrhoea. Breastfeeding of infants during diarrhoea was found to be literacy neutral but belief in fasting children during diarrhoea was found to be sensitive to literacy. The need for antenatal care and postnatal care was found to be literacy neutral. Income has not been established as a major determinant in the health seeking behaviour. In fact in non intervened slums, those in highest income groups have reported the highest number of children. The need for antenatal and postnatal care has been found to be income neutral. Income effect has been found to be nil in families with malnourished children. Similarly the decision to adopt family planning as well as the choice of contraceptives has been found to be income neutral. Family members have been of strong influence, especially mothers in law and husbands. This influence has been reflected in areas of places of delivery, acceptance of family planning, cooking procedure in homes and satisfaction with the level of nutrition in home made food. Community has strongly influenced the age of marriage. Beliefs in prejudices, taboos and superstitions have been a strong factor in the practice of reproductive health behaviour, acceptance of immunisation and addressing malnutrition and diarrhoea.

Health interventions have overcome most of the negative influences of these determinants especially influence of social beliefs, illiteracy and that of the community by creating awareness through extension work, establishing accessible health facilities and availability of health service providers. This has been evidenced in the findings in the intervened slums.

SOME POLICY OPTIONS

The present study on intervened and non intervened slums studied the social dimensions of health practices in urban slums. Some of these social dimensions so examined are literacy, religion, income, influence of family members and influence of community. The purpose of the study was to ascertain that given these social dimensions, to what extent behaviour of slum dwellers are influenced by social traditions, rituals, social and cultural practices, taboos and superstitions.

The findings of the study helps to observe and suggest a few policy options for the health planners and policy makers while designing and implementing any preventive/promotive health programme for the urban poor.

It is suggested that to be able to intervene successfully in the area of health of the urban poor, there are certain social and cultural requirements to be met. Firstly, it is necessary to adjust to the local culture. While social factors such as age of marriage, influence of laws and social punishments are to be reckoned with, it is very important to work through the local beliefs, superstitions, traditions, taboos and carefully move towards process of behaviour change. Secondly, it requires empathy and client sensitivity of the service providers for the underprivileged who mostly require such services. Thirdly, health professionals are required to be trained in social sciences such as social and individual behaviour, the dynamics of urban slum life and its politics. Fourthly, it is also relevant to be aware of the causes and effects of socio-economic disparities, gender differentials and religious background. This study has shown that religion is an important factor in deciding on many aspects such as age of marriage, childbirth, size of family, availing of services of male doctors, accepting immunisation, detecting malnutrition and resisting diarrhoea. Fifthly, an awareness of the difference between education, literacy and intelligence along with gender differentials therein is required. Sixthly one needs to understand the complexities of cities, towns and peri urban areas, the politics of slum life and how to deal with these. It is equally important to understand the necessity of translating the hype of media into actual practices especially in the areas of immunisation and diarrhoea. Most importantly, it is necessary to understand the culture of service providers that is doctors, auxilliary nurse midwives, community health workers, male multipurpose workers and other extension workers. Thereafter, an updated strategic framework for reproductive and childhood illness, health and development is needed. Religion and social influencing factors need to be taken as a variable for segmentation of behaviour change and focus both on the target age groups and the influential social groups to reinforce the behaviour change effects.

The present study has shown that some of the areas which need careful approach could be providing services of lady doctors for antenatal, postnatal care, actual delivery and family planning counselling. Working through reluctance and ignorance to introduce behaviour changes among the target group of clients is another suggested approach. Training extension workers to escort mothers to hospitals and providing referral transport to mothers to avail of emergency obstetric care is also suggested. As women in a position of stronger decision making are able to decide on many issues relating to reproductive health, the policy makers could work through providing facilities for economic empowerment of women and helping women to form self help groups among themselves. Male health workers need to provide proper counselling to men to remove the prejudices on adverse effects of male sterilisation on their working abilities. Health extension workers need to dissipate the

influence of taboos such as the presence of Goddess *Sitala*(local goddesses) to overcome the traditional reluctance to Measles immunisation. Follow up of the complete cycle of immunisation is advocated strongly in the case of infants. Health workers also need to remove social beliefs that evil spirits cause malnutrition. Intensive work needs to be put in to help mothers detect actual malnourishment in children, Similarly mothers in law need to be informed about the nutrient preservation in cooking by actual cooking demonstration. Health workers need to conduct actual growth monitoring of children under 5 years of age and assist mothers of malnourished children to provide early remedies to such conditions. Health workers also need to advise mothers on the actual cause of diahorrea and how to adopt simple home made remedies to tackle dehydration.

