



PERCEPTION REGARDING ACUTE RESPIRATORY TRACT INFECTION AMONG MOTHERS OF UNDER FIVE CHILDREN

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Abstract

It was a cross sectional study conducted among 285 mothers of under five children in selected rural areas in Tangail District during the period of January to March 2016, to assess the mothers' perception regarding acute respiratory tract infection in children under five years of age. The interview of respondents was performed by using the semi-structured questionnaire. Majority (47.7%) of the respondents were in age group 26-30 years with mean age 26.51 (S.D of ± 3.74) years, minimum 18 and maximum 38 years. Maximum mothers (46.7%) had education class 6 to class 10. Most (88.8%) of the respondents were house wife. Majority (85%) were Muslims and 52% were residing in nuclear family, maximum family size of the respondents were 3-8 persons in case of respondents with mean and S.D of $6.75(\pm 3.52)$, 76% of the respondents lived in semi pucca houses and near about 100% using tube well water and 66% used sanitary with water sealed latrine. Majority (27.7%) of the respondents had monthly family income up to 10,000 taka, mean monthly income 29535.1 taka with S.D= ± 21600.946 , minimum and maximum income were 4000.0 and 80000.0 taka respectively. Majority (65.7%) of the respondents were full complete of vaccination status of her child, all of the respondents (100.0%) said that they gave colostrum to her child. Very few respondents (5.3%, 4.2%) were aware of giving more breast milk and food during acute respiratory tract infection respectively. The study also revealed that around all respondents heard the name of acute respiratory tract infection which were mostly (82.4%) from mass media. Fever were described by 100% of the mothers as the common

symptoms of acute respiratory tract infection. Regarding health care seeking pattern, 85.6% of the respondents consulted with doctor and 68.4% preferred to visit pharmacy drug seller. Increase temperature (96.5%) and respiratory distress (84.6%) were stated as the severe symptoms of acute respiratory tract infection by the mothers. Majority (88.8%) of the respondents consulted with doctor, 87.1% continued breast feeding, 86.3% rubbed hot oil in chest and back of the child, rest of them, gave tulsi leaves juice, black tea with ginger, honey, feed the child frequently and fewer portion of respondents (0.7%) gave lemon juice to child when her child had simple cough or cold.

Majority (73%) of the respondents could point out the cause of acute respiratory tract infection. Most (97.1%) of the respondents mentioned cold food/drink as the causes of acute respiratory tract infection and 41.8% stated the presence of organism as the causative agent. Maximum (84%) respondents could not tell about any preventive measure to be taken for acute respiratory tract infection. Majority (53%) of the respondents had fair perception, 46% had poor perception while only 1% had good perception level about acute respiratory tract infection. In this study, perception level was found to be associated with education level ($P = 0.000$), total monthly family income ($P = 0.014$) and age ($P = 0.021$) of the respondents.

Introduction

Every day, on average more than twenty six thousand children under age of five die around the world, mostly from preventable causes. Nearly all of them live in developing world. More than one third of these children die during the first month of life, usually at home and without access to essential health services and basic commodities that might save their lives. Some succumb to respiratory or diarrheal infections that are no longer threats in industrialized countries or to early childhood diseases that are easily prevented through vaccines such as measles (UNICEF, 2008).

Acute respiratory infection is an infection that may interfere with normal breathing. It usually begins as a viral infection in the nose, trachea or lungs. If the infection isn't treated, it can spread to the entire respiratory system (written by health line editorial team, medically reviewed by Deborah Weatherspoon,ph.D,R.N,CRNA).Upper respiratory tract infections are illness caused by an acute infection which involves the upper respiratory tract including the nose,sinuses,pharynx or larynx.This commonly includes tonsillitis, pharyngitis,laryngitis,sinusitis,otitis media and common cold. Lower respiratory tract infection, while often used as a synonym for pneumonia, can also be applied to other types of infection including lung abscess and acute bronchitis. Symptoms include shortness of breath, weakness, fever, coughing and fatigue. The two most common are bronchitis and pneumonia.

The primary causes of persistently high mortality are infectious diseases. Particularly important are diseases for which effective immunization is not widely available, such as diarrhea or acute respiratory infections (Goldman N et al, 2000).Diarrheal and acute respiratory infection are common childhood diseases throughout the world. However, in poorer countries, children are most likely to experience repeated infections, to become seriously ill once they contract an infection and to die, in part because they do not receive appropriate or timely treatment, either at home or from a health care provider and also mothers cannot distinguish the acute respiratory infections from other diseases because of their similar symptoms, such as fever, cough and hypertension.

There are five major causes for the deaths of most of the under five children-pneumonia, diarrhea, malaria, measles and malnutrition. Seven out of ten childhood deaths in developing countries can be attributed to these five causes or often some combination of them; and around

the world three out of every four children who seek healthcare are suffering from at least one of these conditions. Though it is within knowledge and capability to treat and prevent all of them, 23,000 children die due to these illnesses each day (WHO, 1997).

ARI are deadly, especially pneumonia. Nearly 13 million under five children die each year in the developing countries. ARI alone or linked to other illnesses cause 4.3million of these deaths. ARI are the leading cause of death among young children. Nearly 12,000 children die from them each day. The average child in a developing country has a cough, cold or other acute respiratory infection 4-8 times a year. Most of these episodes are mild and short-lived, but one in every 30-50 turns into life threatening pneumonia. Without proper treatment 10-20% of young children who get pneumonia die. For infants under one year and particularly for those under two months of age, the fatality rates are higher. Pneumonia, primarily bacterial pneumonia is responsible for 90% of all ARI deaths in developing countries. It cuts short the lives of 4 million young children every year (Dr. Afaf Mustafa Eltyeb, 1996).

Almost 40 percent of all under five deaths occur during the neonatal period, the first month of life, from a verity of complications. Of these neonatal deaths, around 26 percent accounting for 10 percent of all under five deaths-are caused by severe infections. A significant proportion of these infection is caused by pneumonia and sepsis(a serious blood-borne bacterial infection that is also treated with antibiotic).Around 2 million children under five die from pneumonia each year-around 1 in 5 deaths globally. In addition, up to 1 million more infants die from severe infections including pneumonia during the neonatal period. Despite progress since the 1980s, diarrheal diseases account for 17 percent of under five deaths. Malaria, Measles and AIDS taken together, are responsible for 15 percent of child deaths. Many conditions and diseases interact to increase child mortality beyond their individual impacts with under-nutrition contributing up to 50 percent of child deaths. Unsafe water, poor hygiene practices and inadequate sanitation are not only the causes of the continued high incidence of diarrheal diseases; they are a significant contributing factor in under-five mortality caused by pneumonia, neonatal disorders and under-nutrition (UNICEF, 2008).

ARI is high burden for health system and a common reason for consultations and admission to health facilities.ARI is responsible for almost a third (30%) of all pediatric consultation at Thana Health Complex (THCs) and Union Health & Family Welfare Centers (UHFWCs) in 1988, according to data from health.

Information unit & for 30-40% of admission at Dhaka Medical College Hospital during the period 1982-1986 (**National ARI Programme, 1996**). Data from National ARI program showed that ARI represented 15-20% of cases reported from THCs & District Hospital in 1995. In the year 2000, total visit rate due to ARI was 11/1000 under 5 population & out of 1,007,990 cases 844,261(83.73%) were no pneumonia, 116,372(11.54%) & 47,357(4.69%) were of severe form of pneumonia (**Child Health Programme, ESP, DGHS, 2000**). On an average a child suffers from 3-5 episodes of ARI each year. Around 11 children are dying from pneumonia every hour. ARI accounts for 100,000 under 5 deaths every year (UNICEF, 2000).

These serious threats to children's health have been difficult to control for a number of reasons. Inadequate living conditions including poor water supply, bad hygiene, malnutrition and overcrowding promote the rapid spread of the diseases. Malnutrition is one of the major causes of infection like ARI. Malnutrition and infections are linked in a downward spiral, each exacerbating the effect of others. Poor feeding practices contribute to malnutrition. Malnourished children are in turn, more vulnerable to diseases and the vicious circle is established.

Besides these reason, however, an important reason is the ignorance of the parents to recognize that their children are sick and need appropriate measures either at home or at hospital. Harmful wrong practices even compound the problems. Over the past decades the developing countries, under the guidance of WHO have been adopting new approaches to reduce the mortality and morbidity. An acceptable strategy is 'case management'; that is adoptable initially at home level and later at the level of healthcare facilities when the condition worsens. This strategy remains at the center of efforts by the healthcare system of developing countries to reduce childhood mortality and to improve child health.

The incidence of pneumonia and bronchitis has been studied in 2205 infants over the first five years of life. Since access to health services is limited in many developing countries, prompt treatment may also require training health workers to diagnose and treat children with pneumonia in the community. Studies show that community health workers can effectively manage uncomplicated pneumonia in the community. Mother's knowledge can be very important factors in reducing the occurrence of pneumonia in children under five years (Siswanto Bunyan et al, 2007).

Now a days, as the ARI is becoming alarming situation in our country & it is most frequent types of childhood illness throughout the world & leading cause of childhood death in developing countries, so that measure should be taken to reduce the incidence of ARI which indirectly reduce the social as well as economic burden.

Owing to ignorance or inadequate knowledge, the parents cannot take care of their children. In the management of the child's sickness, it is utmost importance for the parents to have some knowledge about the disease. For this reason, parents should be educated properly. This help to improve the pre-existing knowledge, attitude, behavior of the parents. On the other hand, preventive measures should be taken in order to reduce the mortality & morbidity of ARI.

Materials and method

The cross sectional study was conducted to assess the mothers' perception regarding acute respiratory tract infection in children under five years of age in selected rural areas. This study was conducted as per as following methodology:

Study Design

The study was a cross sectional study. The perception of mothers having under-5 children about sign symptoms, homecare of ARI and care seeking conditions of this disease was assessed. This was one type of need assessment study or baseline survey to determine the current status of intervention being operated for control of ARI in rural areas and to make future plan of action to be taken to reduce morbidity and mortality of under-5 children due to this illness.

Study population

Mothers of under five years children during the period of study in selected rural areas of Bangladesh was the study population. The respondents (mothers) gladly expressed their interest to participate voluntarily in this study.

Study place

The Study was conducted in Mirzapur & Paharkanchanpur under Tangail district, Bangladesh, which were selected purposively where people were living with poverty and low school attainment. These areas were easily approachable and accessible from every corner of Tangail city. These places were densely populated rural in Tangail city. The rural areas consisted of population of almost all religion.

Study Period

The study was conducted from January to March, 2016. It started with protocol development and completed with final report submission.

Sample size

To determine the minimum sample size, the following standard formula is widely used in biomedical and social research. I want in my study,

$$n = z^2pq/d^2$$

Where,

z= at 95% confidence limit the value of z is 1.96

n= required sample size

p= estimated prevalence = 0.5 p= Expected proportion of event if not

Known, it is regarded as 0.5 (50%)

q=1-p

d=margin of error at 5% (standard value of 0.05)

So, $n = \{(1.96)^2 \times 0.5 \times (1-0.5)\} / (0.05)^2\}$

$$\begin{aligned} &= (3.8416 \times 0.5 \times 0.5) / 0.0025 \\ &= 0.9604 / 0.0025 \\ &= 384 \end{aligned}$$

Estimated sample size was 384.

Due to allocation of data collection time, the feasible sample size had to be 285.

Sampling technique

Convenient type of non-probability sampling technique was used for this study as we required reaching the study participants within the shortest possible time while proportionality was not of primary concern.

Data collection tool

A semi structured questionnaire was developed both in English and in Bangla using variables and specific objectives of the study from the mothers by face to face interview. It contained question related to: 1. Socio-demographic characteristics

2. Information regarding Vaccination to their child 3. Information on breast feeding and weaning practices 4. Information regarding ARI

The questionnaire was pre-tested in a similar rural area, amended accordingly and was finalized. The final interview was taken during the scheduled period.

Scoring of the tool

Some questions were written in the questionnaire for identify the perception level of the respondents. Total score of these questions was 42. The scores between 0-21 was considered as poor, the scores 22-32 were considered as fair and the score 33 and above were considered as good.

Data Collection Technique

Researcher himself collected data by means of the following techniques:

- Face to face interview

The interview was conducted privately as far as possible and before preceding the data collection, the detail of the study was explained to each eligible respondent and informed written consents were obtained from the respondents. Interview was taken in a quiet place; no other person was allowed to influence the replying of the respondent. It took on average 30 minutes to complete the interview of a single respondent.

Data processing

Data processing involves

- Categorization of the data
- Coding
- Summarizing the data
- Categorizing to detect the errors and to maintain consistency and validity
- Then these were entered into SPSS software in a computer for analysis

Data Analysis

The data was collected, verified and checked to exclude any error. Further validation checks for accuracy and consistency were carried out afterwards. Finally data was analyzed by computer through Statistical Package for Social Science (SPSS) program (version 20) according to the variables to fulfill the objectives of this study. For descriptive statistics means, standard deviation and ranges for categorical data were calculated as required. For inferential statistics, Fisher's Exact test were done to analyze the association between mothers' perceptions & socio-demographic characteristics.

