Sickness Profile of the Children Attending Paediatric Out Patient Department at Combined Military Hospital, Dhaka

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Abstract

Introduction: Children are the major victims of mortality and morbidity in our society. Though Bangladesh has achieved significant success in reducing mortality of children over the past few decades, but still it is alarming.

Objective: To determine the sickness profile of the children under 12 years attending paediatric outpatient department at combined Military Hospital (CMH), Dhaka.

Methods: This descriptive cross-sectional study was conducted from July to December 2012 to determine the sickness profile of the children under 12 years attending paediatric outpatient department at CMH, Dhaka. A total of 143 children were selected for this study and data were collected with a semi-structured questionnaire and check list by face-to-face interview of the parents and reviewing medical records of the children.

Results: Among the subjects, 60.1% were male and 39.9% were female with mean age 4.8(±3.6) years. Regarding mother's education, 62.2% were SSC or equivalent qualified, 23.1% HSC, 0.7% Diploma and 4.9% were Graduated or above. Average family size of the children was 4 (±0.7). Most of the mothers (97.2%) were housewives. The diseases suffered by children included respiratory diseases (43.4%), gastro intestinal diseases (17.5%), pyrexia (16.8%), neurological diseases (14.0%) and non-communicable diseases (8.4%). Respiratory diseases (43.4%) were more common in children of housewives' mother (43.9%) while neurological diseases (14.0%) were prevalent in children of serving mother and these differences were statistically significant (P=0.027). Regarding age and diseases, respiratory diseases were more in <1 year children while pyrexia and neurological diseases were more in 6-9 years children. About mother's education and diseases; diseases of GIT, pyrexia, respiratory and neurological were prevalent in mothers of SSC or equivalent level. The association of mothers' education level and diseases of children suffering from were statistically significant (P<0.05).

Conclusion: To improve the situation, health care providers and the parents should be aware enough of prevailing major diseases of the children and there by necessary measures along with health education especially for mother should be taken accordingly.

Key-words: Sickness profile, immunization status, vaccination, pyrexia

Introduction

Bangladesh is one of the most densely populated countries in the world with an estimated population of about 149.8 million people living in an area of 147570 square kilometer. The population density per square kilometer is 1015. About 33.8% of the total population is under 14 years of age. The most striking features of this population explosion is the annual population growth rate is 1.4% and is still very high in comparison to the economic growth rate (GDP 6.3%) and corresponding inputs for poverty reduction[1].

The country has made important gains in providing primary health care since the Alma Ata Declaration in 1978. Health indicators show steady gains in many respects and the health status of the population has improved. Infant, maternal and under-five mortality rates have all decreased over the last decades, with a marked increase in life expectancy at birth[2]. Seven in ten of these deaths are due to acute respiratory infection (18%), mostly pneumonia, diarrhoea (6%). malnutrition (45%), accidents (26%), measles, malaria and often to a combination of these condition[3].

As stated in Bangladesh Demographic and Health Survey-2011, acute respiratory infections (ARI), primarily pneumonia, are a leading cause of childhood morbidity and mortality throughout the world. Early diagnosis and treatment with antibiotics can reduce the number of deaths caused by ARIs, particularly deaths resulting from pneumonia. Thirty-five percent of children with symptoms of ARI were taken to a health facility or a medically trained provider for treatment. This is slightly lower than that recorded in the 2007 BDHS (37 percent). Boys are more likely than girls to be taken to a health facility or trained provider when ill with ARI (40 percent versus 29 percent). Urban children are more likely than rural children to receive treatment at a health facility or from a medically trained provider (54 percent versus 31 percent)[4].

The Integrated Management of Childhood Illness (IMCI) strategy brings together previous vertical program for the management of childhood illnesses. It encompasses skilled health workers in the first-level facilities, functioning, and supportive health systems that include supervision, adequate and sustained supply of drugs,

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effective referral systems, and engagement of families and communities in improving key practices[5]. Armed Forces personnel and their families belong to middle and lower class strata having relatively better accommodation with good water supply system and satisfactory standard of sanitation. They are also provided with better medical facilities[6]. But still there are some diseases and nutritional problems prevalent among them. The children are the future prospect of the nation. They are the most vulnerable group and comprise a substantial percentage of our population both in civil and in Armed Forces. So, we should be very much concerned about their health needs. For development of better health care delivery system for the children in Armed Forces it is essential to have proper and adequate knowledge for all concerned especially the authority for effective management.

