

Reprint

ISSN 1997-2571 (Web Version)

Journal of Innovation & Development Strategy (JIDS)

(*J. Innov. Dev. Strategy*)

Volume: 10

Issue: 1

April 2016

J. Innov. Dev. Strategy 10(1): 12-19 (April 2016)

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HEALTH CARE SEEKING BEHAVIOR FOR CHILD ILLNESS AMONG MOTHERS IN RURAL BANGLADESH

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Accepted for publication on 10 March 2016

ABSTRACT

Begum S, Rabeya T, Majumder MMA, Faruque MO (2016) Health care seeking behavior for child illness among mothers in rural Bangladesh. *J. Innov. Dev. Strategy*. 10(1), 12-19.

The aim of this study was to examine the health care-seeking behavior for the under 5 year's child illness in rural Bangladesh. The study was conducted in one municipality and four unions of Dhamoirhat Upazila. Data was collected from February 2014 to April 2014. The sample consisted of 1200 households and the households were selected through a two-stage cluster sampling method. Quantitative data was collected by using the face-to-face interview by using a structured pre-tested questionnaire. For qualitative data collection, focus groups discussion, case studies, and participant observation were used. The collected data were analyzed using SPSS program. Immunization data were collected from a total of 365 children age of 0-59 months and the mothers of under 5 year's children. The mothers reported that 75.1% children had an immunization card, and 15.2% had a health card but were not capable of showing the card during the interview. Children age of 0-59 months immunized with three doses of DPT were 80.2%, measles were 88.5%, and 87.2% children had completed 3rd dose of Penta vaccine as per national protocol. Vitamin A capsule were given to 82.7% children having age of 0-59 months. In the case of child nutrition, 19.7% children having age of 6-59 months whose height for age is moderate/ below minus two standard deviations from the median, 19.4% children having age of 6-59 months whose underweight is moderate/ below 'minus two standard deviations' from the median and 11.4% children having age of 6-59 months whose wasting is moderate/below 'minus two standard deviations' from the median. Data as regards to Positive Deviance Health children according to nutritional status having age of 6-59 months revealed that 25.7% children were severe wasted, 12.9% were severe underweight and 8.1 were severe stunting. During the last two weeks prior to the survey date, 6.9% children of aged 0-59 months had diarrhea. 66.7% caregivers of children aged of 0-59 months with diarrhea in past 2 weeks received oral rehydration therapy (ORT). For treating diarrhea, 47.4% parents received treatment from government hospital for children aged of 0-59 months in the last two weeks followed by the government health center is 15.8%, from the private pharmacy is 15.8%, from private medical sector like from private hospital/ clinic is 15.8%, from private physician is 10.5%, from relative/ friend is also 10.5%, from village health worker/ community health worker is 5.3%, and from mobile outreach/ clinic is 5.3%. The number of children aged of under 5 years have suffered from pneumonia during last 2 weeks is 13.4%. It was also found that about 56.1% caregivers received treatment for pneumonia from government hospital for children aged of 0-59 months followed by government health center is 22.0%, from village health worker/ community health worker are 22.0%, from mobile outreach/ clinic is 7.3%. Children caregivers also seek treatment from private medical sector like from the private physician is 7.3%, private pharmacy is 17.1%, from relative/ friend is also 2.4%. In Dhamoirhat Upazila, poverty is the main causes for receiving the proper treatment for children. Appropriate policy and programs, related to mother and child nutrition should be taken by the government and NGOs. At the same time, there should be established good linkage with the service providing agencies like the department of government and NGOs for the availability of essential drugs, transportation and other health services for children.