States with a large proportion of urban poor will need to include policy options for innovative approaches to health service delivery including increased access and use of quality services provided by private providers and non-government organisations. While addressing the needs of the urban poor, it may be necessary to design and expand multi-sectoral approaches for prevention and care in slum areas, improve involvement of private sector to increase the reach of quality healthcare services for the urban poor and to review and raise protocols and procedures to allow more practical and feasible approaches for private healthcare providers.

While designing preventive health policies, it would be necessary to pay attention to certain important social realities, which prevail in this country. These are malnutrition, inadequacy of safe water supply, sanitation, illiteracy, poverty, maternal and child health care services. Traditional beliefs, perception of people towards utilisation of health services, corruption levels at primary health centres, long wait, non availability of doctors and improper behaviour of the health staff are the important social factors which are required to be addressed suitably by properly sensitising the health personnel towards the community.

Certain social factors contribute significantly to motivating families to adopt the small family norm. Placement of personnel trained to understand the cultural milieu, to understand the social and economic constraints that the urban poor face and motivated educators sensitive to socio economic realities will perhaps go a long way to motivate people to accept family planning.

It is required to introduce a fundamental shift in the relationship between the community and the health technology that is to be offered by the health services. Health technology and health services need to be made responsive to the community who are to be given social justice in a favourable social, cultural and economic milieu.

Increasing awareness and innovative communication methods helps to dispel the social/religious beliefs regarding conception, contraception and seeking of antenatal care as well as choice of places of delivery. The awareness and knowledge regarding immunisation, nutrition and diahorrea also needs to be strengthened.

In fine, it is concluded that social cultural, environmental and behavioural factors influence the cycle of maternal, child health and nutrition and its main determinants. The challenges hence will be to jointly address the most important determinants with affordable, cost effective, feasible and culturally appropriate interventions and to involve the community in identification of its needs and priorities.

REFERENCES

1. Ahluwalia A (1972). *Sociology of Medicine*, Indian Council for Social Science Research, New Delhi
2. Anderson (1960). *The Urban community in Urban land politics*, United Nations, New York
3. Bala P (1991). *Imperialism and Medicine in Bengal* Sage Publications, New Delhi
4. Banerji D (1971). *Family Planning in India: a critique and a perspective*, People's Publishing House, New Delhi
5. Banerji D (1972). 'Prospects of controlling population growth in India', *Economic and Political Weekly*, No VII, pp 2062-2074
6. Banerji D (1982). *Poverty, Class and Health culture in India*, Volume I, Prachi Prakashan, New Delhi
7. Banerji D (1985). *The making of Health Services in the country*, Lok Prakash, New Delhi
8. Banerji D (1985). *Health and family planning services in India – an epidemiological, socio cultural and political analysis and perspective*, Lok Prakash, New Delhi
9. Banerji D (1986). *Social Sciences and Health Services Development in India: Sociology of formation of an alternate paradigm*, Lok Prakash, New Delhi
10. Banerji D (1990). *A socio cultural, political and administrative analysis of the health programs and policies in India in the eighties –a critical appraisal*, Lok Prakash, New Delhi
11. Banerji D (1996)-Political Economy of Public Health in India in Dasgupta Monica, Chen L. C and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
12. Bang A (1991). 'Vitamin A and childhood mortality: the new magic pill', *Economic and Political Weekly* September 21, 1991
13. Bang R and Bang A. (1996) 'A community study of gynaecological disease in Indian villages; some experiences and reflections' in S. Zeindenstein and K Moore (eds). *Learning about sexuality*, New York: The Population Council, 1996
14. Basu A.M (1989). 'Is discrimination in food really necessary for explaining sex differentials in infant mortality?' *Population Studies*, Volume 43 Number 2
15. Basu S (1990). *Cultural influence and health care use: two regional groups in India*, Studies in Family Planning, Number 21
16. Bhargava P K (1984). 'Changes in the age of marriage and its effect on fertility: a study of slum dwellers in greater Bombay', *The Journal of Family Welfare* Volume XXXI. Number 1
17. Bhatnagar S and Dosajih V (1985). *Magnitude of morbidity and mortality due to diarrhoeal diseases in children below the age of five years in the slum areas of Delhi*, Research studies of National Institute for Health and Family Welfare, New Delhi
18. Bhatnagar S, Dosajh V and Kapoor S D (1986). *Health Care delivery model of urban slums of Delhi*, Research studies of National Institute for Health and Family Welfare, New Delhi