Data presentation

Data was presented by tables, charts, figures, statistical inferences.

Selection criteria

A) Inclusion Criteria:

1. Mothers of under five years children in rural area
2. Mothers who are willing to participate

B) Exclusion criteria:

1. Mothers of under five years children who are not willing to participate
2. Mentally retarded or seriously ill mothers
3. Mothers with children having chronic respiratory diseases

RESULTS

Distribution of the respondents by religion

Age in years	Frequency	Percent	Statistics
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Figure

1: Distribution of the respondents by religion

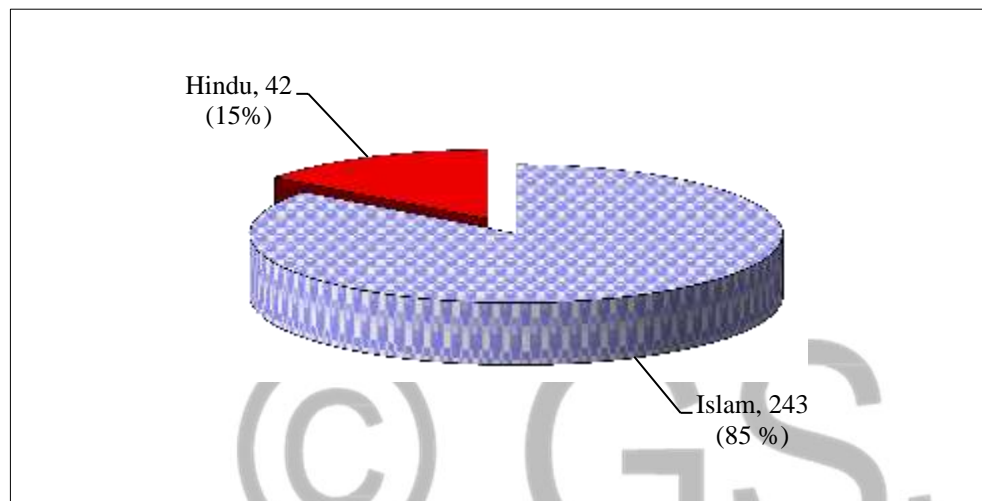


Figure1 shows that out of 285 respondents, majority [243 (85%)] were Muslim while Hindu were 42 (15%).

Distribution of the respondents by the age

Table 1: Distribution of the respondents by the age

16-20	13	4.6	Mean=26.51 Median=26.00 Mode=25.00 St. Deviation= ± 3.74 Minimum=18 Maximum=38
21-25	105	36.8	
26-30	136	47.7	
31-35	28	9.8	
36-40	3	1.1	
Total	285	100.0	

Table 1 illustrate that among 285, majority [136 (47.7%)] of the respondents were in the age group 26-30years, then 105 (36.8%) were in 21-25years, 28 (9.8%) were in 31-35years age group while 13(4.6%) were in 16-20 years group and lowest only 3(1.1%) were in 36-40 years group.

Minimum age was 18 years where maximum age was 38 years. Here Mean, 26.51 years, median 26years & mode 25years and St. deviation ± 3 .

Distribution of the respondents by education

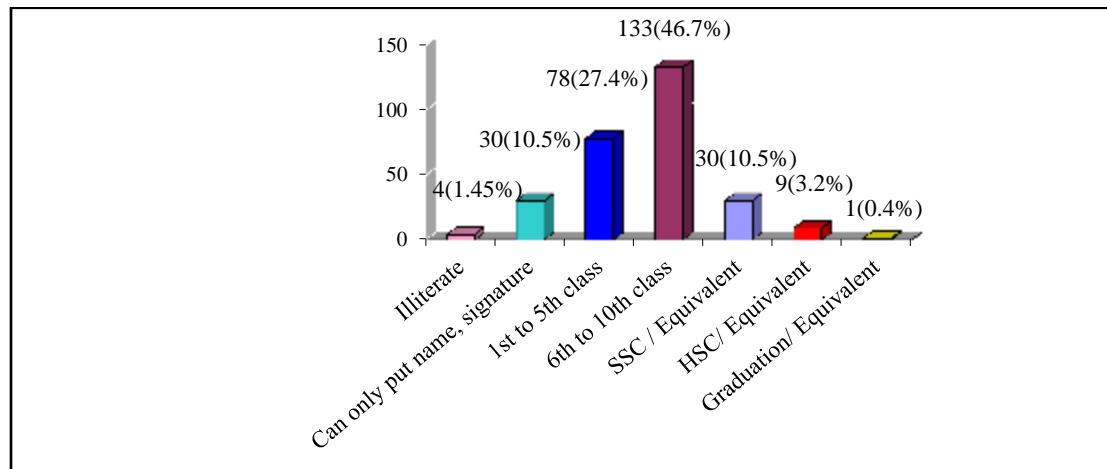
Figure 2: Distribution of the respondents by education

Figure 2 shows that among 285 respondents, majority [133 (46.7%)] were in 6th to 10th class, 78 (27.4%) were in class group 1-5, 30(10.5 %) were can only put name, signature and also have passed SSC / equivalent, 9 (3.2%) have passed HSC / equivalent, 4 (1.4%) were illiterate, while 1(0.4%) were graduate or equivalent.

Distribution of the respondents by her husband education

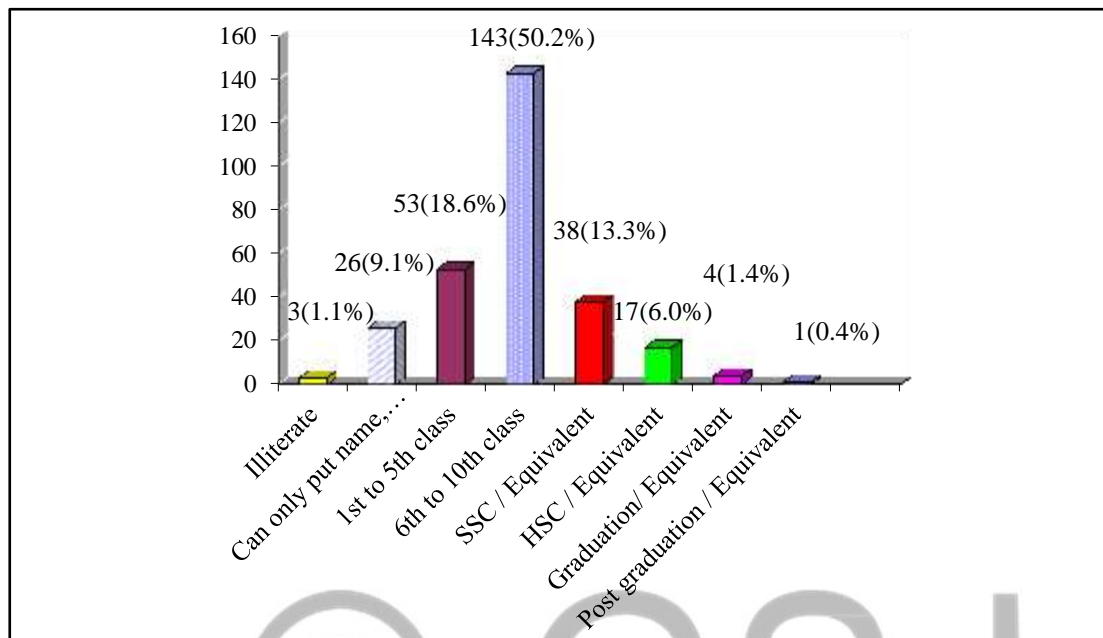
Figure 3: Distribution of the respondents by her husband education

Figure 3 illustrate that among 285 respondents, majority[143(50.2%)] were in class group of 6th to 10th, 53 (18.6%) were in class group of 1st to 5th, 38 (13.3%) have passed SSC / equivalent, 26(9.1%) were can only put name,signature,17 (6.0%) have passed HSC / equivalent, 4 (1.4%) were graduate or equivalent, 3(1.1%) were illiterate while only 1(0.4%) have passed post-graduation / equivalent.

Distribution of the respondents by occupation

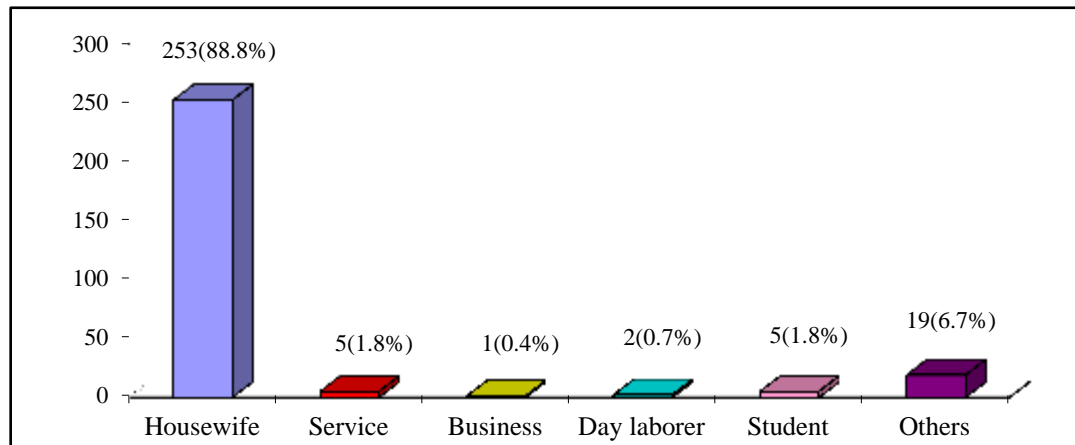
Figure 4: Distribution of the respondents by occupation

Figure 4 shows that among 285 respondents, majority [253 (88.8%)] were house wife, 19 (6.7%) were in other occupation (servant), both service holder & student group were 5 (1.8%) each, 2 (0.7%) were day laborer, while 1 (0.4%) from business.

Distribution of the respondents by her husband occupation

Figure 5: Distribution of the respondents by her husband occupation

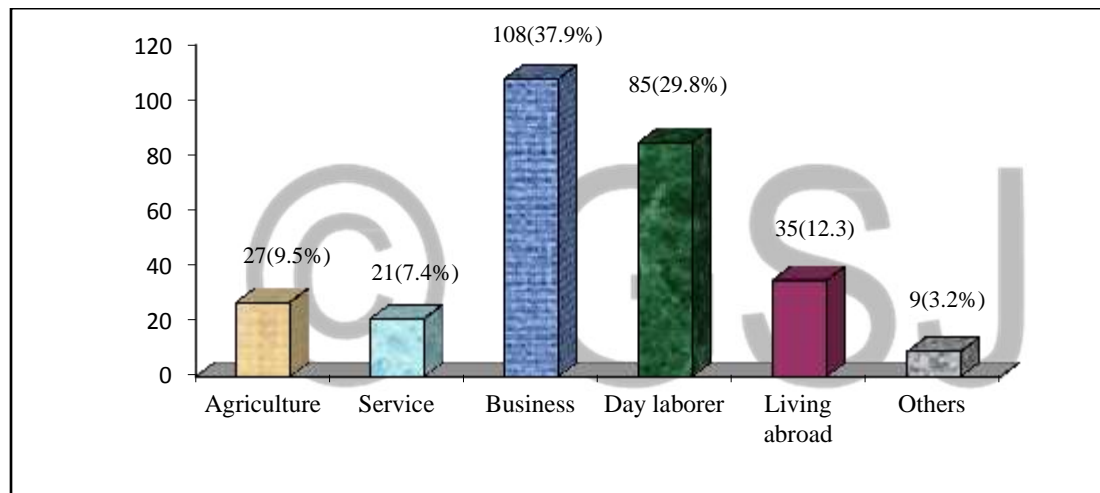


Figure 5 demonstrate that among 285 respondents, majority [108 (37.9%)] from business, 85(29.8%) were day laborer, living abroad were 35(12.3%), 27(9.5%) were in agriculture, 21(7.4%) were service holder & 9 (3.2%) from others.

4.1.7 Distribution of the respondents by monthly income

Table 2: Distribution of the respondents by monthly income

Income group	Frequency	Percent	Statistics
Lowest -10000 taka	79	27.7	Mean=29535.1 Median=25000.0 Mode=8000.0 Std. Deviation= ± 21600.946 Minimum=4000.0 Maximum=80000.0
10001-20000 taka	56	19.6	
20001-30000 taka	46	16.1	
30001-40000 taka	33	11.6	
40001-50000 taka	23	8.1	
50001-60000 taka	21	7.4	
>60000 taka	27	9.5	
Total	285	100.0	

Table 2 represents that among 285 respondents, majority [27.7%(79)] were in monthly income less than 10,000 taka group, 19.6% (56) were in 10001-20000 taka group, 16.1%(46) were in 20001-30000 taka group, 11.6%(33) were in 30001-40000 taka group, 9.5%(27) were in more than 60000 taka group, 8.1%(23) were in 40001-50000 taka group while 7.4%(21) were in 50001-60000 taka group which are minority of the respondents.

