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Utilization of Child Health Care Services in Thana Health Complex of Bangladesh: A Study of Keraniganj

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Abstract: This study is investigated the pattern of utilization of child health care services provided by the Thana Health Complex (THC) of Keraniganj. The overall aim of the study was to identify the factors that are affecting the use of Child Health Care (CHC) services and to provide policy recommendations for improving the utilization of CHC facilities at the THC level. The study focuses on socio-economic factors, knowledge and attitude of the people and demographic factors that are affecting the use of CHC services from population perspectives. Two major killer diseases: diarrhea and acute respiratory infections, and immunization of children under 5 years of age are considered as child health care services in this study. The results show that on average 96.76% of children received vaccination at some time irrespective of level of family income and education of mothers, family income and mother education was found to have positive individual effect on the rate of children vaccination. It was found in the study that higher level of knowledge of the respondents about the CHC service provision increases the use of THC. Mother's education was found to be associated with the use of THC in particular EPI services and reception of diarrhea treatment but not with that of ARI treatment. Family income has been shown to be associated with the use of THC in particular EPI services. But the rate of ARI treatment at the THC was found to be higher in the lower income families. Knowledge and attitude about the CHC services at the THC was found to be positively related with family income and education of mothers. The findings show significant association between distance and use of THC.

Key words: Thana health complex, child health care services, socio-economic conditions, EPI, ARI, diarrhea

INTRODUCTION

Poor health is a severe problem in Bangladesh, which is more visible in case of women and children health. In spite of the success of Expanded Programmes on Immunization (EPI) and increased use of Oral Rehydration Therapy (ORT), the under 5 mortality rate is still high (116/1000 live birth) (WHO, 1999). Pneumonia and diarrhea are the most common causes of death with malnutrition increasing the death of children under five years of age. The

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Bangladesh Demographic and Health Survey (BDHS) reported that children in rural areas of Bangladesh experience a 36% higher risk of dying before age five than urban children (131 vs. 96 per 1000 birth, respectively). The infant mortality rate is 79/1000 5 birth (WHO, 1999). Where, 91/1000 live birth in rural area's infant mortality rate and 73 in urban areas (BDHS, 1997). Every year some 12 million children die before the age of five. Seventy percent of these deaths are caused by 5 common preventable or easily treatable childhood diseases: pneumonia, diarrhea, measles, malaria and poor nutrition. In Bangladesh, Acute Respiratory Infection (ARI) is the number one killer disease. It represents a high burden for the health system and is a common reason for consultation and admission to health facilities. Annual report of the national ARI programme noted that ARI represented 15 to 20% of cases reported from Thana Health Complexes (THCs) and district hospitals in 1995 (DGHS, 1997). Every year 148,000 children are dying due to ARI, mainly pneumonia (UNICEF, 1998).

In Bangladesh 15% of the total population are children under 5 years of age (UNICEF, 1999). In this regard, to improve the health status of the population, especially child health, Government of Bangladesh (GOB) made a number of efforts. For example, from July 1998 the GOB has taken a major step towards reorganizing the health and population sector services, which is known as the Health and Population Sector Programme (HPSP) (MOHFW, 1998). The HPSP, which aims to contribute to the improvement of the health and family welfare status among the most vulnerable women, children and poor in Bangladesh. It specially includes reduction of infant mortality and morbidity for female and male children under five (MOHFW, 1998). The health and population sector programme of the MOHFW (1998-2003) documented that less than 40% of the population has access to basic health care (BIDS, 1995).

Child Health Care encompasses basic preventative and curative care for infants and children. The GOB has implemented control programs for Acute Respiratory Infection (ARI), Diarrhoeal Diseases, Vaccine-Preventable Diseases (EPI) and prevention of vitamin A Deficiency disorders. While, there have been declines in child mortality from all causes in Bangladesh, many children still do not have access to preventive and curative services delivered by trained health workers (Rahman, 2000; Mangoud *et al.*, 1997). Moreover, most sick children present with signs and symptoms related to more than one of these conditions (MOHFW, 1998).