Materials and Methods

A descriptive cross-sectional study was conducted from July to December 2012 to determine the sickness profile of the children under 12 years of age attending paediatric outpatient department at Combined Military Hospital, Dhaka. Total 143 children of both sex were selected by non-probable purposive sampling and those are willing to give interview. Respondents who denied for interview and over 12 years aged children were excluded from the study. Informed written consent was taken from the respondents and they were ensured about the confidentiality. Data were collected with a semi-structured pretested questionnaire which includes socio-demographic profile, information regarding treatment of the children and check list by face-to-face interview of the parents and reviewing medical records of the children. The collected data were analyzed with the help of SPSS v20.0 and qualitative data were expressed as frequency and percentage. The study protocol was approved by AFMI ethical committee before the study.

Results

Out of 143 children maximum children i.e. 48 (33.6%) were in 1-5 years group followed by 6-9 years 38 (26.6%), <1 year 36 (25.2%) and 10-12 years 21 (14.7%). Mean ± (SD) age is 4.8

(±3.6). The number of male sick children were 86 (60%) and female sick children were 57 (40%). Male female ratio was 3:2 (Table-I). Majority mothers were SSC or equivalent level qualified 89 (62.2%), followed by HSC or equivalent 33(23.1%), class vi-x 13 (9.1%), Diploma 1 (0.7%) and Graduate or above 7(4.9%) (Figure-1). Mothers of majority 139 (97.2%) children were housewives, 2 (1.4%) were in civil services, 1 (0.7%) was in Armed Forces and 1 (0.7%) was engaged in business (Figure-2). Respiratory diseases 23(37.1%) were more common in below 1 year aged child group, GIT diseases 15(60%) were more in 1-5 years group, Pyrexia and Neurological diseases 12(50%) and 9(45%) respectively were more commonly found in 6-9 years group. Again non-communicable diseases 4(33.3%) were more noticed in below 1 year of age. This association was found statistically significant (p <0.05) (Table-II). Maximum GIT, pyrexia, respiratory and neurological diseases were found in children whose mother's educational qualification was SSC or equivalent level. The association of education level of mother and diseases of children suffering from was found statistically significant (P<0.05) (Table-III). Maximum mother were housewives and respiratory diseases were more common among their children. Neurological diseases were common in mothers who were service-holder. The association between occupation of mother and diseases of the children suffering from was statistically significant (P<0.05) (Table-IV).

Table-I: Distribution of the children by age and sex (n=143)