Minimum income was 4000 taka & maximum income was 80000 taka.
Mean= 29535.1, Median = 25000.0, Mode=8000.0, St. deviation = ± 21609.946

Distribution of the respondents by family type

Figure 6: Distribution of the respondents by family type

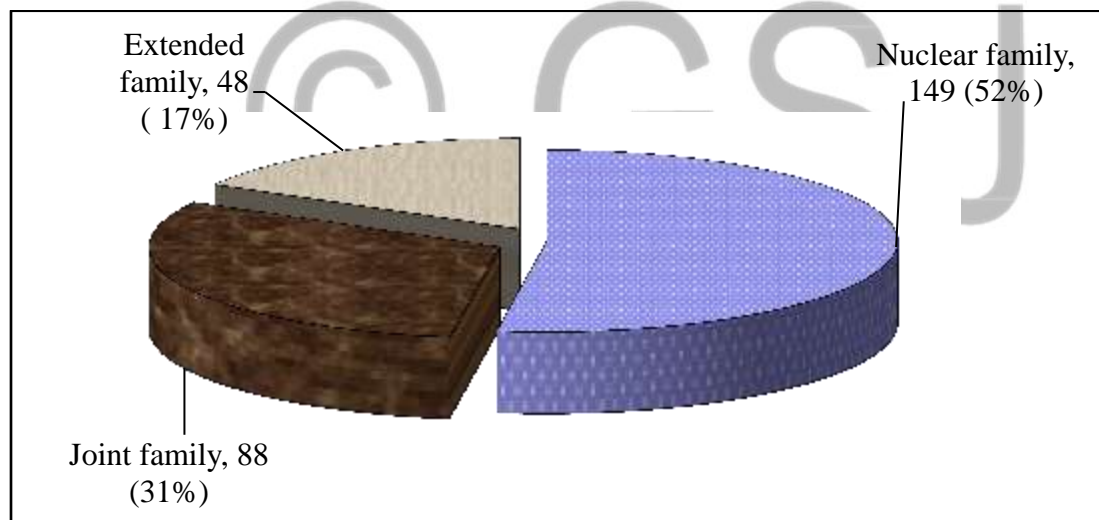


Figure 6 shows that out of 285 respondents, majority [149 (52%)] of the respondents were living in nuclear family, 88 (31%) were living in joint family whereas 48(17%) were living in extended family.

Distribution of the respondents by total family member

Table 3: Distribution of the respondents by total family member

Family members in group	Frequency	Percent	Statistics
3-8 persons	236	82.8	Mean=6.75 Median=5.00 Mode=5.00 SD=±3.52 Minimum=3.0 Maximum=25.0
9-14 persons	35	12.3	
15-20 persons	12	4.2	
21-26 persons	2	0.7	
Total	285	100.0	

Table 3 shows that among 285 respondents, majority [236 (82.8%)] were in 3 to 8 persons family members group, 35 (12.3%) were in 9-14 persons, 12 (4.2%) were in 15-20persons, while only 2 (0.7%) were in 21-26 person family members group that were lowest group of this study populations. Mean=6.75 Median=5.00 Mode=5.0 St. Deviation=±3.52 Minimum=3.0Maximum=25.0

Distribution of the respondents by type of house

Figure 7: Distribution of the respondents by type of house

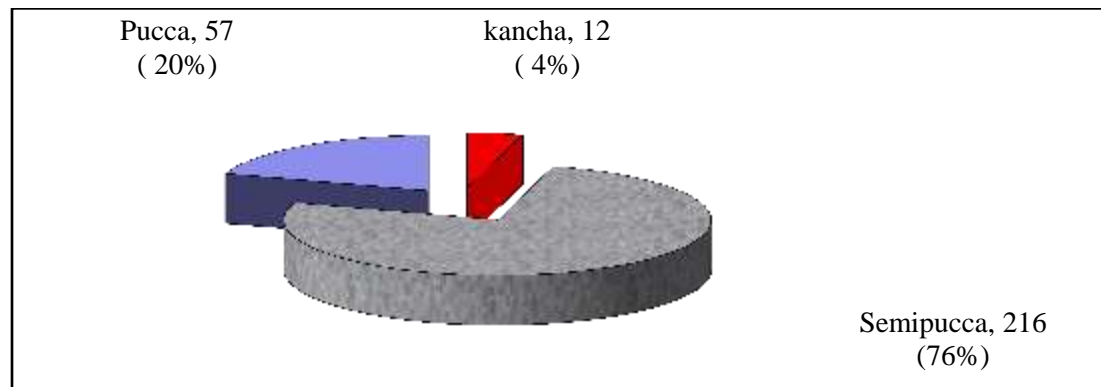


Figure 7 shows that out of 285 respondents, majority [216(76%)] were having semipucca house type, 57 (20%) were having pucca whereas 12 (4%) were having kancha house type, which were minority among the respondents.

Distribution of the respondents by the source of drinking water

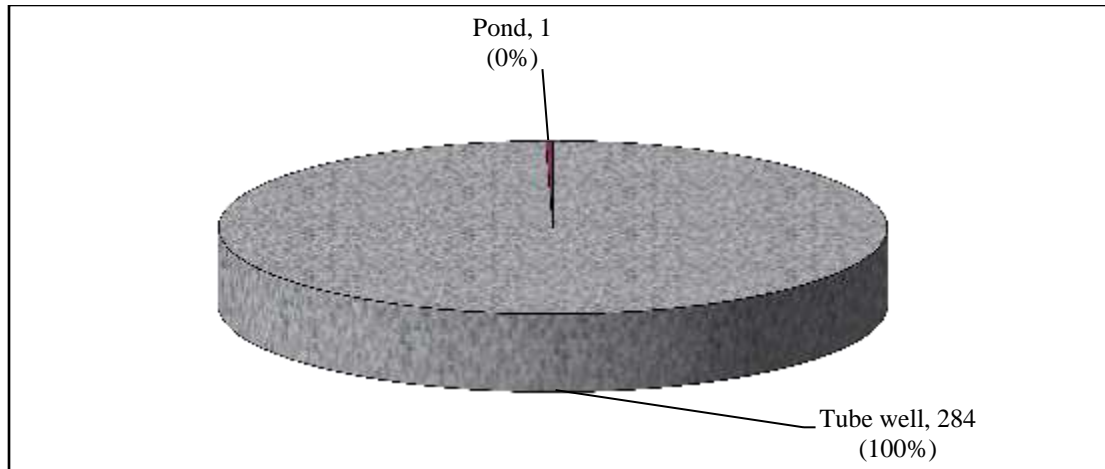
Figure 8: Distribution of the respondents by the source of drinking water

Figure 8 shows that out of 285 respondents, majority [284(99.6%)] were used tube well water for drinking purpose, whereas only 1(0.4%) from pond.

Distribution of the respondents by latrine type

Figure9: Distribution of the respondents by latrine type

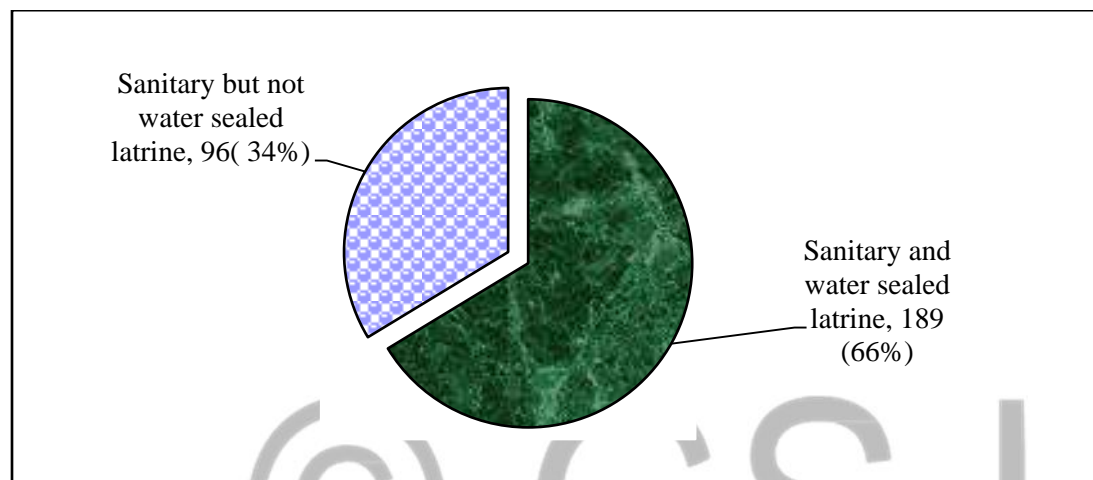


Figure 9 shows that among 285 respondents majority [189(66%)] were using sanitary water seal latrine and on the other hand, 96(34%) using sanitary but not water seal latrine.

Distribution of the respondents by number of under 5 children

Table 4: Distribution of the respondents by number of under 5 children

Number of children	Frequency	Percent	Statistics
1	215	75.4	Mean= 1.26 Median= 1.00 Mode= 1.00 St. Deviation= $\pm .461$ Minimum= 1 Maximum= 3
2	67	23.5	
3	3	1.1	
Total	285	100.0	

Table 4 demonstrate that among 285 respondents, majority [215 (75.4%)] were having 1 children

under 5, then 67 (23.5%) were having 2 children and on the other hand, only 3 (1.1%) were having 3 children under 5.

Mean=1.26 Median=1.00 Mode=1.00 St.deviation= $\pm .461$ Minimum=1.0 Maximum=3.0

Distribution of the respondents by age of last child

Table 5: Distribution of the respondents by age of last child

Age of last child in months	Frequency	Percent	Statistics
1-10	52	18.2	Mean=27.39 Median=30.00 Mode=36.00 SD=±15.478 Minimum=1 Maximum=58
11-20	68	23.9	
21-30	41	14.4	
31-40	62	21.8	
41-50	39	13.7	
51-58	23	8.1	
Total	285	100.0	

Table 5 represents that distribution of the respondents by age of last child, here among

285 respondents, majority [23.9%(68)] were in 11-20 months group, 21.8%(62) were in 31-40 months group, 18.2%(52) were in 1-10 group, 14.4%(41) were in 21-30 months group, 13.7%(39) were in 41-50 months group, while 8.1%(23) were in 51-58 months group which are lowest months group among the respondents.

Minimum was 1month & maximum was 58 month. Mean= 27.39, Median = 30.00, Mode=36.00, St. Deviation =± 15.478

Hand washing practice as mentioned by the respondents

Hand washing	Frequency	Percent
Before and after preparing food	51	17.9
Before eating food	281	98.6
After using the toilet	284	99.6
After cleaning up a child who has used the toilet	270	94.7
Before and after caring for someone who is sick	55	19.3
After blowing your nose, coughing or sneezing	39	13.7
After touching garbage	243	85.3
After touching an animal, animal feed or animal waste	238	83.5

Table 6: Hand washing practice as mentioned by the respondents
n=285

* Multiple responses

Table 6 illustrate that majority of the respondents [284(99.6%)] were washing her hand after using toilet, 281(98.6%) before eating food, then 270(94.7%) of the respondents were washing her hand after cleaning up a child who has used the toilet, 243 (85.3%) were washing hand after touching garbage, 238(83.5%) were washing hand after touching an animal, animal feed or animal waste, 55(19.3%) were washing hand before and after caring for someone who is sick, 51(17.9%) before and after preparing food, while minority [39(13.7%)] respondents were washing her hand after blowing nose, coughing or sneezing

Distribution of the respondents by type of burner used

Figure 10: Distribution of the respondents by type of burner used

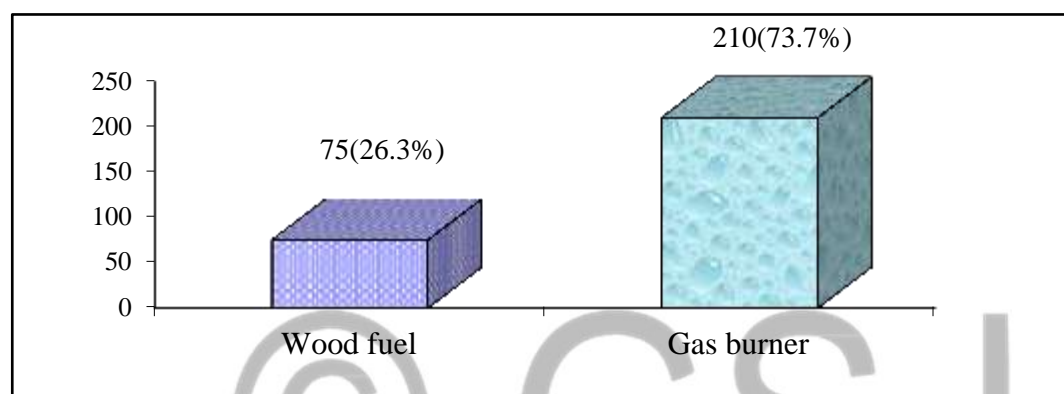


Figure 10 shows that out of 285 respondents, majority

[210(73.7%)] were used gas burner whereas 75(26.3%) used wood fuel for cooking purpose.