It is evident that the Infant Mortality Rate (IMR) and under 5 mortality rate are still at unacceptable levels. The demand for child health care is high, but the utilizations of the public sector facilities for child health services are very low (Wouters, 1992; Begum, 1997). So, it is important to obtain information about the child health care services provided through THC under the Essential Service Package (ESP) to identify reasons for low utilization of those facilities.

During the last 15 years, Bangladesh has achieved significant reduction in the child mortality rate. The Under 5 Mortality Rate (U5MR) in Bangladesh declined from 151 per thousand live births in 1990 to 77 per thousand live births in 2001 compared to the United Nations (UN) goal of 70 per thousand live births (WHO, 2003). Although, the last 2 decades have shown a substantial decline in Bangladesh's child mortality rate, the levels are still high by any standard (Pushkar and Pal, 2004). Considering the poor health situation, the government of Bangladesh is committed to provide health care services for all, giving special attention to the vast population living in the rural areas (MOHFW, 2003). The NGOs and international communities are also giving considerable effort along with the government. In Bangladesh's health care system, NGOs play an important role by providing healthcare at the grass root level and complementing the government efforts through their countrywide network (Health Economics Unit/MOHFW, 2003).

Utilization of child healthcare services has been identified as an important factor affecting child mortality (Govindasamy and Ramesh, 1997). The utilization of healthcare services is a complex behavioral phenomenon. Empirical studies of preventive and curative services have often found that the utilization of healthcare services is related to the availability, quality, cost and comprehensiveness of services as well as socio-cultural structure, health beliefs and personal characteristics of the users (Chakraborty *et al.*, 2003). Moreover, mother's education also has a great impact on health and survival of children through curative means, whether the mother uses modern facilities or traditional practices (Becker *et al.*, 1993). Nonetheless, child health has been considered as one of the important indicators for describing mortality conditions, health progress and indeed the overall social and economic well being of a country (Islam, 2000).

In this context, this study aims to investigate the issues involved in the utilization of health services. The focus is on child health care services, because child health care is one of the main components of Primary Health Care (PHC). A detailed understanding of the utilization pattern of THC services in rural areas of Bangladesh, particularly in child health care services, the factors affecting and recommendations for improving the situation will be intended to provide in this study.

MATERIALS AND METHODS

Selection of Area and Respondents

The Keraniganj Thana Health Complex was selected as the study area. It was chosen to investigate the utilization pattern of CHC services in this particular THC, which is located near the Dhaka City. The Keraniganj Thana is located in the South-West part of the Dhaka District. It has an area of 167 km². The total population is 634158. Among them 20534 are 0-1 years old and 74511 are 1-5 years old. Administratively the Thana is divided into 12 unions and 36 wards. Under the Keraniganj Thana health complex there are 11 Family Welfare Centers (FWC), 84 Satellite Clinics (SC) and 288 EPI outreach centers. Rate of child immunization is 98.6%, vit. A coverage (0-5) is 95%. The growth rate of population is 1.9%. There are 12 doctors in the THC, one Medical Officer (MO) of Maternal and Child Health (MCH), 3 MOs of Family Planning (FP), 49 Health Assistants (HAs), 3 Health Inspectors (HI) and 8 Assistant Health Inspectors (AHIs).

The study was conducted from April, 2006 to September, 2006 at the Keraniganj Thana Health Complex, Keraniganj, Dhaka, Bangladesh. The respondents consist of parents of the children under 5 years of age who were present in the THC. The parents were randomly selected among them who came to receive child health care service. The study was conducted among 50 parents. Among them 41 mothers, 5 fathers, 2 relatives and 2 father and mother together were included. Information about 64 children (29 boys and 35 girls) under 5 years of age were found from 50 respondents.

Variables and Sources of Data

Education level of mother, family income, knowledge and attitude of the people about THC services and accessibility factors like distance, travel cost and travel time were taken as independent variable. The CHC services provided by the THC: EPI, diarrhea treatment and ARI treatment were taken as dependent variable. Primary data was collected from the Keraniganj THC through the interview of parents of under-5 children. The secondary data was collected from reports of BBS, BDHS, DGHS, WHO and MOHFW.