Key words: child mortality, health seeking behavior

INTRODUCTION

The term health seeking behavior is a multidimensional approach and it varies from culture to culture. Igun (1979) considered health seeking behavior as a tool for investigating individuals' or a population's interaction with the health system. In other words, as health-seeking behavior is a social process, it not only involves individuals' interactions with the social network. Health seeking behavior is also a social action involving other individuals (Hampshire *et al.* 2011). Kroeger (1983) viewed that the factors determining the health behaviors may be seen in various contexts: physical, socio-economic, cultural and political. Shaheen and Rahman (2001) stated that health-seeking behavior refers to the sequence of actions that patients and/or their parents take to solve their problem. In a greater sense, the utilization of a health care system, public or private, formal or non-formal, may depend on socio-demographic factors, social structures, and level of education, cultural beliefs and practices, gender discrimination, status of women, economic and political systems, environmental conditions, and the disease pattern and health care system itself (Katung 2001; Stephenson and Hennink, 2004). On the other hand, a variety of factors has been identified as the leading causes of poor utilization of primary health care services which includes the poor socio-economic status, lack of accessibility, cultural beliefs and perceptions, low literacy level of the mothers and large family size (Shaikh and Hatcher, 2005).

Health is a basic human right, therefore, more investment is essential to achieve the highest standard of health for children and mother and also promoting the economic growth. Schultz (1999) found that better health had a positive impact on the learning abilities of children, and leads to better educational outcomes that resulted in increased efficiency of human capital formation by individuals and households. Bangladesh has already achieved considerable progress in improving a number of child health related indicators over the years.

However, there are a number of challenges still remain in child health despite the significant success in child and maternal mortality. For example, the maternal mortality ratio is still unacceptably high (194 per 1,000,000 live births) in Bangladesh (NIPORT 2011: Bangladesh Demographic and Health Survey). Glewwe and Miguel (2008) found that a considerable number of children in less developed countries suffer from poor health and nutrition, and complete far fewer years and learn less per year of schooling than that of their counterparts in developed countries. These challenges require further special programs and long-term projects supported by sufficient budgetary provisions and institutional accountability both in the government and non-government health center. Research findings also have been identified a variety of factors as the root causes of child mortality such as lack of primary health care services, poverty, lack of caregiver's education, malnutrition, acute respiratory infections (ARI), and diarrhea. Among the various causes of childhood mortality, malnutrition is one of the major causes of childhood mortality in Bangladesh. The survey findings of NIPORT showed that 42.7% of children <5 years of age living in rural Bangladesh had moderate or severe stunting and 38.7% were underweight (NIPORT 2011: Bangladesh Demographic and Health Survey). Moreover, there are two important factors that contribute to the high rate of child mortality in low-income countries such as low rate of healthcare-seeking from trained healthcare providers and a delay in seeking this care (Caldwell and Caldwell, 1988; Cleland 1990; Barrera 1990; Dreze 1999; Dreze and Murthi, 2001; Murray and Chen, 1993; Victora *et al.* 2003).

As a concept, health care system incorporates all health-related aspects of society. These include patterns of belief about the causes of illness, norms governing choice and evaluation of treatment, socially legitimate status, the power relationship, interaction settings and institutions (Scambler 1992). In Bangladesh, like most other societies, the simultaneous existence of the different system of medicine or medical pluralism is a fact of life (Ahmed 1993). According to Kleinman (1985) health care is described as a local cultural system composed of three overlapping parts: the popular sector, the professional sector, and the folk sector. The popular area is the "lay non-professional, non-specialist" domain of society composed of individuals, family, and social nexus, where illness is first recognized and treatment initiated. On the other hand, folk sector consists of non-professional, non-bureaucratic, specialist like traditional birth attendants (TBAs), bone setters, magical practitioners etc. The professional sector comprises the organized legally sanctioned scientific (modern) medicine and professionalized indigenous healing traditions like ayurvedic, Unani etc. (Kleinman 1985). In rural Bangladesh, during the illness of children, the caregivers receive treatment from the village doctor, MBBS doctor, health worker, medical assistant/paramedic, and pharmacist. At the same time, caregivers of children seek advice or treatment from many places like government hospital, government health center, village health worker, mobile outreach/clinic, private hospital, private physician, private pharmacy, relative/friend, local shop, traditional practitioner etc. Although in Bangladesh note worthy progress has been made in child health due to the successful implementation of Expanded Program on Immunization, Integrated Management of Childhood Illness, diarrheal disease control, and control of acute respiratory tract infection programs, but further research is needed especially in evaluating the child health-seeking behavior. This study, thus, aimed to explore the care-seeking behavior for the under 5 child during illness. In this paper, we also discuss the immunization and nutritional status of the children, the places from where the caregivers seek treatment for children during the illness and the types of health care providers.