Distribution of the respondents by members sleep in a room where child remain

Members sleep in a room in group	Frequency	Percent	Statistics
2-3 persons	173	60.7	Mean= 3.47 Median= 3.00 Mode= 3.00 Std. Deviation= ± 0.798 Minimum= 2 Maximum= 7
4-6 persons	111	38.9	
>6 persons	1	0.4	
Total	285	100.0	

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e 7: Distribution of the respondents by members sleep in a room where child remain

Table 7 shows that among 285 respondents, majority [173 (60.7%)] were under 3 persons group sleep in a room, then 111 (38.9%) were in 4-6 persons group and lastly, minority 1(0.4%) were in >6 persons group.

Mean=3.47 Median=3.00 Mode=3.00 St. Deviation= ± 0.798 Minimum=2 Maximum=7

Distribution of the respondents by family members smoking cigarette/ biri/ hukka in the respondent's house

Figure 11: Distribution of the respondents by family members smoking cigarette/ biri/ hukka in the respondent's house

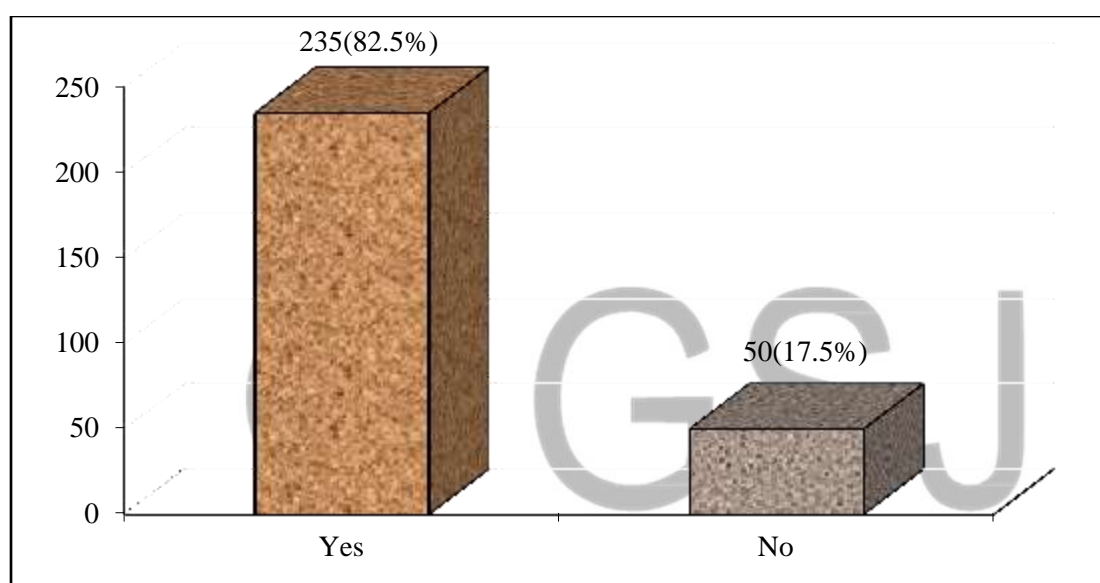


Figure 11 shows that out of 285 respondents, majority [235(82.5%)] of the family members of the respondents smoke cigarette/ biri / hukka in the house while 50(17.5%) of the family members does not smoke in the house.

Information regarding vaccination to respondent's child

Distribution of the respondents by giving vaccination to child

Figure 12: Distribution of the respondents by giving vaccination to child

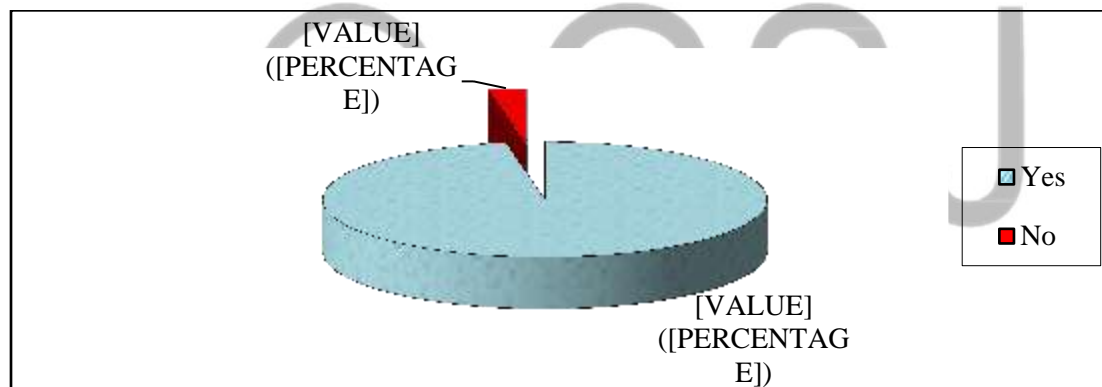


Figure 12 explain that out of 285 respondents, majority [277(97%)] had given vaccination of their child. On the other hand, 8(3%) of the respondents did not give vaccine to their child.

Distribution of the respondents by having vaccination card

Figure 13: Distribution of the respondents by having vaccination card

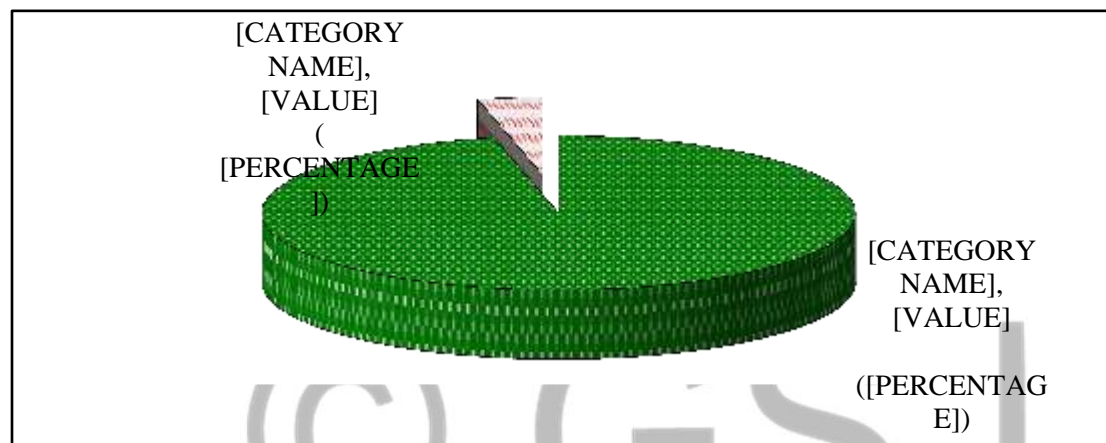


Figure 13 represents that out of 285 respondents

nts, majority [275(96%)] have vaccination card while minority[10(4%)] have no vaccination card.

Distribution of the respondents by type of vaccine given to her child

Table 8: Distribution of the respondents by type of vaccine given to her child

n=277

Type of vaccine	Frequency	Percent
BCG	277	100
DPT	277	100
OPV	277	100
Measles	231	83.4
Others(Hep B, Influenza, PCV)	274	98.9

*** Multiple responses**

Table 8 represent that among 285 respondents, 8 not yet started vaccination program of her child. So, among 277 respondents, majority [277(100%)] were given BCG, DPT and OPV vaccine, 274(98.9%) were given others vaccine (Hep B, influenza vaccine, PCV), on the other hand minority [231(83.4%)] of the respondents were given measles.

Distribution of the respondents by vaccination status of child

Figure 15: Distribution of the respondents by vaccination status of child

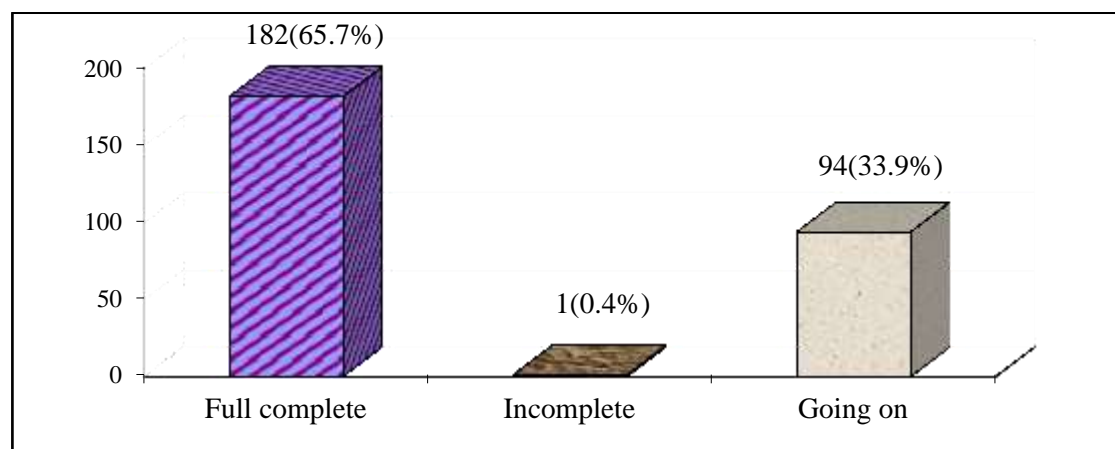


Figure 14 shows that 285 respondents, 8 child of the respondents not yet started vaccination, so among the 277 respondents, majority [182(65.7%)] were full complete of vaccination status of child, 94(33.9%) were in going on and only 1(0.4%) incomplete status of vaccination of her child.

Information on breast feeding and weaning practices

Distribution of the respondents by given colostrum to her child

Out of the 285 respondents all (100.0%) said that they give colostrum to her child.

Distribution of the respondents by breast feed to her child

Table 9: Distribution of the respondents by breast feed to her child

Breast feed in a group	Frequency	Percent	Statistics
1- 5 months	16	5.6	Mean= 18.76 Median=24.00 Mode= 24.00 Std. Deviation= ± 7.878 Minimum= 1 Maximum= 36
6-10 months	43	15.1	
11-15 months	29	10.2	
16-20 months	41	14.4	
> 20 months	156	54.7	
Total	285	100.0	

Table 9 illustrate that among 285 respondents, majority

[156(54.7%)] were above 20 months group, then 43 (15.1%) were in 6-10 months, 41 (14.4%) are in 16-20 months group, 29 (10.2%) were in 11-15 months, while 16(5.6%) were in under 5 months group.

Minimum was 1 month where maximum was 36 month. Here Mean was 18.76, median 24.00 & mode 24.00 months and std. Deviation, ± 7.878

Distribution of the respondents by given child along with colostrum

Table 10: Distribution of the respondents by given child along with colostrum

n=285

Given child	Frequency	Percent
Nothing	272	95.4
Honey	6	2.1
Sugar	1	.4
Water from religious leader	11	3.9

***Multiple responses**

Table 10 shows that majority of the respondents [272(95.4%)] were given nothing to child with colostrum, then water from religious leader given 11(3.9%) respondents, honey given 6(2.1%) and finally sugar given to child only 1(.4%) respondents.

Distribution of the respondents by giving type of food to her child for 1st Six months

Table 11: Distribution of the respondents by giving type of food to her child for 1st Sixmonths

n=285

	Food given	Frequency	Percent
*Multiple responses	Breast milk	285	100
	Other milk	22	7.7
	Others(jaw)	38	13.3

Table 11 demonstrate that majority of the respondents [285(100%)] were given breast milk to child, 38(13.3%) were given others food (jaw) and very fewer portion, 22(7.7%) respondents were given other milk within 1st six months.

Distribution of the respondents by age at which weaning given to the child

Table 12: Distribution of the respondents by age at which weaning given to the child

Weaning given to the child	Frequency	Percent	Statistics
0-3 months	2	0.7	Mean= 6.67 Median= 7.00 Mode= 7.00 Std. Deviation=± .933 Minimum= 3 Maximum= 10
4-7 months	267	98.2	
8-11 months	3	1.1	
Total	272	100.0	

Table 12 demonstrate that among 285 respondents, 13 mothers were

not yet started weaning, so among 272 respondents, majority[267 (98.2%)] give their child weaning food in 4-7 months, then 3 (1.1%) at 8-11 months and the rest 2(0.7%) at 0- 3 months group.

Mean=6.67 Median=7.00 Mode=7.00 St. Deviation=±.933 Minimum=3 month Maximum=10 month

Distribution of the respondents by hearing of the name of ARI

Figure 16: Distribution of the respondents by hearing of the name of ARI

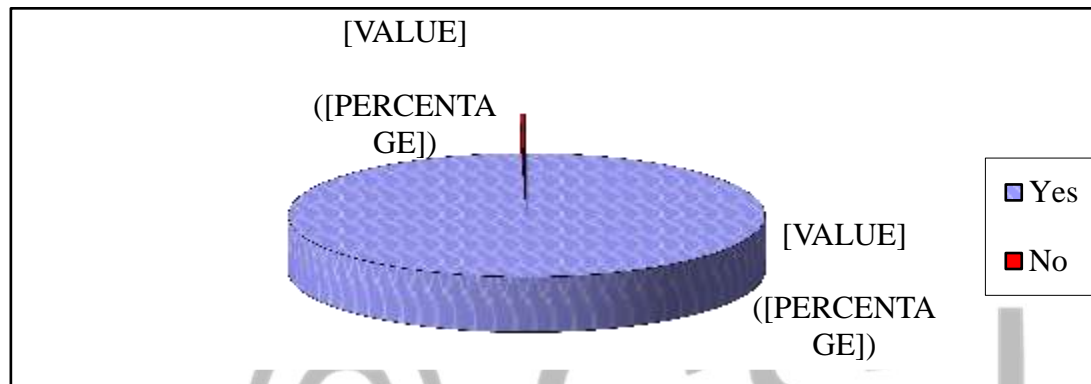


Figure 16
explain
that out of
285

respondents, majority [284(99.6%)] were heard name of ARI while 1(0.4%) did not heard the name of ARI.