Method of Data Collection

A questionnaire was set up to interview the users of CHC services at the THC which focused on the socio-economic status, knowledge and attitude of the people about CHC services at the THC, demographic factors and information about the children under 5 years of age. Interviews were carried out among parents of the children of under 5 years of age who were present in the THC during the time of interview at the THC. They were randomly selected from parents as respondent who came to receive child health care services for their children. Fifty parents were interviewed for the study.

Methods of Analysis

The quantitative data have been presented in tabular form and analyzed by using descriptive (Hootman, 1992; Gordon, 2008) and bivariate analysis (Levy and Nobay, 1986; Reitsma *et al.*, 2005). The objectives of these analysis were to understand the distribution pattern of the study data in general; identify the relationship between the dependent and independent variables and finally to estimate the overall effects of independent variables on the use of CHC services.

Descriptive Analysis

This analysis paints a picture of the quantitative data. It examines the variability of data and describes the sample (Hootman, 1992; Gordon, 2008). It also provides a description of the characteristics of the study population including their socio-economic condition, health seeking behavior and types of health service facility they use during sickness in general and specifically at the time of CHC need. All this information was found to be important and provides a good basis for further analysis.

Bivariate Analysis

To gain an understanding of the cross variation and association between dependent and independent variables, bivariate analysis has been performed (Levy and Nobay, 1986; Reitsma *et al.*, 2005). Two independent variables, family income and education level of mothers were selected for this analysis. Three child health services, immunization, diarrhea and ARI treatment were selected as dependent variables. Bivariate analyses were performed using dependent and independent variables.

RESULTS

Results of Bivariate Analysis

Various bivariate analyses of dependent and independent variables were explored to identify reasons for under-utilization. Two independent variables: education level of mother and family income has been selected for this analysis. These variables have been chosen based on the finding from studies in other countries that reported their effect on the utilization of health services. The bivariate analysis helped in understanding and in identifying factors those have significant effect on the utilization of services. The bivariate analyses provided individual effects of these 2 selected independent variables on the use of different CHC services provided through the THC.

Child Vaccination

The results show that on average 96.23% of children received vaccination at some time irrespective of level of family income. Similarly, 97.3% of children received vaccination

irrespective of the level of education of mothers. The children from medium income group received more vaccine (95.83%) than that of low income group (92.86%). All children (100%) from high income group are vaccinated. A similar trend was also found among the 3 education groups. All the children (100%) of primary and above primary educated mothers received vaccination in the sample population. The result show that only 4% of all study children did not received vaccine ever. They are mainly from low and medium income families and non-educated mother's families. These findings are shown in Table 1 and 2. The vaccination is found to be higher in high income and primary and above primary educational group compared to that of low income and uneducated groups. These findings indicate that the family income and mother's education has some individual effects on the vaccination in the Keraniganj area, which is similar in case of rural areas of Bangladesh (Bhuiya *et al.*, 1995; Biswas *et al.*, 2001).

Child Vaccination at THC

The highest number (33.33%) of child vaccination received from THC was found in the middle income family groups and lowest number (14.29%) in the low income family groups. Similarly, this number is highest (40%) in the primary educated mother's group. Then gradually above primary educated (37.50%) and non-educated (24%) mother's children received vaccination from the THC. So, it is clear that the trend of receiving EPI service from the THC and is affected by both education of mother and family income as shown in Table 3 and 4. The utilization of 3 basic child health care facilities significantly higher in the

Table 1: Distribution of child vaccinated among three income groups

Income levels	Frequency (N)	Vaccination				
		%	Yes	%	No	%
Low (upto 2000)	14	28.57	13	92.86	1	7.14
Medium (2000-4000)	24	48.98	23	95.83	1	4.17
High (above 4000)	11	22.45	11	100.00	0	0.00
Total	49	100.00	47	95.92	2	4.08

Table 2: Distribution of child vaccinated among three education level of mother

Education levels	Frequency (N)	Vaccination				
		%	Yes	%	No	%
No education	25	58.14	23	92.00	2	8.00
Primary education	10	23.26	10	100.00	0	0.00
Above primary education	8	18.60	8	100.00	0	0.00
Total	43	100.00	41	95.35	2	4.65

Table 3: Distribution of three CHC services taken from THC according to the level of mother education