METHODOLOGY

The study was conducted in Dhamoirhat Upazila, during the period from February 2014 to April 2014. The total number of population in the program impact area of World vision Bangladesh was 58,565 of where male is 11,316 (BBS 2011). The proportion of the ethnic population in Dhamoirhat Upazila is 6.67. The major sources of income in this area are agriculture (45.5%), agricultural labors (28.25%), non-agriculture labor (6.17%), business (6.58%), regular employment (2.50%) and rickshaw/van puller (5.17%). In Dhamoirhat Upazila, 58.50% households have owned agriculture land (World Vision Bangladesh 2014: Baseline Survey of Dhamoirhat Area Development Program). The study participants for this study were the pregnant and lactating women with under 2 children, ultra poor households, Community Based Organization members, registered children under health program of World Vision Bangladesh and their families, ethnic families, entrepreneur groups, government and non-government organizations employers' groups. The sample households for this study were selected through a two-stage cluster sampling method. Primarily, mauza/village in rural areas and mahalla in the town areas served as the primary sampling units (PSU), which was drawn with standard probability proportional sampling (PPS) methods. After that, each selected cluster consists of a number of households, which is the secondary sampling unit (SSU). From the 34,889 households; a sample of 1,200 households was drawn. At the first stage, 30 clusters were proportionally identified with the help of cluster sampling method. In the second stage, the identified clusters were divided into different segments comprising 100-120 households and finally, 40 households were interviewed from each selected cluster (30×40=1200 households).

Data collection

Data was collected by the researcher under the program of “Baseline survey of Dharmoirhat Area Development Program of World Vision Bangladesh”. Data were collected using a pre-designed, pre-tested, semi-structured and, open-ended questionnaire. Additionally, few data were collected by using the caregiver surveys. Caregiver surveys were conducted on the basis of some proposed questions related to health care seeking behavior related to child illness. Additionally, for qualitative data collection, in-depth interviews, focus groups discussion (FGD), case studies, and participant observation were used. The purpose of FGD was to obtain the perception of the caregivers’ on nutrition, immunization status of the children, breast-feeding practices, diarrhea, and pneumonia status of the children. FGD session lasted for 35-50 minutes and discussions were recorded on tape, notes were taken concurrently. In addition, anthropometric measurement method was also used to measure the nutritional status of children of 6-59 months in terms of stunting, wasting and underweight. The quantitative data was processed through SPSS program.

RESULTS

Demographic and socio-economic profile of the households

The study shows that out of total 1200 households 77.3% are Bengalis and 22.7% are from various ethnic communities such as Santal, Oraon, Mundari, Mahali, Pahan, Singh, Mahato, Turi and Mali. As regards to religion, the percentage of Islam is 69.8, Hinduism 14.3, and Christian is 15.3. It is also found that among the surveyed households, 90.5% are male-headed. The majority of the study household members belong to the age group of 25 to 49 years (44.8%). It is also found that 8.7% children are with age below 5 years and 10.5% are of age 50 years and above. Among the household head 22.4% completely illiterate, 42.9% can sign only, 11.6% are grade 1 to grade 5 class passed, 15.3% are grade 6 to grade 9 passed, 6.8% are SSC and higher grade passed. With the household members age of 7 years and above, it was found that 12.9% are illiterate, 28.2% can sign only, 4.2% can read only, 22.5% are grade 1 to grade 5 passed, 21% is grade 6 to grade 9 passed, and 11.4% is SSC and higher grade passed. Marital status of the household’s age of 10 years and above shows that 72.5% is married followed by 24.3% is unmarried/single, 2.7% is the widow, and 0.6% is divorced/separated. The study also found that 4.2% girl’s age of 10 to 17 years are married and 3.7% boy’s age between 10 and 20 years are married. Data as regards to household primary occupation reveals that out of total 1,200 households, 28.4% household head involved in cultivation, 24.0% in agriculture labor, 17.3% in non-agriculture labor, 4.6% in rickshaw/van pulling/driver, 3.3% in service, 6.9% in business/petty trade, 7.7% in household work, 3.1% in mason/carpentry/pottery, and 4.7% in others profession. Alternatively, 89% households head had no secondary occupation.