Distribution of the respondents by source of hearing of the name of ARI

Table 13: Distribution of the respondents by source of hearing of the name of ARI

n=284

Source of hearing of the name of ARI	Frequency	Percent
Doctor	152	53.5
Health worker	19	6.7
Relatives	209	73.6
Neighbor	98	34.5
TV/ Radio	234	82.4

*** Multiple responses**

Table 13 illustrate that majority (among 284, because, one respondents did not heard the name of ARI) of the respondents [234(82.4%)] heard the name ARI from TV/Radio, 209(73.6%) from relatives, 152(53.5%) from the doctor, 98(34.5%) from neighbor and minority 19(6.7%) from the health worker.

Distribution of the respondents by knowing about symptoms of ARI

Figure 17: Distribution of the respondents by knowing about symptoms of ARI

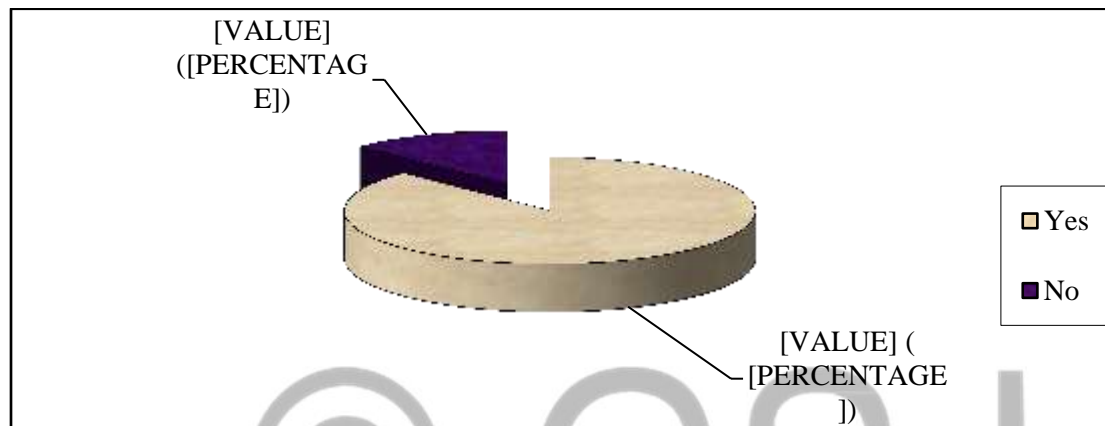


Figure 17 illustrate that out of 285 respondents, majority [249(87%)] were known about symptoms of ARI while 36(13%) were not known.

Symptoms of ARI as mentioned by the respondents

Table 14: Symptoms of ARI as mentioned by the respondents

n=249

Symptoms of ARI	Frequency	Percent
Fever	251	100.8
Running nose	233	93.6
Repeated cough	173	69.5
Sore throat	39	15.7
Respiratory Distress	227	91.2
Change of voice	2	0.8

***Multiple responses**

Table 14 shows that, among 249 respondents(because 36 were not knowing about the symptoms of ARI), majority[251(100.8%)] mentioned the symptoms of ARI were fever, 233(93.6%) as running nose, 227(91.2%) as respiratory distress, 173(69.5%) as repeated cough, 39(15.7%) as sore throat, while only 2(0.8%) of the respondents said change of voice.

Distribution of the respondents by history of previous episode of ARI to her child

Figure 18: Distribution of the respondents by history of previous episode of ARI to her child

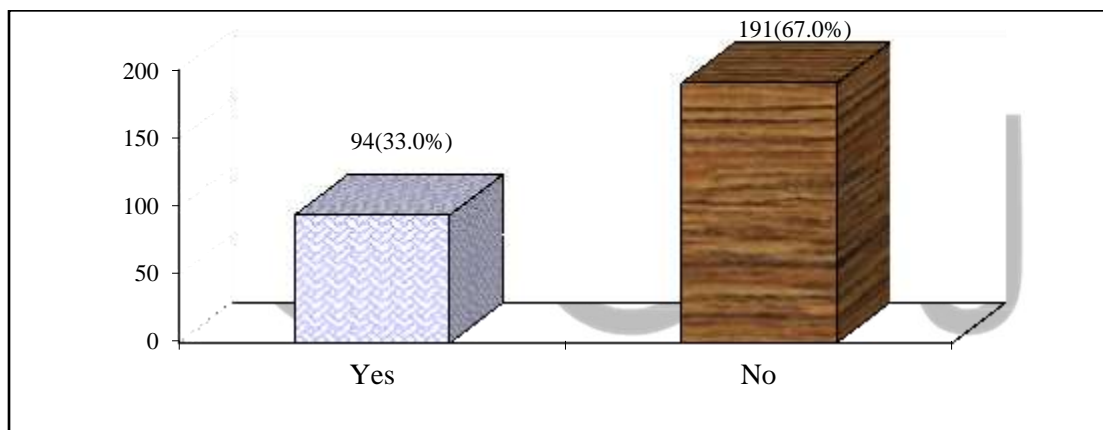


Figure 18 shows that among 285 respondents, majority [191(67.0%)] of the child had no history previous episode of ARI while 94(33.0%) had history of episode.

Distribution of the respondents by place of health care seeking outside the home

Table 15: Distribution of the respondents by place of health care seeking outside the home

n=285

Place of health care seeking	Frequency	Percent
MBBS	244	85.6
Pharmacy drug seller	195	68.4
Health worker	12	4.2
Village doctor	5	1.7

***Multiple responses**

Table 15 represent that majority of the respondents [244(85.6%)] seek care from MBBS, 195(68.4%) from pharmacy drug seller, 12(4.2%) from the health worker and minority portion [5(1.7%)] of the respondents from the village doctor.

Distribution of the respondents by knowing about sign symptoms of severe ARI

Figure 19: Distribution of the respondents by knowing about sign symptoms of severe ARI

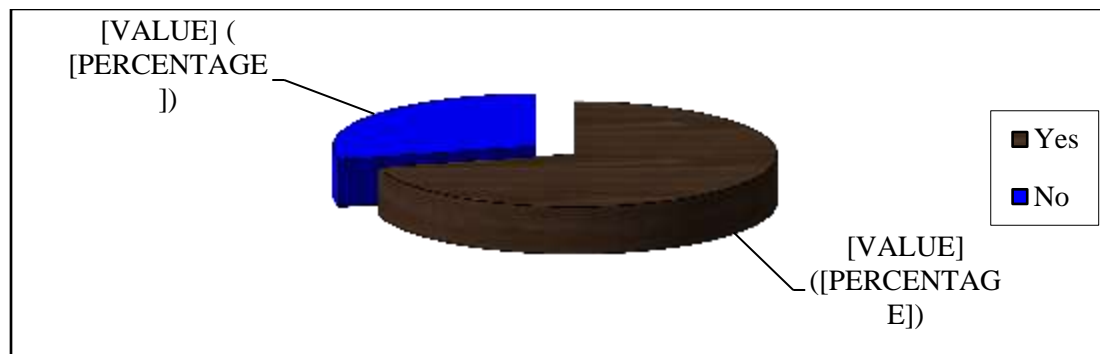


Figure 19 illustrate that out of 285 respondents, majority [202(71%)] were known and 83(29%) were not known about the sign symptoms of severe ARI.

Sign Symptoms of Severe ARI as mentioned by the respondents

Table 16: Sign Symptoms of Severe ARI as mentioned by the respondents

n=202

Sign Symptoms of Severe ARI	Frequency	Percent
Stop/ avoid taking food	166	82.2
Fast respiration	121	59.9
Respiratory distress	171	84.6
Indrawing of the chest	17	8.4
Rest less	123	60.8
Increase temperature	195	96.5
Others	1	0.5

***Multiple responses**

Table 16 shows that, among 202 respondents(because 83 were not known about the sign symptoms of severe ARI), majority of the respondents [195(96.5%)] as mentioned the sign symptoms of severe ARI as increase temperature, second group 171(84.6%) identified respiratory distress as severe sign, stop/ avoid taking food by 166(82.2%), restless by 123(60.8%), 121(59.9%) as fast respiration, indrawing of the chest 17(8.4%) and only 1(0.5%) mentioned as others.

Steps taken by the mother during attack of simple cold or cough to her child

Table 17: Steps taken by the mother during attack of simple cold or cough to her child

n=285

Steps taken	Frequency	Percent
Given lemon juice	2	0.7
Given honey	42	14.7
Given tulsi leaves juice	47	16.5
Given black tea with ginger	45	15.8
Given hot water	202	70.9
Rubbing hot oil in chest and back	246	86.3
Keep the baby warm	90	31.6
Feed the child frequently	29	10.2
Continue breast feeding	248	87.1
Give safe cough remedy to reduce cough	181	63.5
Consult physician	253	88.8

***Multiple responses**

Table 17 illustrate that majority of the respondents[253(88.8%)] consult with physician when her child had simple cough or cold, 248(87.1%) continue breast feeding, 246 (86.3%) rubbing hot oil in chest and back of the child, 202(70.9%) give hot water, 181(63.5%) give safe cough remedy to reduce cough, 90(31.6%) keep the baby warm, 47(16.5%) give tulsi leaves juice,45(15.8%) black tea with ginger give to child, 42(14.7%)honey,29(10.2%) feed the child frequently and fewer portion of respondents that was 2 (0.7%) lemon juice give to child.

Distribution of the respondents by history of given bath to child during illness

Figure 20: Distribution of the respondents by history of bath given bath to child during illness

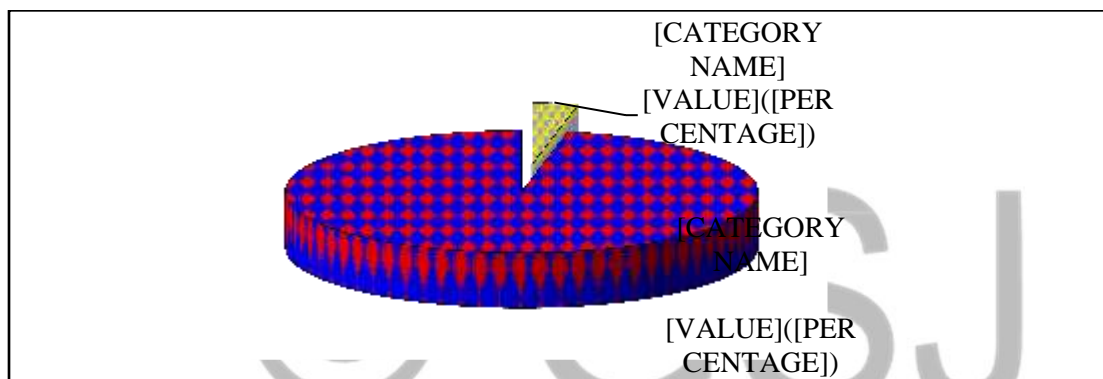


Figure 20 shows that out of 285 respondents, majority [276(97%)] were did not give bath to their child during illness (only weeping with moist cloth) while only 9(3%) gave bath.

**Distribution of the respondents by amount of breast milk given to their child
during simple cough and cold**

Figure 21: Distribution of the respondents by amount of breast milk given to their child during simple cough and cold

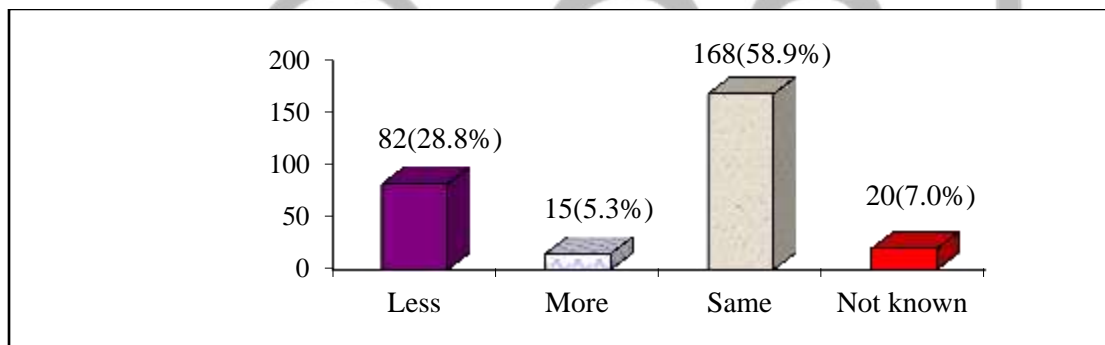


Figure 21 represents that among 285 respondents, majority [168(58.9%)] were given same breast milk, 82(28.8%) less breast milk, 20(7.0%) not known while 15(5.3%) given more breast milk to her child if had simple cough and cold.