Level of mother education	Frequency (N)	%	EPI at THC		Diarrhea at THC		ARI at THC	
			%	%	%	%	%	%
No education	25	58.14	6	24.00	6	24.00	21	84.00
Primary education	10	23.26	4	40.00	4	40.00	6	60.00
Above primary education	8	18.60	3	37.50	5	62.50	6	75.00
Total	43	100.00	13	30.23	15	34.88	33	76.74

Table 4: Distribution of three CHC services taken from THC according to the income level

Family incom	Frequency (N)	%	EPI at THC		Diarrhea at THC		ARI at THC	
			%	%	%	%	%	%
Low (upto 2000)	14	28.57	2	14.29	4	28.57	10	71.43
Medium (2000-4000)	24	48.98	8	33.33	8	33.33	17	70.83
High (above 4000)	11	22.45	3	27.27	3	27.27	6	54.55
Total	49	100.00	13	26.53	15	30.61	33	67.35

Table 5: Incidence of diarrhea and ARI among three income groups

Family income	Frequency (N)	Incidence of diarrhea	%	Incidence of ARI	%
Low (upto 2000)	14	6	42.9	6	42.9
Medium (2000-4000)	24	10	41.7	17	70.9
High (above 4000)	11	3	27.3	9	81.9

Table 6: Incidence of diarrhea and ARI among education level of mothers

Level of mother education	Frequency (N)	Incidence of diarrhea	%	Incidence of ARI	%
No education	25	9	36.0	18	72
Primary education	10	3	30.0	9	90
Above primary education	8	7	87.5	6	75

case of educated mother as well as medium and high family income. So, a significant association was found between the family income and mother's education and vaccination at THC. The higher the level of income and education, the higher the rate of utilization of the EPI service. The reason may be that educated mothers and parents of higher income families are more concerned about immunizing their children and they come to the THC by themselves. On the other hands, less educated mothers and lower income family members are mostly inspired to immunize their children by the health worker or others. As a result they go to the nearest service centers.

Incidence of Diarrhea

The overall incidence of diarrhea among the children of the study sample, within the 2 weeks before the study was almost 30% (19 cases among 64 children found from 50 respondents). The incidence of diarrhea was more (42.9%) among lower income group. Then among medium income group (41.7%) and high income group (27.3%). It was more (87.5%) in the group of above primary mother's family and less (30%) in the primary educated mother's family. The incidence of diarrhea significantly association with the income level of the family as shown in the Table 5. Only 27% incidence was observed in high income group compare to that of low (43%) and medium (42%) (Table 5). Therefore, the lower the income, the higher the incidence rate. Whereas the high incidence was observed in family with above primary educated mothers (88%) (Table 6).

Incidence of ARI

The incidence of ARI among the children of the study has found to be 55% (35 cases among 64 children found from 50 respondents). The incidence of ARI was found more among the children of higher income group (81.9%) compared to middle (70.9%) income group and low (42.9%) income group (Table 5). But children from the primary educated mother's families had higher (90%) incidence of ARI compared to that of above primary (75%) and non educated (72%) mother's family (Table 5). So, a positive relation was found between family income level and incidence of ARI.

The Place of Diarrhea Treatment

Out of 19 children with diarrhea, 15 (79%) were treated in the THC. More children from middle income group (33.33%) (Table 4) and from above primary educated mother's family (62.50%) (Table 3) visited THC for diarrhea treatment. Then gradually other income groups, low income and higher income groups came to THC for diarrhea treatment. So, there is no significant association found between income and diarrhea treatment received from THC. But a clear association between educated mother's family and diarrhea treatment at THC was

found from Table 3. We see that the incidence of diarrhea and treatment reception is higher in the cases of children from above primary educated mother's family (62.50%).

The Place of ARI Treatment

Out of 35 children with ARI, 33 (94.2%) were treated in the THC. More children of non-educated mother's family (84%) and from lower income families (71.43%) visited THC for ARI treatment. From Table 3 and 4, we can see the above findings and also that there is no clear association between education of mothers and ARI treatment reception at the THC. But lower income families receive more ARI treatment from the THC than higher income families. The reason may be free supply of medicine from the THC.