19. Bhatnagar S (1986). *Socio economic and political development of people's responses to their health problems: a case study of Seemapuri resettlement colony in Delhi*, Centre for Social Medicine and Community Health, School of Social Sciences, Jawaharlal Nehru University, New Delhi (M. Phil dissertation)
20. Bhattacharya J et al (1994) 'Tobacco smoking in a defined community of Delhi,' *Indian Journal of Public health*, XXXVIIX, Number 1
21. Biswas R (1994). 'City health development', *Indian Journal of public health* Vol XXXVIII, Number 1
22. Carstairs G (1955). 'Medicine and Faith in rural Rajasthan' in B.D. Paul (ed) *Health, Culture and Community*, Russel Sage Foundation, New York
23. Chakraborty A (1990). *Social stress and mental health in a social psychiatric field in Kolkata*, Sage Publications, New Delhi
24. Chakraborty A M and Halder A (1990). *Slum Dwellers of Kolkata- a socio economic profile*, Kolkata Metropolitan Development Authority, Kolkata
25. Chambers, Robert(1979), "Editorial on Indigenous Knowledge," *IDS Bulletin*, 10: 1-3.
26. Chatterjee M (1988). *Implementing Health Policy*, Manohar Publications, New Delhi
27. Chatterjee M (1996) 'The nutritional challenge to Health and Development' in Dasgupta Monica, Chen L. C and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
28. Chatterjee N et al (1997). *A Socio-Economic survey of the Kolkata Metropolitan area*, Kolkata Metropolitan Development Authority, Kolkata
29. Chaudhuri B (1985). 'Medical Anthropology in India with special reference to the Tribal population' in B. Chaudhuri (ed) *Tribal Health: Social and Cultural dimensions*, Vikas Publishing House, New Delhi
30. *Children and women in India: a situation analysis* (1991), United Nations Childrens Fund, New Delhi
31. *Children and women in India: a situation analysis* (1998), United Nations Childrens Fund, New Delhi
32. Clammer, John(1975), "Economic Anthropology and the Sociology of Development: 'Liberal' Anthropology and the French Critics," in Ivar Oxaal (ed.), *Beyond the Sociology of Development*, London, Routledge Kegan Paul.
33. Colletta, Nat J. (1977), " The use of Indigenous Culture as a Medium for Development : The Indonesian Case, " *Prisma Indonesian Journal of Social and Economic Affairs*," 1(2): 60-73
34. Crook Nigel (1996). 'Urbanization and Health in India' in Dasgupta Monica, Chen L.C and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
35. Desai V (1995). *Community participation and slum housing: a study of Bombay*, Institute of Development Studies, Sussex and Sage publications, New Delhi
36. Djurfeldt and Lindberg (1980). *Pills against poverty: a study of the introduction of Western medicine in a Tamil Village*, Macmillian, New Delhi
37. Dube S (1956). 'Cultural factors in Rural Community Development', *Journal of Asian Studies*, 16:19-30
38. Dubos R (1968). *Man, Medicine and Environment*, Penguin Books, London
39. Dyson T (1996) – 'On the demography of the 1991 census' in Dasgupta Monica and Chen Lincoln C (eds) *Health, Economic Development and Poverty*, Oxford University Press, New Delhi