Distribution of the respondents by food given to their child during simple cough and cold

Figure 22: Distribution of the respondents by food given to their child during simple cough and cold

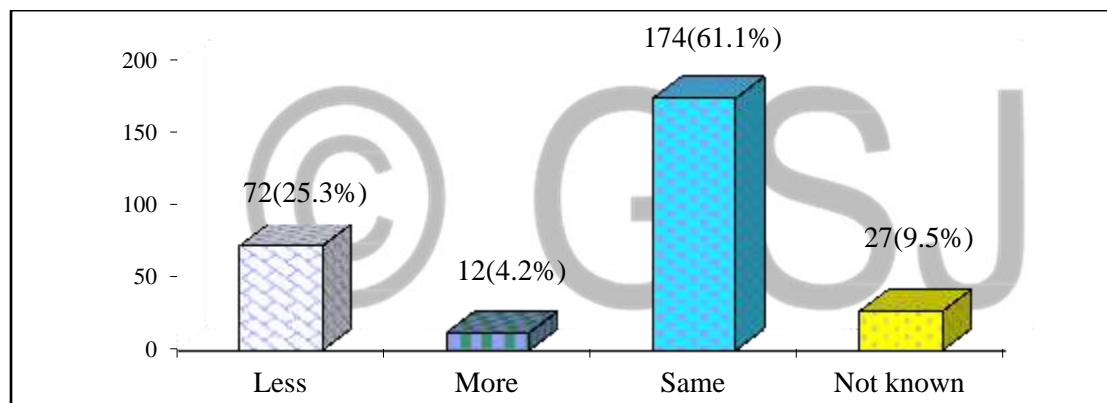


Figure 22 represents that among 285 respondents, majority [174(61.1%)] same food will given, 72(25.3%) less food, 27(9.5%) not known while 12(4.2%) more food will given to her child if had simple cough and cold.

Distribution of the respondents by seeking health care after onset of illness

Table 18: Distribution of the respondents by seeking health care after onset of illness

n=285

Symptoms of Seeking health care	Frequency	Percent
Immediately	4	1.4
Fast breathing	223	78.2
Chest indrawing	15	5.3
Difficult breathing	230	80.7
Fever	273	95.8
Unable to eat/drink	262	91.9
If condition worsens	273	95.8
Others or does not know	1	0.4

***Multiple responses**

Table 18 demonstrate that majority of the respondents [273(95.8%)] were go to doctor or hospital when her child had fever and if condition worsen, 262(91.9%) go to hospital when her child unable to eat/drink, 230(80.7%) when child suffering from difficulty breathing, 223(78.2%) fast breathing, 15 (5.3%) and 4 (1.4%) chest indrawing and immediately respectively, while 1(0.4%) of the respondents does not know about this situation.

Distribution of the respondents by knowing the causes of ARI

Figure 23: Distribution of the respondents by knowing the causes of ARI

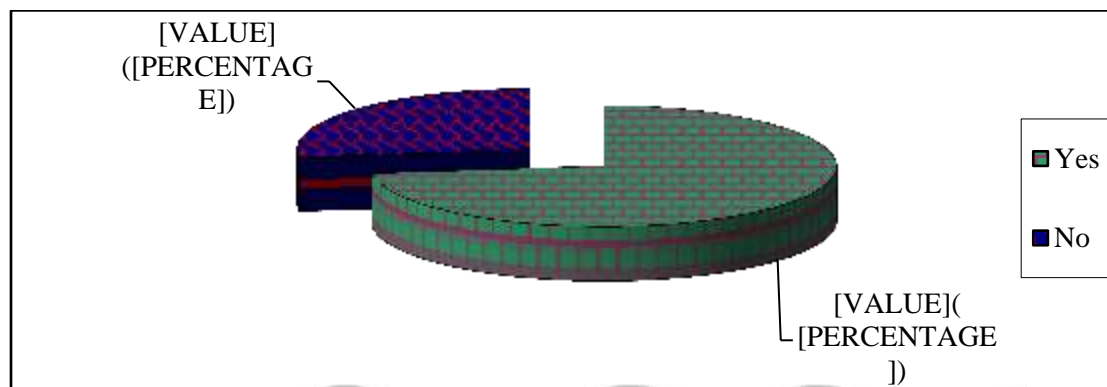


Figure 23 explain that out of 285 respondents, majority[208(73%)] were known the causes of ARI while 77(27%) were not known.

Causes of ARI as mentioned by the respondents

Table 19: Causes of ARI as mentioned by the respondents

n=208

Causes of ARI	Frequency	Percent
Organism	87	41.8
Bad air	10	4.8
Dust	191	91.8
Cold food / drink	202	97.1
Moving with bare foot	104	50.0
Living with dump house	5	2.4
Malnutrition	3	1.4
Diarrhea	4	1.9
Overcrowding	53	25.5
Smoking habit of the parents	136	65.4

***Multiple responses**

Table 19 shows that among 285 respondents, 208 were known the causes of ARI, so among 208, majority of the respondents [202(97.1%)] as mentioned the causes of ARI was cold food/drink, 191(91.8%) was due to dust, 136(65.4%) Smoking habit of the parents, 104(50.0%) moving with bare foot, 87(41.8%) as mentioned organism, 53(25.5%) respondents said overcrowding, bad air, living with dump and diarrhea said 10(4.8%), 5(2.4%) and 4(1.9%) respondents respectively. Malnutrition as mentioned by the respondents only 3(1.4%).

Distribution of the respondents by mentioning about preventive measure taken against ARI

Figure 24: Distribution of the respondents by mentioning about preventive measure taken against ARI

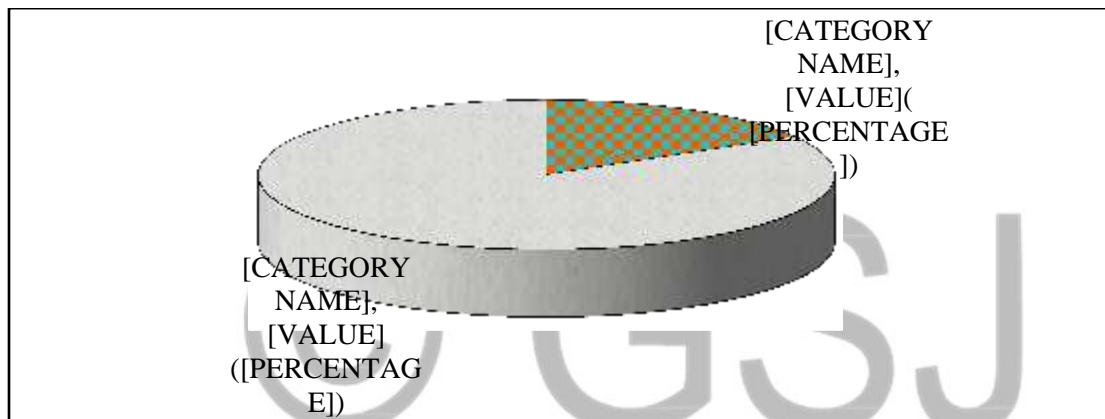


Figure 24 demonstrate that out of 285 respondents, majority[238(84%)] were not taken preventive measure while minority portion [47(16%)] were taken preventive measure for ARI.

Distribution of the respondents by their knowledge about the prevention of ARI

Table 20: Distribution of the respondents by their knowledge about the prevention of ARI

n=47

Types of preventive measure	Frequency	Percent
Avoid cold	31	65.9
Avoidance of smoking	3	6.4
Keep away from germs	2	1.5
Maintaining cleanliness	10	21.3
Stay away from dust	18	38.3

*** Multiple responses**

Table 20 illustrate that among 285 respondents, 47 were preventive measure taken against ARI, so among 47, majority of the respondents [31(65.9%)] as taken the preventive measure of ARI by keeping away their children from cold, 18(38.3%) by stay away from dust, 10(21.3%) of respondents maintaining cleanliness, 3(6.4%) avoidance of smoking and only 2 (1.5%) of the respondents by keep away from germs.

Distribution of the respondents by hearing about pneumonia

Figure 25: Distribution of the respondents by hearing about pneumonia

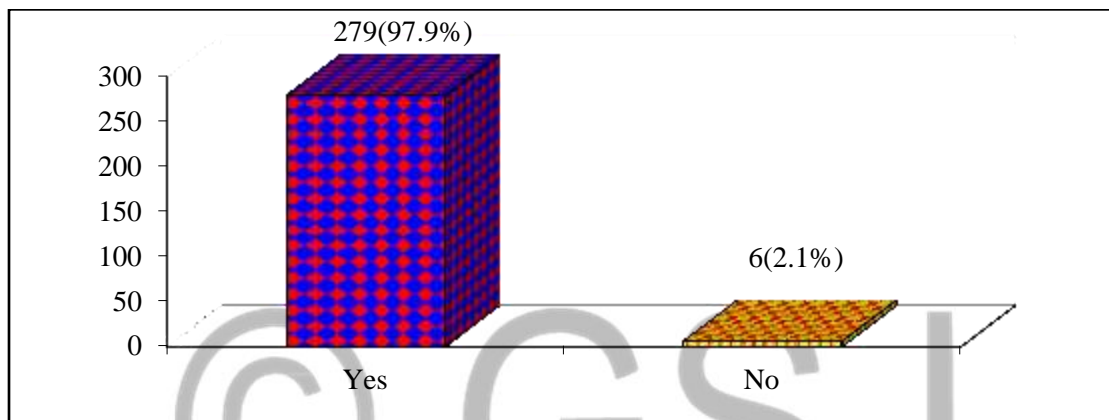


Figure 25 shows that among 285 respondents, majority [279(97.9%)] heard about pneumonia while 6(2.1%) do not heard about pneumonia.

Recognition of pneumonia as mentioned by the respondents

Table 21: Recognition of pneumonia as mentioned by the respondents

n=279

Recognition of pneumonia	Frequency	Percent
Fast breathing	246	88.2
Difficulty breathing	258	92.5
Chest indrawing	29	10.4
Others or don't know	24	8.6

* Multiple responses

Table 21 shows that among 285 respondents, 6 were do not heard about pneumonia, so among 279, majority of the respondents [258(92.5%)] mentioned the recognition of the pneumonia by difficulty breathing, 246(88.2%) by fast breathing, 29(10.4%) by the chest indrawing, while minority 24(8.6%) respondents don't recognize pneumonia.

Distribution of the respondents by communicate to others if her child had pneumonia

Out of the 285 respondents all (100.0%) said that they communicate physician/health worker / hospital if her child had pneumonia.

Distribution of the respondents by distance of health center from their home

Figure 26: Distribution of the respondents by distance of health center from their home

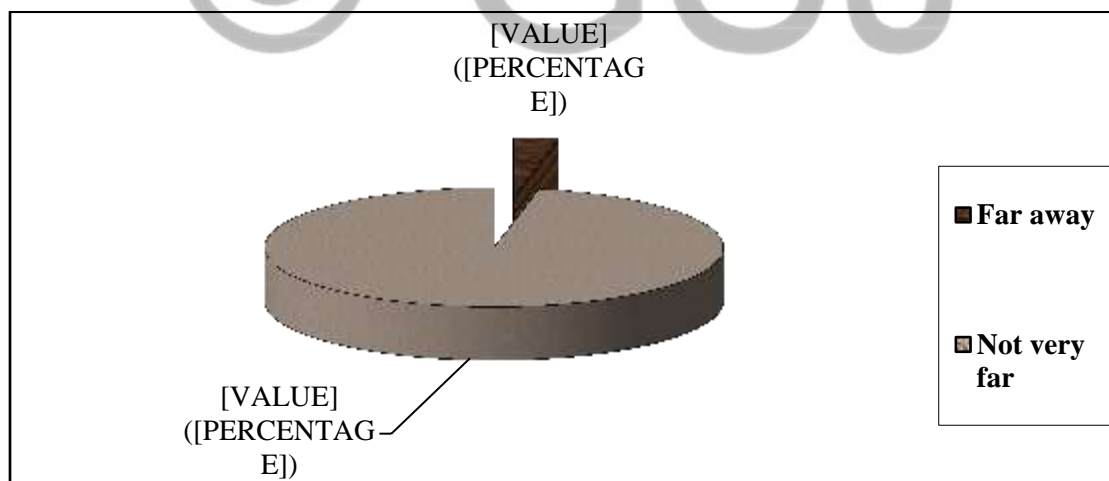


Figure 26 demonstrate that out of 285 respondents, majority[276(97%)] respondent's home were not very far away from health center while 9(3%) were living very far away from the health center.