Cross Table Analysis

Table 7-9 reflect that non-educated mothers are higher (71.43%) in the low-income family groups than middle-income (55.56%) and higher income (50%) family groups. And there is no above primary educated mothers (0%) in the low income family group which is highest (50%) in the higher income family group.

Children from middle income families and from primary educated mother's families receive more EPI service from the THC compared to other groups. Similarly, frequencies of ARI and diarrhea treatment reception are higher in the lower level of income and education groups. So the findings from above tables support the results of previous analysis.

Knowledge, Attitude and Use of CHC Services

From the following tables, Table 10 and 11, we can see a picture that the percentage of awareness about child vaccination is higher in the families with higher education (90 and 75%) and also higher income (100%). It is clearly evident from the above tables that educated mothers are more concerned about child vaccination. The similar trend is seen in case of higher income family groups. Percentage of self decision of mother is higher (62.5%) in the above primary educated mothers than other groups such as no education (40%) and primary education (60%) (Table 12).

Table 7: Association between level of education and use of three CHC services for respondents of low income group

Variables	Low income group (upto 2000) (N)		EPI at THC		Diarrhea at THC		ARI at THC	
		%		%		%		%
No education	10	71.43	1	10.00	4	40.00	8	80.00
Primary education	4	28.57	1	25.00	0	0.00	2	50.00
Above primary education	0	0.00	0	0.00	0	0.00	0	0.00
Total	14	100.00	2	14.29	4	28.57	10	71.43

Table 8: Association between level of education and use of three CHC services for respondents of medium income group

Variables	Low income group (upto 2000) (N)		EPI at THC		Diarrhea at THC		ARI at THC	
		%		%		%		%
No education	10	55.56	4	40.00	2	20.00	10	100.00
Primary education	5	27.78	3	60.00	4	80.00	4	80.00
Above primary education	3	16.67	1	33.33	2	66.67	3	100.00
Total	18	100.00	8	44.44	8	44.44	17	94.44

Table 9: Association between level of education and use of three CHC services for respondents of high income group

Variables	Low income group (above 4000) (N)		EPI at THC		Diarrhea at THC		ARI at THC	
		%		%		%		%
No education	5	50	1	20.00	0	0.00	3	60.00
Primary education	0	0	0	0.00	0	0.00	0	0.00
Above primary education	5	50	2	40.00	3	60.00	3	60.00
Total	10	100	3	30.00	3	30.00	6	60.00

Table 10: Association between education level of mothers with their awareness about child immunization

Education of mother	Frequency (N)	Awareness				
		%	Yes	%	No	%
No Education	25	58.14	17	68.00	8	32.00
Primary Education	10	23.26	9	90.00	1	10.00
Above primary education	8	18.60	6	75.00	2	25.00
Total	43	100.00	32	74.42	11	25.58

Table 11: Association between level of income and awareness of mothers about child vaccination

Level of income	Frequency (N)	Awareness				
		%	Yes	%	No	%
Low (up to 2000)	14	28.57	8	57.14	6	42.86
Medium (2000-4000)	24	48.98	20	83.33	4	16.67
High (above 4000)	11	22.45	11	100.00	0	0.00
Total	49	100.00	39	79.59	10	20.41

Table 12: Association between decision making with education level of mothers

Education	Frequency (N)	Decision making							
		Self	%	Husband	%	Both	%	Others	%
No education	25	10	40.0	10	62.50	2	66.67	3	100
Primary education	10	6	60.0	3	18.75	1	33.33	0	0
Above primary education	8	5	62.5	3	18.75	0	0.00	0	0
Total	43	21	48.83	16	100.00	3	100.00	3	100

Table 13: Association between decision making with income level

Income	Frequency (N)	Decision making							
		Self	%	Husband	%	Both	%	Others	%
Low (up to 2000)	14	6	42.80	6	37.50	1	33.33	2	66.67
Medium (2000-4000)	18	11	61.11	5	31.25	2	66.67	0	0.00
High (above 4000)	10	4	40.00	5	31.25	0	0.00	1	33.33
Total	42	21	50.00	16	100.00	3	100.00	3	100.00