Water sanitation and hygiene

A safe and sustainable water supply, suitable sanitation, and hygienic disposal of human waste can significantly reduce the morbidity status both of the child and other family members. Both urban and rural areas of Bangladesh, people are frequently suffering from diseases related to lack of clean drinking water, hygienic sanitation, and unhealthy practices. Inadequate disposal of human excreta and personal hygiene is associated with a range of diseases including diarrheal diseases and polio and is an important determinant for stunting. Improved sanitation can reduce diarrheal disease by more than a third (Cairncross *et al.* 2010). In the study area, 99.3% households reported that tube-well/deep tube well was their main source of drinking water. Most of the households (77.6%) have their own tube-well, and 22.4% do not have their own tube-well and required a time to collect drinking water.

It is also found that adult members of 17.6% households used flush latrine, 51.6% used pit latrine with ring slab, 3.5% used pit latrine without slab, 8.4% used katcha latrine, 4.8% used open/hanging latrine, 13.5% had no latrine/used bush/field, and 0.6% used other places for toilet using. Overall, 72.7% households had the access to the safe latrine. On the other hand, children of 13.4% household’s used flush latrine, 21.1% households used pit latrine with ring slab, 1.9% households used pit latrine without slab, 10.6% households used katcha latrine, 23.9% households used open/hanging latrine, 15.1% households had no latrine/used bush/field, and 14% households used other places. In addition, 36.4% household reported that children used the safe latrine and 37.4% parents/caregiver reported that they put child feces/the stool of children in specific hole/place, 37.9% put the stool of children in the toilet, 18.1% thrown beside the kitchen/tube well, and 6.6% thrown the stool of children anywhere.

Immunization

Immunization data were collected from a total of 365 children age of 0-59 months by seeing the health card and/or verbally. The mothers of under 5 children were asked whether they have completed the course of vaccination of their children or not. It was found that 75.1% of all surveyed children had an immunization card, and 15.2% allegedly had a health card but were not able to show the card during the interview. In addition, 4.7% children had no health card, 3.8% children had lost the card and 0.3% cases were not given permission to see the

card. Among the 365 children, 243 (66.6%) child immunization history were collected by seeing the health card, 99 (27.1%) children history were collected through verbal information/mothers recall and 23 (6.3%) children history were collected both verbal and seeing the card. Table 1 describes the immunization status of children aged of 0-59 months during the interview. Data shows that 80.2% children of age 0-59 months were immunized with three doses of DPT (the rate for boys was 80.7% and for girls the rate was 79.8%). Moreover, about 65.9% (66.7% boys and 65.0% girls) children age 0-11 months were immunized with 3 doses of DPT vaccine, 83.0% (78.6% boys and 88.0% girls) children age of 12-23 months were immunized with 3 doses of DPT vaccine and 83.6% (86.6% boys and 81.0% girls) children age 24-59 months were immunized with 3 doses of DPT vaccine. Data regarding measles suggest that a total of 88.5% children of age 0-59 months were immunized with measles vaccine (the rate for boys was 89.9% and for the girls it was 87.1%). It is found that about 52.3% (66.7% boys and 35.0% girls) children age of 0-11 months were immunized with measles vaccine, 90.6% (85.7% boys and 96.0% girls) children age of 12-23 months were immunized with measles vaccine and 98.6% (100% boys and 97.5% girls) children age of 24-59 months were immunized with measles vaccine.