40. *End of the Project Report of the Kolkata Slum Improvement Project* (1998): Kolkata Metropolitan Development Authority, Kolkata
41. Engels F (1973). *The conditions of working classes in England*, Progress Publishers, Moscow
42. Ganguly K. K (1990). *Role of Hospital Services in Developing the Health Culture of the Community—a case study of Jahangirpuri Resettlement Colony of New Delhi*, Centre for Social Medicine and Community Health, School of Social Sciences, Jawaharlal Nehru University PhD Thesis, New Delhi
43. Government of India (1946). *Health survey and Development Committee (Bhore Committee) Report*, New Delhi: Government of India Press. Volume I
44. Government of India (1997). *Family Planning, Maternal and Child Health and Expanded programme of Immunisation – Programme review and draft population policy* Agenda 5 of the Ministry of Health Family Welfare, New Delhi
45. Guha S (1990). 'Politics in Health and Nutrition of the Urban poor: the Kolkata Slums in health as Development: implications of Research policy and action' *Economic and Political Weekly*, April 17, 1993
46. Gupta Das M, Chen L, Krishnan TN (1996) (eds) *Women's health in India: risk and vulnerability*, Oxford University Press, Bombay
47. Gupta J P et al (1989). *Assessment of Family Welfare/ Primary Health care needs in Urban Areas (specially slums) in cities with population more than two lacs and formulation of proposals for their strengthening*. Research studies, National Institute for Health and Family Welfare, New Delhi
48. Gurusurthy N (1975). *Kallapura—a South Indian village, Dharwad*, Karnatak University Press, Dharwad
49. Gurusurthy N (1990). *Culture and Fertility behaviour among the Yanadis in Bombay*, Himalaya Publishing House, Bombay
50. Harper S (1966). 'Shamanism in South India' in Scott and Volkar (eds) *Medical care readings in Sociology and Medical Institutions*. John Wiley & Sons, Inc, New York
51. Hasan K (1967). *The Cultural Frontiers of Health in village India*, Manaktalas, Bombay
52. Hasan K (1979). *Medical Sociology of Rural India*, Sachin publications, Ajmer
53. *Health and Socio economic Survey in Kolkata Metropolitan Area*, Volume I, II and III. Kolkata Metropolitan Development Authority, Kolkata
54. Hubley E (1992). *Report on Community Health and Education workshop in Indore*, Report of Department for International Development, and New Delhi
55. *Improving Women's Health in India, Development in practice* (1996) World Bank, Washington DC
56. *Informal Consultation on Primary Health care in the Urban Area, Geneva, 26-28th of January (1984)* World Health Organization, Geneva
57. Jayashree T (1989). *Religion, Social Change and Fertility Behaviour in Kerala*, Concept, New Delhi
58. Jayaswal M & Singh A.K (1989) 'Health Modernity in rural Tribals of Bihar' *Social Change*, Volume 19, Number 1
59. Jeejeebhoy S and Koenig M (2002). 'The social context of gynaecological morbidity in Jeejeebhoy, Koenig and Elias (eds) *Research approaches to the study of Reproductive Tract Infections and other Gynaecological Disorders*', Cambridge University Press, Cambridge