Age of the child (in years)	Frequency			%
	Male	Female	Total	
<1 years	22	14	36	25.2
1-5 years	28	20	48	33.6
6-9 years	21	17	38	26.6
10-12 years	15	6	21	14.6
Total	86	57	143	100.0
Mean age ± (SD)	4.8 (±3.6)			
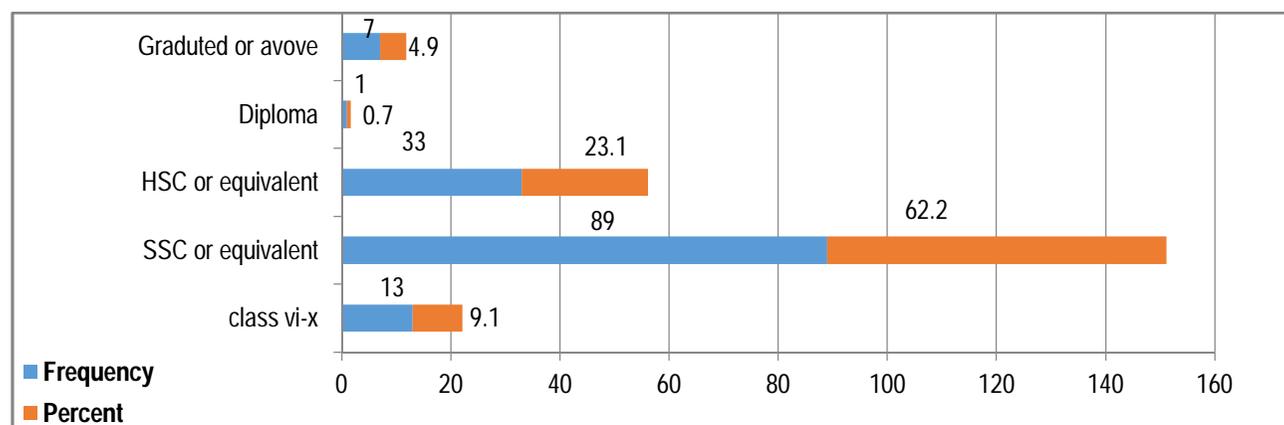
Figure-1: Distribution of education level of the mother of the children (n=143)
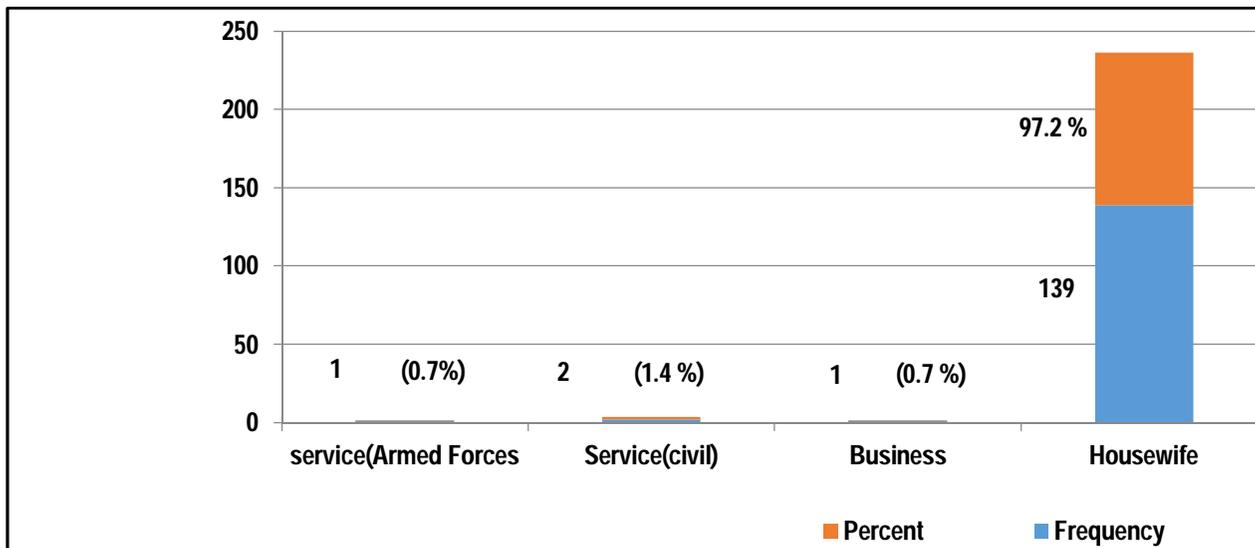
Figure-2: Distribution of the occupation of mother of the child (n=143)

Table-II: Distribution of the diseases by age of the children (n=143).

Diseases	Age group of the child in years				Total (%)
	Below 1 year (%)	1-5 years (%)	6-9 years (%)	10-12 years (%)	
GIT diseases	6 (24.0)	15(60.0)	2(8.0)	2(8.0)	25(100)
Respiratory diseases	23(37.1)	17(27.4)	12(19.4)	10(16.1)	62(100)
Neurological diseases	1(5.0)	6(30.0)	9(45.0)	4(20.0)	20(100)
Pyrexia	2(8.3)	7(29.2)	12(50.0)	3(12.5)	24(100)
Non-communicable diseases	4(33.3)	3(25.0)	3(25.0)	2(16.7)	12(100)
Total	36(25.2)	48(33.6)	38(26.6)	21(14.7)	143(100)
Test statistics	X^2=29.467, df=12, p=0.003				