Regarding Penta vaccine, it was found that 87.2% children of age 0-59 months had completed 3rd dose of Penta vaccine as per national protocol (the rate for boys was 84.0% and for the girls the rate was 90.3%). By age, it is found that about 61.4% (62.5% boys and 60.0% girls) children age of 0-11 months, 88.7% (78.6% boys and 100% girls) children age of 12-23 months, and 94.5% (94% boys and 94.9% girls) children age of 24-59 months had completed 3 doses of Penta vaccine as per national protocol. Apart from the status of immunization, the study also collected data on the intake of vitamin A capsule by children. Findings suggest that 82.7% (80.7% boys and 84.7% girls) of the children age of 0-59 months were given vitamin A capsule. By age, 54.5% (54.2% boys and 55.0% girls) children age of 0-11 months, 88.7% (82.1% boys and 96.0% girls) children age of 12-23 months, and 89.0% (89.6% boys and 88.6% girls) children age of 24-59 months were given vitamin A capsule.

Table 1. Percent distribution of the immunization status of children age of 0-59 months

Immunization	Card documented record only (in percentage)											
	All children (0-59 months)			Children age 0-11 months			Children age 12-23 months			Children age 24-59 months		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Immunized with 3 rd dose of DPT	80.7	79.8	80.2	66.7	65.0	65.9	78.6	88.0	83.0	86.6	81.0	83.6
Immunized with Measles or MMR vaccination	89.9	87.1	88.5	66.7	35.0	52.3	85.7	96.0	90.6	100	97.5	98.6
Children completed 3 rd dose of Penta vaccine as per national protocol	84.0	90.3	87.2	62.5	60.0	61.4	78.6	100	88.7	94.0	94.9	94.5
Within the last six months, the child given a vitamin A dose	80.7	84.7	82.7	54.2	55.0	54.5	82.1	96.0	88.7	89.6	88.6	89.0

Child growth and nutrition

Good nutrition is the basis for survival and proper development of child health. Undernourished mothers face greater risks during pregnancy and childbirth. Unnourished children also have lower resistance to infection and are more likely to die from common childhood ailments such as diarrheal diseases and respiratory infections. Here, it is mentionable that World Vision has developed a Positive Deviance/Hearth (PD/Hearth) approach to decrease the current levels of childhood malnutrition. The 'positive deviance' approach is a community-based rehabilitation and behavior change intervention for families with underweight pre-school children. This approach is used to identify behaviors practiced by the mothers or caregivers of well-nourished children from underprivileged families and to transfer such positive practices to others in the community with malnourished children. Mainly PD/Hearth is implemented in such community where at least 30% of children under 5 are underweight (low weight for age). World Vision Bangladesh received training in 2006, and started implementing PD/Hearth to address high levels of moderate childhood malnutrition. The result shows that 36.5% of under 5 year's children were enrolled in Positive Deviance session during the period of last six months. It is also found that among the survey children 20.2% were the siblings of PD/hearth children. Gender wise analysis with minus two standard deviation (-2SD) Z-scores on wasting category implies that 15.8% of

boys aged between 6 and 59 months compared to 12.5% of girls of the same age are malnourished. In the case of underweight, the rate for boys was 39.1% and for girls, it was 37.7%. In addition, -2SD Z-scores on stunting shows that 47.2% of the boys compared to 46.0% of the girls are malnourished.

In the case of weight for age (underweight), the girls were more adequately nourished (boys 37.5% and the girls 24.7%). In the case of severe malnutrition (stunting), 26.7% girls and 24.4% boys with age of 24-36 months were severely stunted which is comparatively higher than children with age of 6-23 months and 36+ months. Table 2 shows the nutritional status of the siblings of Positive Deviance (PD) Hearth children. It is found that 28.2% children are severely underweight, 26.8% are severely stunted and 13.0% are severely wasted who is the sibling of PD hearth children. The focus group discussion (FGD) participants also reported that most of the household's members in the Dhamoirhat Upazila are poor and vulnerable. They cannot feed their children properly. Therefore, all children in this area should be brought under the PD/hearth program. Moreover, World Vision Bangladesh should provide support with food aid for poor children and mothers.