60. Jeffery R (1996) – 'Towards a Political Economy of Health Care' in Dasgupta Monica, L.C.Chen and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
61. Kabir M and Krishnan TN (1996)– 'Social Intermediation and Health Changes' in Dasgupta Monica, L.C.Chen and TN Krishnan (eds) *Health, Poverty and Development* Oxford University Press, New Delhi
62. Kar N (1993). Reproductive Health Behaviour of the Nocte Women in Arunachal Pradesh, *Social Change*, Volume 23, Number 4
63. Khan M E (1987). 'Productive and Reproductive roles of Women', *Social Change*: Volume 17, Number 1
64. Khan M.E., Bange S and Philip G (1996) 'Abortion in India – an overview' *Social Change*, Volume 26, Numbers 3&4
65. Khare S (1963). 'Folk Medicine in a North Indian Village' in *Main currents. Indian sociology IV—Social and Cultural context of medicine in India* in Giriraj Gupta (ed) Vikash Publishing House, New Delhi
66. Kopperty (1991). *Social Environment and mother and child health practices in rural population*, Human Resource Development and Environment
67. Levine R (1969). 'Culture, Personality and Socialisation: An evolutionary view' in DA Goslin(ed) *The Handbook of Socialisation Theory and Research*, Rand McNally, Chicago
68. Link E and Mehta S (1964). *Victories in Villages*, State University College, Plattsburgh, New York
69. Lewis, Oscar(1952), *Life in a Mexican Village: Tepoxlan Restudied*, Urbana, University of Illinois Press.
70. Link, Eugene P. and S. Meta (1964), *Victories in Villages-India*, New York State University College, Plattsburgh, New York.
71. Luschinsky M (1963). 'Problems of Cultural Change in the Indian village', *Human Organization*, 22
72. Mackinlay E (1984). *Issues in Political Economy in Health care*, Tavistock, New York
73. Malinowski B (1944). *A Scientific Theory of Culture*, University of North Carolina Press, North Carolina
74. Mamdani M (1972). 'The Myth of Population Control', *Monthly Review Press*, New York.
75. Marriott P (1955) 'Western Medicine in a village of Northern India' in B.D. Paul (ed) *Health, Culture and Community*, Russel Sage Foundation, New York
76. McHugh H (1966). 'Social Disintegration as a requisite of Socialisation', *Social Forces*, PP 354-62
77. Mulgaonkar, Veena. B (1996). 'Reproductive Health of Women in Urban Slums of Bombay', *Social Change*, Volume 26, Numbers 3&4
78. Nagi B. Sand Singh Ravendra (1996). 'Reproductive health of ST and SC women', *Social Change*, Volume 26, Numbers 3&4
79. *National Health policy (1983)* Ministry of Health and Family Welfare, Government of India
80. *National Health policy (2000)* Ministry of Health and Family Welfare, Government of India
81. *National Population policy (2000)* Ministry of Health and Family Welfare, Government of India

82. Niehoff, Arthur H. and J. Charnel Anderson (1964), "The Process of Cross-Cultural Innovation," *International Development Review*. 6(2):S-11.
83. Oomen T (1978) *Doctors and Nurses in India, a study in the Sociology of the Medical Profession*, Paper presented at the Conference on review of Behavioural research in Health and Extension Education, New Delhi (mimeograph)
84. Pachauri S (1996) 'NGO efforts to prevent maternal and infant mortality in India' *Social Change* Volume 26, Numbers 3&4
85. Panda P et al (1993) *Health status of under five in a Ludhiana slum, Health and Population—Perspectives and Issues*, National Institute for Health and Family Welfare New Delhi, Volume 16 (3&4)
86. Paniker P G K (1976). 'Health care delivery system in India—alternative approaches', *Economic and Political Weekly*, Volume XI, Number 22
87. *Participatory Impact Assessment of the Kolkata Slum Improvement Project*, (1997) Department for International Development, United Kingdom publication
88. Patel Pallavi and Capoor Indu (1996). 'Listening and talking with women on health', *Social Change, Volume 26, Numbers 3&4*
89. Piet Pelon N & Rob U (1996) 'Integration of RTI care into existing planning services in Bangladesh. The possible and the practical'. *Social change*, Volume 26, Numbers 3&4
90. Preyer R (1993). 'Impact of adult ill health in household income and ill health in Khulna, Bangladesh', *Environment and Urbanization*, Volume 5, Number 2
91. Qadeer I (1985). 'Health services system: an expression of Socio Economic equalities', *Social Action*, Volume 35
92. Rakesh Kumar T et al (1991). *Health seeking behaviour of urban slum dwellers of Delhi in Health Population*, National Institute for Health and Family Welfare, New Delhi, Volume 14 (1&2)
93. Ray, C.N (1989). 'Health Care in some West Bengal villages', *Social Change*, Volume 19, Number 1
94. Ray N R (1986). *Calcutta---the profile of a city*, K.P.Bagchi & Co, Kolkata
95. Ravindran Sundari T. K (1996). 'Social Inequality and Child Health Status: A Study of a Scheduled Caste Population' in Dasgupta Monica, L.C.Chen and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
96. *RCH Household Survey(1998-99)* – Ministry of Health & Family Welfare, Government of India.
97. *RCH Household Survey(2002-03)* – Ministry of Health & Family Welfare, Government of India.
98. Reddy J P and K Mahadevan (1984). 'Effect of infant and child mortality on fertility behaviour—a study of slum and non slum dwellers of the Hyderabad city', *Journal of Family Welfare*, Volume XXXI, Number 4
99. Reddy M M (1984). 'Status of Women and Family Planning Behaviour among Non-Adoptors' *Social Change*, Volume 14, Number 3
100. *Report on the reorganisation of Family welfare and primary health care services in Urban Areas (1985)* Ministry of Health and Family Welfare, Government of India
101. *Report on Mid term Evaluation of the CUDP III Health programme (1997)* Kolkata Metropolitan Development Authority
102. Ringhein K (1996) 'Male involvement and contraceptive methods for men: present and future' in *Social Change*, Volume 26, Numbers 3&4