Distribution of the respondents by good communication from their home to health center transport condition

Figure 27: Distribution of the respondents by good communication from their home to health center transport condition

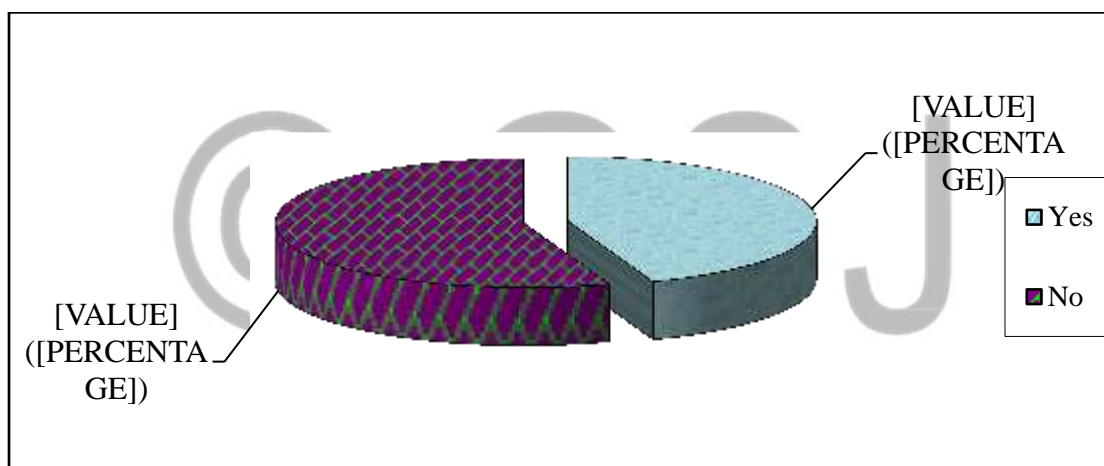


Figure 27 illustrate that among 285 respondents, 9(because 9 respondents were living far away from health center), majority [5(56%)] said that communication condition not good, on the other hand, 4(44%) said communication condition good.

Need to pay for treatment purpose said by the respondents

Out of the 285 respondents all (100.0%) said that they had to pay for treatment purpose.

Distribution of the respondents by who think the service given in the center is enough

Figure 28: Distribution of the respondents by who think the service given in the center is enough

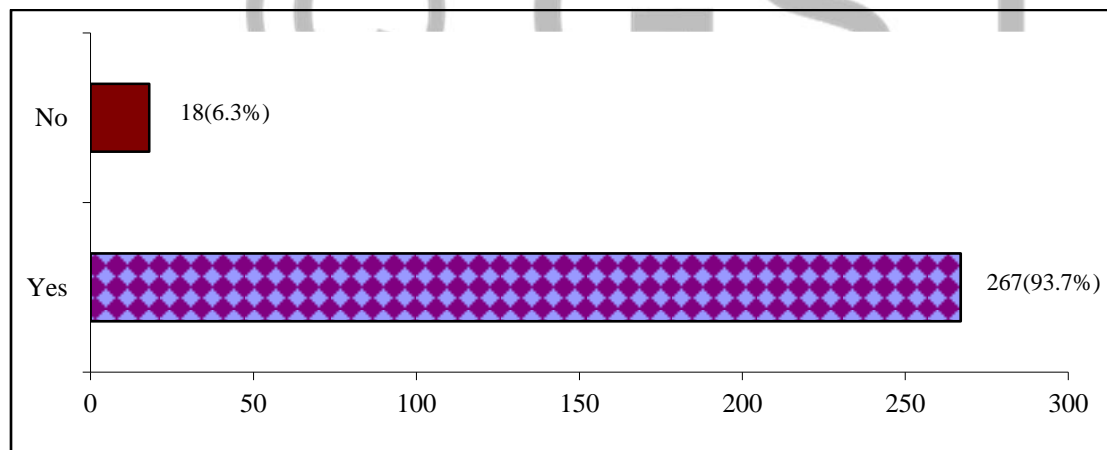


Figure 28 shows that out of 285 respondents, majority [267 (93.7%)] said that service given by the health center is enough whereas only 18(6.3%) thought that it is not enough.

Distribution of the respondents by family support to go to health centers

Figure 29: Distribution of the respondents by family support to go to health centers

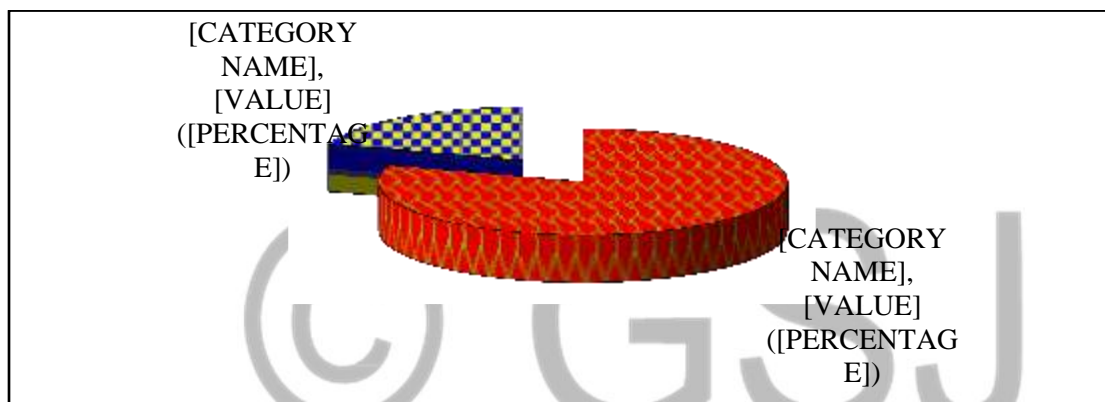


Figure 29 represents that 285 respondents, majority[228(80%)] said that their family support her to go health center while 57(20%) said not support their family to go health center.

Causes of not getting support of the family as mentioned by the respondents

Table 22: Causes of not getting support of the family as mentioned by the respondents

n=57

Causes of not getting support by the family	Frequency	Percent
Poverty	53	92.9
Do not identify the severe sign symptoms	40	70.2
Religious purpose	1	1.7

***Multiple responses**

Table 22 demonstrate that among 285 respondents, 57 were said not getting support of the family, so among 57 majority of the respondents [53(92.9%)] as mentioned the causes of not getting support by the family were poverty, 40(70.2%) due to do not identify the severe sign symptoms and only 1(1.7%) respondents mentioned as religious purpose.

Distribution of the respondents by level of perception

Figure 30: Distribution of the respondents by level of perception

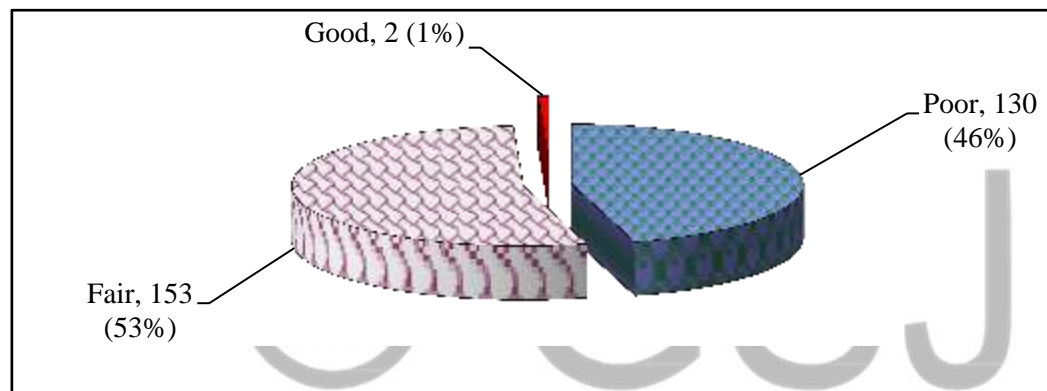


Figure 30 shows that out of 285 respondents, majority

[153(53%)] were fair perception, 130(46%) were poor perception while good perception level were only 2(1%).

Association between perception level of ARI and educational qualification of the respondents

Table 23: Association between perception level of ARI and educational qualification of the respondents

Education group	Perception Level			Total n (%)	Statistics
	Poor n(%)	Fair n (%)	Good n (%)		
Upto primary level	72 (64.3)	40 (35.7)	0 (0.0)	112 (100)	Fisher's Exact test=26.147 df= 2 P=0.000
Above Primary level	58 (33.5)	113 (65.3)	2 (1.2)	173 (100)	
Total	130 (45.6)	153 (53.7)	2 (0.7)	285 (100)	

Out of 112 respondents who were up to primary level; 72(64.3%) had poor perception, 40(35.7%) had fair perception and no one had good perception. On the other hand, out of 173 respondents who were above primary level; 58(33.5%) had poor perception, 113(65.3%) had fair perception and rest 2(1.2%) had good perception. Perception level was found to be associated with education level ($P < 0.05$, pulled from Fisher's Exact Test).

Association between perception level of ARI and age of the respondents

Table 24: Association between perception level of ARI and age of the respondents

Age group	Perception Level			Total n(%)	Statistics
	Poor n (%)	Fair n (%)	Good n (%)		
18-25 years	60 (50.8)	58 (49.2)	0 (0.0)	118 (100)	Fisher's Exact test=2.998 df= 2 P= 0.187
26 and above years	70(41.9)	95 (56.9)	2 (1.2)	167 (100)	
Total	130 (45.6)	153 (53.7)	2 (0.7)	285 (100)	

Out of 118 respondents who were 18-25 years; 60(50.8%) had poor perception, 58(49.2%) had fair perception and no one had good perception. On the other hand, out of 167 respondents who were 26 and above years; 70(41.9%) had poor perception, 95(56.9%) had fair perception and rest 2(1.2%) had good perception. Perception level was found not to be associated with age of the respondents ($P > 0.05$, pulled from Fisher's Exact Test).

Association between perception level and total monthly family income of the respondents

Table 25: Association between perception level and total monthly family income of the respondents

Monthly family income group	Perception Level			Total n (%)	Statistics
	Poor n (%)	Fair n (%)	Good n (%)		
Below 40000 taka	107 (50.0)	106 (49.5)	1(0.5)	214 (100)	Fisher's Exact test=7.535 df= 2 P =0.014
40001and above taka	23(32.4)	47 (66.2)	1 (1.4)	71 (100)	
Total	130 (45.6)	153 (53.7)	2 (0.7)	285 (100)	

Out of 214 respondents who were below 40000 income group; 107(50%) had poor perception, 106(49.5%) had fair perception and rest 1(0.5%) had good perception. On the other hand, out of 71 respondents who were 40001and above income group; 23(32.4%) had poor perception, 47(66.2%) had fair perception and rest 1(1.4%) had good perception. Perception level was found to be associated with total monthly family income of the respondents ($P < 0.05$, pulled from Fisher's Exact Test).

Association between perception score and education level of the respondents

Table 26: Association between perception score and education level of the respondents

	Education of respondents	N	Mean	Std. Deviation	Significance
Total score	Up to primary level	112	18.30	5.909	t=-5.928 P=0.000
	Above primary level	173	22.29	4.925	

Table
26
shows
associati

on between perception score and education level of the respondents, it was seen that among the respondents having upto primary level, the mean perception score was 18.30. On the other hand, among respondents having above primary level, the mean perception was 22.29. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test).

Association between perception score and age of the respondents

Table 27: Association between perception score and age of the respondents

	Age group of respondents	N	Mean	Std. Deviation	Significance
Total score	18-25 years	118	19.81	5.916	t=-2.315 P=0.021
	26 and above years	167	21.37	5.412	

Table 27 shows

association between perception score and age of the respondents, it was seen that among the respondents having age group 18-25 years, the mean perception score was 19.81. On the other hand, among respondents having age group 26 and above years, the mean perception was 21.37. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test).

Association between perception score and total monthly family income of the respondents

Table 28: Association between perception score and total monthly family income of the respondents

	Monthly family income group	N	Mean	Std. Deviation	Significance
Total score	Below 40000 taka	214	20.18	5.716	t=-2.829 P=0.005
	40001 and above taka	71	22.35	5.232	

Table 28 shows association between perception score and total monthly family income of the respondents, it was seen that among the respondents having monthly family income upto 40000 taka, the mean perception score was 20.18. On the other hand, among respondents having monthly family income 40001 and above taka, the mean perception was 22.35. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test).

Discussion

A cross sectional study was conducted in selected rural areas at Tangail district, Bangladesh from January to March, 2016. The main objective of this study was to identify their perception about recognition and home care of acute respiratory tract infection, to determine the reasons for delay in care seeking for a child with acute respiratory tract infection, to assess socio demographic characteristics of the respondents, to find out association of mothers perceptions and socio demographic characteristics.

Mother's age was significantly related with the prevalence of ARI. In this study, there were 285 respondents; most of the respondents (47.7%) belonged to the age group between 26-30 years. This finding was almost similar to that findings of a study found in Lucknow city, India about caregivers perception regarding childhood pneumonia (Monika Agarwal et al, 2015).

Most of the respondents (88.8%) were housewife. Whereas in a study in Thailand revealed 39.29% were involved in labor and 37.14% were housewife. The study was about knowledge and perception of pneumonia disease among mothers of children under five years (Siswanto E et al, 2007).