Table 2. Nutritional status of the siblings of Positive Deviance/Hearth children

Nutritional status	Nutritional status of the siblings of PD hearth child					
	Yes					
	Male		Female		Total	
	N	%	N	%	N	%
Weight for age Z-score(WAZ)						
Severe	12	34.3%	8	22.2%	20	28.2%
Moderate	7	20.0%	7	19.4%	14	19.7%
Mild	6	17.1%	12	33.3%	18	25.4%
Adequate	10	28.6%	9	25.0%	19	26.8%
Total	35	100.0	36	100.0%	71	100.0%
Height for age Z-score(HAZ)						
Severe	11	31.4%	8	22.2%	19	26.8%
Moderate	2	5.7%	6	16.7%	8	11.3%
Mild	11	31.4%	17	47.2%	28	39.4%
Adequate	11	31.4%	5	13.9%	16	22.5%
Total	35	100.0	36	100.0%	71	100.0%
Weight for height Z-score(WHZ)						
Severe	4	12.1%	5	13.9%	9	13.0%
Moderate	7	21.2%	7	19.4%	14	20.3%
Mild	9	27.3%	9	25.0%	18	26.1%
Adequate	13	39.4%	15	41.7%	28	40.6%
Total	33	100.0	36	100.0%	69	100.0%

Diarrhea

Diarrhea is one of the leading causes of childhood morbidity and mortality in developing countries (Petri *et al.* 2008). The survey found that among the total 306 children age of 0-59 months, 6.9% had suffered from diarrhea in the last two weeks from the survey date. Gender wise, the rate of prevalence of diarrhea was higher among boys (7.4%) than girls (6.3%). Age wise, the rate of prevalence of diarrhea was highest among children in the age group of 12-23 months with 10.5% (boys 3.1% and girls 20.0%), followed by children of the age group of 24-59 months was 6.3%. It was low among the children from the age of 0-11 months which was recorded 4.5%. The incidence of diarrhea varies in different seasons and occurs mostly during the flood time.

To examine the extent to which mothers change the nature of feeding to the child during the episode of diarrhea and in the context of normal time, mothers were asked whether they had changed the amount that the child was given to feed during the usual time in comparison to disease incident period. Data indicates that about 14.3% children with diarrhea had received neither milk nor water even any food, 14.3% children were given much less drink, 52.4% children were given somewhat less amount of drink, 4.8% children were given the similar amount of drink, and 14.3% children were given more drink during diarrhea. It is also found that 9.4% children's food was stopped, 38.1% children were given much less amount of food, 28.6% children were given somewhat less amount of food, 14.3% children were given the same amount of food and 4.8% children were given more food to eat during diarrhea. Regarding fluid or oral saline, it is observed that 66.7% children were given fluid/homemade saline during the episode of diarrhea followed by 61.9% children were given government recommended homemade saline. In addition, 90.5% households had to arrange other treatment for the diarrhea patients. For treating diarrhea, 47.4% children received treatment from the government hospital, followed by from government health center 15.8%, from private hospital/clinic 15.8%, from private pharmacy 15.8%, from private physician 10.5%, from relatives 10.5%, from village health worker 5.3%, from mobile clinic 5.3%, and

from private medical center 5.3%. The data also shows that 21.1% sought treatment from village doctor, 31.6% sought from MBBS doctor, and 10.5% sought from the healer, 15.8% sought from health workers, 10.5% sought from the medical assistant, and another 10.5% sought from the pharmacist.

Pneumonia

Pneumonia is a major cause of death among all age groups of children. Mainly the rate of pneumonia is high among the children in less than five years of age. Liu *et al.* (2010) reported that Acute Lower Respiratory Infections (ALRI), particularly pneumonia are the leading and largest single cause of mortality among <5-year-old children in developing countries. Appropriate treatment for pneumonia in rural areas of Bangladesh is very important due to the insufficient healthcare facilities. Black *et al.* (2010) conducted a research on the causes of child mortality and found that among the under 5 children who die in Bangladesh each year, 14% are due to pneumonia. The study findings indicate that out of total 306 under 5 children, 13.4% suffered from a cough (boys 16.2% and girls 10.8%) in the past 2 weeks from the survey date.