Table 14: Association between distance and use of three CHC services

Distance (miles)	Frequency (N)	Decision making							
		EPI at THC		Diarrhea at THC		ARI at THC			
	%	%	%	%	%	%	%		
Below 3	37	74	11	29.73	11	29.73	24	64.86	
Between 4-6	8	16	2	25.00	2	25.00	6	75.50	
Above 6	5	10	0	0.00	2	40.00	3	60.00	
Total	50	100	13	26.00	15	30.00	33	66.00	

On the other hand, the mother's decision making is higher in the medium income family groups (61.11%). Decision taken by other than mother and father is higher (100 and 66.67%) in the non-educated and lower income category and zero in the primary level and middle income family group (Table 13). Mother's decision making is increasing with the level of education. On the other hand, father's decision making is negatively related with income and mother's education. In the medium income families, mothers also earn by doing some job. So, they can contribute in decision making.

Access and Use of CHC Services

The results of bivariate analysis of Table 14 shows that distance was significantly associated with the use of THC for EPI service. It was found that those who live within 3 miles from the THC used more EPI service. Diarrhea treatment and ARI treatment are not clearly related to distance.

Table 15: Association between travel cost per visit and use of three CHC services

Travel cost per visit-tk	Frequency		EPI at THC		Diarrhea at THC		ARI at THC	
	(N)	%		%		%		%
Below 10	26	52	10	38.46	9	34.62	22	84.62
Between 11-30	17	34	2	11.76	5	29.41	7	41.18
Above 30	7	14	1	14.29	1	14.29	4	57.14
Total	50	100	13	26.00	15	30.00	33	66.00

Table 16: Association between travel time and use of three CHC services

Travel time (min)	Frequency		EPI at THC		Diarrhea at THC		ARI at THC	
	(N)	%		%		%		%
Below 30	24	48	8	33.33	8	33.33	18	75.00
Between 30-60	16	32	5	31.25	4	25.00	7	43.75
Above 60	10	20	0	0.00	3	30.00	8	80.00
Total	50	100	13	26.00	15	30.00	33	66.00

In case of travel cost as shown in Table 15, percentage of user declined with the increase of that cost. So, it was found that travel cost is a significant factor for the use of CHC facility at THC. If we consider the association between travel-time and use of CHC services, we see that the frequency of the use of EPI services and diarrhea treatment declines with the increase of travel time (Table 16). The lower the travel time, the higher the percentage of service use in each of the cases of EPI and diarrhea. But no clear association was found between these variable and ARI treatment at THC. So, the level of utilization of EPI service at the THC is negatively related with the travel cost, distance and travel time.

DISCUSSION

Bangladesh is one of the least developed countries in the world and per capita income is US\$ 273 (BBS, 1998 and BBS and UNICEF, 1998). The majority (84.36%) of the country's population lives in the rural areas (BBS, 1996, 1997). Socio-economically it is less advanced and is a traditional rural society. Use of modern health services of this major section of the population depends partly on their socio-economic condition. Studies in different country have also found association between the socio-economic conditions such as education and family income on the use of health services. The third and fourth 5 years plan (1980-90) of the government of Bangladesh took an integrating view of national development in a long-term perspective to address the acute problem of poverty, unemployment, rapid population growth, malnutrition and illiteracy. The process is continuing to improve the socio-economic conditions of the people, but it is far away from achieving the targets (Rahman, 2000; Mangoud *et al.*, 1997).

It was found that majority (72%) of the study population use THC for all kind of treatment for their children and rest of them use other available sources of health service. But to ensure 100% use of the THC or at least to increase the use THC, the government should concentrate on improving the quality of service provided by the THC. Almost, 50% of the respondents reported good quality of service but the percentage of moderate and bad report are not very low. The main reason for not using THC was found to be non-availability and in particular ineffectiveness of medicine for the children.