Majority of the respondents (73.7%) used gas burner and 26.3% were used wood fuel for cooking food. A study on the mother's knowledge, attitudes and practices regarding ARI in children in Baringo district in Kenya showed that among 309 mothers all used wood fuel for cooking (Simiyu D E et al, 2003).

82.5% of the family members smoke cigarette/ biri / hukka in the room, only (17.5%) of the family members does not smoke in the room. The study carried out on home management of ARI; a challenge to the family and the community found two-thirds of the households covered by the study have one or more members smoking which is associated with increased incidence of ARI (Dr. Magdalena C.C. 1998).

Parental education especially mother's education plays an important role to differentiate ARI among children. The study revealed (1.45%) of the respondents were illiterate, 27.4% were in 1st to 5th class, 46.7% in 6th to 10th class and 10.5% can put signature, name and only 0.4% were graduate. Another study in Thailand was conducted in 2007. In this study, (4.29%) were illiterate, (37.14%) were in primary level and 25.71% were in high school and 10% in university level (SiswantoE et al, 2007).

Majority (27.7%) had earnings upto 10,000 taka per month. The mean salary of the group was Tk29535.1per month. In a study carried out in Dhaka city about mother's/ care giver's health seeking behavior during childhood illness in an urban slum. The study showed majority (29.4%) of the respondents had earnings Tk 4001-8000. (Mahejabin F, et al, 2014). In another study was conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. This study showed that majority (41.3%) had earnings <Tk 3000 per month. The mean salary of the group was Tk 3707.34 per month (Dr.Barnali Dutta, 2010).

The mean number of family members was 6.75 including the dependents besides father, mother and their children. In another study, the overall household size corresponded to 5.14 persons, carried out in Derra district, Northshoa Zone, Oromia Regional State, Ethiopia among mothers care seeking behavior for childhood illness (Assefa T et al., 2008). Other study was conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. This study showed that, the mean number of family members was 5.20 including the dependents besides father, mother and their children (Dr.Barnali Dutta, 2010).

87% of the respondents had knowledge about the symptoms of ARI, among them majority (100.8%) of the respondents were said fever, 93.6% were said running nose, 91.2% were said respiratory distress and others as the sign symptoms of ARI. In another study, 29% of the respondents had the prior understanding of sign and symptoms of ARI. They mentioned that chest retractions, difficulty in breathing, noisy breathing and the child stopping taking breast milk or crying a lot pneumonia (FarzanaFerdous et al, 2014).

Majority (96.5%) of the respondents mentioned increase temperature, then, 84.6% were identified respiratory distress and only 8.45 were said indrawing of the chest as the sign symptoms of severe ARI. A study found in Lucknow city, India, perception about childhood pneumonia among caregivers. The study showed that 58.0% of the caregivers recognize pneumonia by fever, 47.3% were recognize by chest indrawing and 42.4% were said severe cough (Monika Agarwal et al., 2015). Another study done in Haryana, India about respiratory infections in children: a study showed that 11.2% of the mothers recognized pneumonia by chest indrawing (Saini N K, et al, 1992).

97% of the respondents had given vaccination to their child and among them (65.7%) had full complete vaccination status, only (33.9%) had their vaccination going on. In a study carried out

in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. This study show that, 72.5% of the respondents had given vaccination to their child and among them 34.2% had full complete vaccination status, only 17.7% had their vaccination going on (Dr.Barnali Dutta, 2010).49.36% children were partially immunized and the remaining 49.86% were fully vaccinated in a study about the impact of biosocial factors on morbidity among children aged under 5 in Bangladesh revealed prevalence of ARI was significantly ($p<0.001$) higher among children (20.7%) who didn't complete the vaccination course than those who completed the entire course (Khan A Z et al., 2007).

Majority (82.4%) heard the name of ARI from mass media (TV/ Radio) and the rest from relatives, doctors, health worker and neighbor. This was similar to the study in India where most women obtain the information regarding ARI from mass media and paramedical staff (Khan A Z et al., 1995).Other study was conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. This study showed that, majority (36.9%) heard the name of ARI from health workers and the rests from relatives, mass media and others (Dr.Barnali Dutta, 2010).

Regarding health care seeking pattern, it was found that most women did not seek care at initial stage of illness in ARI. Home care was applied first and if not benefitted then the mother sought care from outside. They sought variety of practitioners for treatment according to the financial conditions and availability. 85.6% of the respondents were interested in going to MBBS doctor, 68.4% to pharmacy drug sellers, 4.2% from health worker and only 1.7% from village doctor. On the other hand, in a study about diarrhea and ARI in rural area of Bangladesh shows that 33.3% went to village doctors, 17.3% to private services, 13.3% government services, 12.2% traditional healer, 8.5% from pharmacy drug sellers and 15.4% from others (Piechulk H et al., 2003).In another study carried out in Dhaka city about mother's/ care giver's health seeking behavior during childhood illness in an urban slum. The study show that, majority (50%) of the respondents consulted a drug seller and rest of them consulted a homeopath, an ayurved, taken to govt. clinic, received NGO facility, consulted a private practitioner and from others (Mahejabin F, et al, 2014).

The knowledge about continuing food and breastfeeding among the mothers during ARI was not satisfactory. Majority (58.9%) mentioned that same breastfeeding and 61.1% mentioned that same food as usual should be given to the sick child. Around28.8% were in favour of continuing

breastfeeding and 25.3% were favour of continuing food as less as usual. A few (5.3%) wanted to give more amount of breastfeeding and only 4.2% wanted to give more amount of food to the sick child. In another study was conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. In this study, the knowledge about continuing food and breastfeeding among mothers during ARI was satisfactory. Majority (30.3%-33.0%) mentioned that more breastfeeding and food than usual should be given to the sick child (Dr.Barnali Dutta, 2010).

Majority (88.8%) of the respondents mentioned that they would carry out practice such as consult physician when symptoms as running nose, cough and fever appeared. Then, a considerable number of respondents (87.1%) continue breastfeeding to her child, 86.3% were rubbing oil in chest and back, 70.9% were given hot water, 63.5% were give cough remedy to reduce cough, 31.6% keep the baby warm, 16.5% given tulsi leaves, 15.8% given black tea with ginger, 14.7% were given honey and others, feed the child frequently and given lemon juice. On the other hand, study was conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. In this study, majority (34.8%) of the respondents mentioned that they would carry out practices such as rubbing oil in chest and back when symptoms (fever, cough etc) appeared. 22.2% were use juice from tulsi leaves (Dr.Barnali Dutta, 2010). Result from household survey of DGHS supported the findings on knowledge of chest massaging with oil are more or less same in rural and urban slum (Goldman N et al., 2000).

97.9% of the respondents said that heard about pneumonia. Another study, Galvez et al.(2002) have demonstrated significant improvement in pneumonia knowledge among mothers after pneumonia campaign by government in Peru. In the study, majority caregivers heard about the pneumonia in recent or past during their visit to doctors' clinic (Galvez et al., 2002).

73% of the respondents had knowledge about the causes of ARI, among them, majority of the respondents [202(97.1%)] as mentioned the causes of ARI was cold food/drink, 191(91.8%) was due to dust, 136(65.4%) Smoking habit of the parents, 104(50.0%) moving with bare foot, 87(41.8%) as mentioned organism, 53(25.5%) respondents said overcrowding, bad air, living with dump and diarrhea said 10(4.8%), 5(2.4%) and 4(1.9%) respondents respectively. Malnutrition as mentioned by the respondents only 3(1.4%). On the other hand a study was

conducted in Bangladesh, where majority (28.5%) respondents said, the causes of ARI was cold food/drink same as present study and 22.8% were said moving with bare foot (Dr.Barnali Dutta, 2010).In another study, environmental factors such as dust, unhealthy household condition and high room temperature during hot summer months, cold allergy and winter seasons, drinking cold water or playing with water were perceived as the causes of pneumonia (FarzanaFerdous et al.,2014). This was similar to a study carried out in Matlab, Bangladesh where most mothers believed that exposure to cold was responsible for pneumonia(Stewart MK et al, 1994).

Majority of the respondents [31(65.9%)] as taken the preventive measure of ARI by keeping away their children from cold, 18(38.3%) by stay away from dust, 10(21.3%) Of respondents maintaining cleanliness, 3(6.4%) avoidance of smoking and only 2 (1.5%) of the respondents by keep away from germs.On the other hand, a studywas conducted in Bangladesh about pattern of management of acute respiratory tract infection by mothers of under five children. In this study, majority (27%) of the respondents as taken preventive measure by to avoid cold foods/ drinks as same as present study. 18.9% taken measure by given breastfeeding and vaccination to their child (Dr.Barnali Dutta, 2010).

Regarding the cause of delayed or no health care seeking by the mothers of children under 5 years old in rural areas, all respondents said, they had to pay for treatment purpose.3% said their home very far away from health center, among them 56% said that communication condition were not good from home to health center. 20% of the respondents said not support their family to go health center, among them, majority of the respondents [53(92.9%)] as mentioned the causes of not getting support by the family were poverty, 40(70.2%) due to do not identify the severe sign symptoms and only 1(1.7%) respondents mentioned as religious purpose and 6.3% though service given in the center is not enough. In another study, regarding the cause of delayed or no health care seeking by the mothers of children under 5 yearsold in El Sururab area; poverty was claimed by 151 (37.8%); 34(8.5%) mentioned far distance as the cause, 69(17.3%) think that it is mild illness and no need to see a doctor and one (0.3%) attributed it to illness of the mother(Dr. Afaf Mustafa Eltyeb, 1996).The study done in Ethiopia showed that the main reasons for not seeking care or delay seeking care from health facilities were 53.3% illness not serious, 26.7% lack of money and 13.3% did not believe the benefit care seeking from health facilities for such childhood illness (Awoke W, 2013).

After the result of mother's perception had analyzed separately according to each question, this study found majority [153(53%)] were fair perception, 130(46%) were poor perception while good perception level were only 2(1%). On the other hand, a study was conducted in Thailand about knowledge and perception of pneumonia disease among mothers of children under five years. In this study, 81% were good perception, 17% were fair and only 2% were poor perception level about pneumonia (Siswanto E et al, 2007).

There was significant association between perception level of ARI and educational qualification of the respondents. Respondents who were upto primary level; 72(64.3%) had poor perception and no one had good perception. On the other hand, who were above primary level; 58(33.5%) had poor perception and 2(1.2%) had good perception. Higher educational qualification is associated with a higher probability of good perception about ARI.

Perception level was found to be associated with total monthly family income of the respondents. Respondents who were below 40000 income group; 107(50%) had poor perception, 106(49.5%) had fair perception and rest 1(0.5%) had good perception. On the other hand, respondents who were 40001 and above income group; 23(32.4%) had poor perception, 47(66.2%) had fair perception and rest 1(1.4%) had good perception. Higher income is associated with a higher probability of good perception about ARI.

Among the respondents having age group 18-25 years, the mean perception score was 19.81. On the other hand, among respondents having age group 26 and above years, the mean perception was 21.37. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test).

Association between perception score and education level of the respondents, it was seen that among the respondents having upto primary level, the mean perception score was 18.30. On the other hand, among respondents having above primary level, the mean perception was 22.29. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test) and also association between perception score and total monthly family income of the respondents was statistically significant. It was seen that among the respondents having monthly family income upto 40000 taka, the mean perception score was 20.18. On the other hand, among respondents having monthly family income 40001 and above taka, the mean perception was 22.35. The difference was statistically significance ($P < 0.05$, pulled from Student's t- test).

Conclusion

This cross sectional study was conducted among the mothers in selected rural areas in Tangail city from January to December 2016. The study was carried out to identify the perception regarding acute respiratory tract infection by mothers of under five children. It was also undertaken to find out perception level in respect of age, educational qualification, along with the monthly income of the respondents. Acute Respiratory Tract Infection is a major public health problem accounting for more than a quarter of all child deaths of the world. But the incidence of ARI could be reduced to a great extent by applying simple preventive measures and basic knowledge about it. Nearly half of the ARI and its related deaths could be prevented through the correct use of case management approach. The study revealed that most of the respondents were 6th to 10th class and in the age group between 26-30 years.

The study also disclosed that maximum number of children were vaccinated. Around half of the mothers had a considerable perception on causes, common and severe symptoms/ signs of the ARI but rest of them had lack of perception about ARI. Very few percent of respondents were taken preventive measure against acute respiratory tract infection. Majority of the respondents heard of the ARI, mostly from mass media and doctors. Fever and running nose were described as the common symptoms of ARI by a large number of mothers.

Study showed that the mothers consulted various categories of practitioners. Most of the respondents consulted with MBBS doctors and second most respondents consulted with pharmacy drug seller.

It is generally accepted that educated mothers have good perception level about ARI. In this study, perception level was found to be associated with education level and also, perception level was found to be associated with total monthly family income of the respondents. Higher educational qualification of the respondents had good perception level regarding ARI and respondents with higher family income group had more good perception level than the less family income group.

Less than half of the respondents were poor perception level and minority (only 1%) were good perception level. So, it is essential to bring about a significant change in their **level of perception** and its practice to save the death of children.

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