Table 3 shows the distribution of children aged of 0-59 months according to sources of Acute Respiratory Infection (ARI) treatment. It is found that almost 100% affected children received treatment from different sources. Treatment from government hospital was received by 56.1% children (boys 45.8% and girls 70.6%), from government health center was 22%, from village health worker was 22%, from the mobile clinic was 7.3%, from private physicians were 7.3%, from the pharmacy was 17.1%, and 2.4% received treatment from traditional healers (quack, healer, kabiraj etc). Regarding service provider of Acute Respiratory Infection (ARI) treatment, it was found that the highest 34.6% received treatment from MBBS doctor, followed by 26.8% received from village doctor, 19.5% received from the pharmacist, 9.8% received from the health worker, 7.3% received from medical assistant and 2.4% received from others. It is also found that 41 affected children were given pill/syrup, 2 children were given the injection, and 1 child was given paracetamol tablet for curing the problems.

Table 3. Percentage distribution of children aged of 0-59 months according to sources of Acute Respiratory Infection (ARI) treatment

Place of received treatment	Boys	Girls	Total
Government hospital	45.8%	70.6%	56.1%
Government health centre	25.0%	17.6%	22.0%
Village health worker/ community health worker	20.8%	23.5%	22.0%
Mobile clinic	12.5%	0.0%	7.3%
Private physician	8.3%	5.9%	7.3%
Private pharmacy	8.3%	29.4%	17.1%
Relative/ friend	4.2%	0.0%	2.4%
Shop	0.0%	5.9%	2.4%
Traditional practitioner (quack, healer, kabiraj etc.)	4.2%	0.0%	2.4%
N	24	17	41

Discussion

This study shows that in Dharmoirhat Upazila, 99.6% of the population uses improved drinking water. In the case of child immunization, 91.7% of children aged of 12-23 months have completed 3rd dose of Penta vaccine. Communities are found more conscious about hygienic sanitation, and health related issues especially for the common ailment of children, child nutrition and safe motherhood. In this Upazila, 100% children aged of 0-59 months received Vitamin A capsule in the last 6 months. Presently, parents are much aware about child rights and nutrition. Positive deviance hearth program under health project helps the mother to know the child health properly and also to prepare nutritious food, measurement of child height and weight, preparation of mixed diet for children and mother, to learn about cleanliness, pregnant mother' health needs, hand washing before taking meals etc. It appears that children are healthier now and their growth rate is normal according to their age. For treating the children who suffered from diarrhea, 66.7% caregivers of children aged of 0-59 months with diarrhea received oral rehydration therapy (ORT) and 51.2% children aged of 0-59 months with "presumed pneumonia" (cough and rapid or difficult breathing) taken to a proper health care provider. However, there is inadequate participation by the children in positive deviance nutritional hearth program in the study area which is recorded only 36.5%.

CONCLUSION AND RECOMMENDATIONS

It is found that there are many vulnerable groups of population in Dharmoirhat Upazila like indigenous peoples, religious minority group, orphanage, poor pregnant mother, widow etc. The regular vulnerabilities in this area are the prevalence of diarrhea, pneumonia, typhoid, and unavailability of good treatment opportunities, lack of health-related knowledge by the ethnic community, the existence of malnutrition, school dropout, early marriage, child labor, religious beliefs and practices for treating the illness. In this context, the study findings

have some further important policy messages. For instance, a comprehensive intervention program should be introduced especially on child nutrition and pregnant mothers. Caregiver's awareness level on child health related issues needs to be increased. The activities of Water and Sanitation (WATSAN) committee in Dhamoirhat Upazila need to be more functional to decrease the practice of open defecation. It is also found that a large number of children aged of 12-23 months were not fully immunized and card retention rate is not optimum level. So there is a scope to strengthen government immunization program for ensuring the full dose of immunization of children. Data also depicts that the main reason for school dropout both in the primary and secondary level are children have to assist with household chores. On the other hand, illiteracy, belief in traditional healers, lack of accountability of health care providers, lack of regular monitoring of public health facilities act as a barrier to the effective service utilization by the beneficiaries. So the program coverage of World Vision Bangladesh and NGOs which are working in Dhamoirhat Upazila should be enlarged to address the health needs of many poor and vulnerable groups in this area.

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