Family income and mother's education was found to have positive individual effect on the rate of child vaccination. The percentage of vaccinated children (97% approx.) among the sample population was found close to that of the recorded percentage (98.6%) at the Keraniganj. It was found in the study that higher level of knowledge of the respondents about the CHC service provision of the THC increases the use of THC. Mother's education

and family income had clear association with the use of THC in particular EPI services. Mother's education was found to be significantly associated with the reception of diarrhea treatment at the THC but not with that of ARI treatment at the THC. No significant association was found between income and diarrhea treatment reception. But the rate of ARI treatment at the THC was found to be higher in the lower income families. Knowledge and attitude about the CHC services at the THC was found to be positively related with family income and education of mothers. Evident was found that educated mothers are more concerned about the health status of their children and receiving treatment. A similar relation was also found in the cases of higher family income groups. The decision making capacity of the mothers was positively related with the level of education of mother and higher family income. On average, reception of ARI treatment at THC is higher (94.2%) compared to that of diarrhea treatment (79%) and EPI (29%), irrespective of the income group and mother's education.

It was hypothesized that difficulties in access to the THC were deterring people from using CHC in rural Bangladesh. The findings show significant association between distance and use of THC. This was more dominant in the case of EPI service reception but not very much in case of diarrhea and ARI treatment. Travel cost was found to be a significant factor for the use of EPI and diarrhea treatment but not for that of ARI treatment. Travel time had negative relation with the use of EPI services and diarrhea treatment but it had no clear effect on the use of ARI treatment. The reason may be, in case of emergency, people do not care about distance, time or cost but seek for proper treatment. Primary health care won widespread acceptance, among both governments, international and non-governmental organization since 1978. Different countries restructured their health system based on the primary health care concept (DGHS, 1997). A wide range of basic services has been organized at the grass root level for improvement of the health status of the population particularly maternal and child health. However, as we see in this study the utilization of those services is still low in Bangladesh like other developing countries. Available studies show that utilization of health services is influenced by individual, communities as well as health care delivery system of the country (Rahman, 2000). Utilization of health care services is affected by various factors. The circumstances and characteristics of the client are designated as user factors such as age, sex, education, income, parity, culture and attitudinal factors. On the other hand, variables primarily associated with service delivery systems or facilities are designated as service factors such as availability, accessibility of services and quality of care (Rahman, 2000).

We observed that educational status, income, knowledge about immunization and communicable diseases, etc play an important role in influencing the people toward immunization as well as utilization of health care services. The results were related with the observation as mentioned by Begum (1997). It is revealed by them that the major causes for non-awareness about EPI diseases and vaccines were ignorance and negligence, bad communication and side effects after vaccination.

It was found that the reasons for under-utilization of health care services range from individual behaviour, community characteristics as well as health system of the country. The pattern of utilization is not molded by one to one relationships of variables. It is a complex relationship among those variables that decide the utilization of health services (Rahman, 2000). The accessibility, as well as the quality of the services, shortage of medicine and long waiting time at public provisions is also responsible for such behaviour. Long distances as well as long waiting time for treatment are noticeable in rural areas (BBS, 2001).

These findings of the study substantiate the facts that socio-economic status exerts a dominating control on child healthcare in Bangladesh. Although, mothers' education plays a dominating role in their children's health status, poverty status plays a more vital role in the selection of qualified providers (Huq and Tasnim, 2008). Therefore, we believe that parent's education level and socioeconomic conditions can substantially improve the utilization of child primacy health care services at THC in Bangladesh.

CONCLUSIONS

Findings proved that quality of public sector health care facilities is unacceptable to people, as such; priority of the government needs to be shifted from expansion of facilities to improvement in the quality of services. A comprehensive training program on behavioral change could be initiated. Supply of sufficient amount of drugs is necessary in the THC. Emphasis should be given on the local need and especially on the treatment facility of endemic diseases.

Study Limitations

The main limitation of this study was the small sample size. A larger sample size could help to get clear idea about the relationship among the variables that were hypothesized to be affective for the use of CHC services at the THC. The study was conducted only on one THC, which was not sufficient enough to draw any concrete conclusion from the information collected. Information was collected from the user's perspective but provider's perspective had to be considered also. Respondents were selected among those who were present at the THC for receiving CHC services. So there may have some probability of recall bias in case of informing about the quality of services.

Suggestion for Further Research

The information should be collected both from user's and provider's perspective to get more distinct and significant association between the variables. A larger sample size would help to draw conclusions about the relationship between the variables. Sample from more than one THC should be taken for more accurate results. A further research on the utilization of CHC may be carried out on other health care facilities in public and private sectors. A comparison on utilization of CHC services between private and public facilities can be made.

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