103. Rosen G (1971). *Historical trends and future prospects in Public health in A symposium of Perspectives*, Nuffield provincial Hospitals Trust, London
104. Sahu S (1991). 'Health culture in transition: a case study of the Oraon tribe in rural and Industrial nexus', in Joshi and Mahajan (eds): *Studies in Medical Anthropology*, Reliance publishing House, New Delhi
105. Sapir, Debarati Guha (1996). 'Health and Nutrition of the Urban Poor: The Case of the Calcutta Slums' in Dasgupta Monica, L.C.Chen and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
106. Sen Amartya (1996) – 'Objectivity, Health and Policy' in Dasgupta Monica, Chen. L.C and TN Krishnan (eds) – *Health, Poverty and Development*, Oxford University Press, New Delhi
107. Singh A, Jayaswal M. & Chowdhury R. (1996) 'Reproductive and Child Health Education in Tribal Women' in *Social Change*, Volume 26, Numbers 3&4
108. Siva Raju S (1987). 'Socio Economic factors in Family Planning adoption', *Social Change*, Volume 17, Number 1
109. Snow J (1954). *On the mode of communication of Cholera*, John Churchill, London
110. Sokhay Committee report (1948). *Sub committee on Health in the National Planning Commission*, Vora, Bombay
111. Sukhtane P V (1970). 'Size and Nature of Protein Gap', *Nutritional Review* 28, Volume 9, page 229
112. Tamang A (1996) 'Induced abortions and subsequent reproductive behaviour among women in urban areas of Nepal' in *Social Change*, Volume 26, Numbers 3&4
113. *Tanzania Seventh Education Project Appraisal Report*. Report no. 2782-TA. (1980) World Bank, Washington DC
114. *Urban Health Services, WHO Technical report series no. 250*, (1963) World Health Organisation, Geneva.
115. *Urbanization and its implications for Child Health: potential for action* (1988)-World Health Organization, Geneva
116. Visaria, Pravin and Gumber, Anil (1996). 'Socio-economic Differentials in Patterns of Health Care Access and Utilization' in Dasgupta Monica, L.C.Chen and TN Krishnan (eds) *Health, Poverty and Development*, Oxford University Press, New Delhi
117. Waitzin H (1981). 'The Social Origins of illness: a neglected history', *International Journal of Health services* Volume I, Number 1
118. Zurbrigg S (1984). *Rakku's story: structures of ill health and source of change*, George Joseph, Madras