Table-III: Association between mothers' education and diseases of children (n=143)

Education level of mother	Diseases of children					Total (%)
	GIT diseases (%)	Respiratory Diseases (%)	Neurological diseases (%)	Pyrexia (%)	Non-communicable diseases (%)	
Class vi-x	1(7.7)	7(53.8)	0(.0)	4(30.8)	1(7.7)	13(100)
SSC or equivalent	16(18.0)	31(34.8)	18(20.2)	17(19.1)	7(7.9)	89(100)
HHC or equivalent	8(24.2)	19(57.6)	2(6.1	2(6.1)	2(6.1)	33(100.0)
Diploma	0	0	0	0	1(100)	1(100)
Degree or above	0	5(71.4)	0	1(14.3)	1(14.3)	7(100)
Total	25(17.5)	62(43.4)	20(14.0)	24(16.8)	12(8.4)	143(100)
Test Statistics	X^2 = 29.744, df = 16, P = 0..026 (<0.05)					
	Fisher's Exact Test, P =0.026					

Table-IV: Association between mothers' occupation and diseases of children (n=143)

Occupation of mother	Diseases of children					Total (%)
	GIT (%)	Respiratory diseases (%)	Neurological diseases (%)	Pyrexia (%)	Non-communicable (%)	
Service(Armed Forces)	0	0	0	1(100.0)	0	1(100)
Service(civil)	0	0	1(50.0)	1(50.0)	0	1(100)
Business	0	1(100.0)	0	0	0	1(10)
Housewife	25(18.0)	61(43.9)	19(13.7)	22(15.8)	12(8.6)	139(100)
Total	25(17.5)	62(43.4)	20(14.0)	24(16.8)	12(8.4)	143(100)

Test statistics	X^2 = 10.943, df = 12, P = 0.027 (<0.05)
	Fisher's Exact Test, Value= 13.074 ; P =0.325

Discussion

In this study the mean age of the children was 4.8 years (SD ±3.6 years) which is similar to the finding of the study by Yazdany[7] (mean age 3.5 years) among children of Armed Forces Personnel of Dhaka Cantonment. It was evident from the study that out of 143 children, 60.1% were male and 39.9% were female. This study finding is almost similar to the study finding conducted by Choudhury DK and Bezbaruah Bk[8] where out of 200 children, male (58.3%) and female (41.7%). But it is not similar to the study conducted by Yasmeen S[9] in Bangladesh Medical College Hospital where she found male children were 44% and female children were 56%. These differences in male and female percentage might be due to small size and purposive sampling technique. In this study, it was found that the mean monthly family income of the parents of the children was taka 16286.7 which is much higher than the per capita national income of our country which is about taka 4646.6 per month[1].

This study showed that maximum mothers' education was (62.2%) SSC or equivalent level. The finding is not similar to the finding of the study among under five admitted children in Combined Military Hospital Dhaka by Ahmed N M[10], where it was shown that 13.2% mother were illiterate and 42.6% were below SSC. In another study on sickness pattern of children attending Malobika Child Welfare Centre of Dhaka Cantonment by Rahman JM[11] shown that mother's educations were 42.9% below SSC and 3.9% were illiterate. Higher education level of

mother in this study reflects the gradual increasing consciousness about the importance of mother's education.

The present study revealed that majority of the children were suffering from respiratory diseases (43.4%) followed by gastrointestinal diseases, pyrexia, neurological diseases and non-communicable diseases. Though this result is not similar to the study of Surender Kagitapu[12] where he found that majority of the paediatric patients were suffering from respiratory tract infection (35%) followed by diarrhea (27%), viral pyrexia (17%), epilepsy (9%), tonsillitis (7%) and others (5%).

This study revealed the association of the diseases of the children with education level of mother. Children of low educational level (class vi-x) mother suffered more from pyrexia (30.8%) and children of more educated (Graduate or above) mother from respiratory diseases (71.4%). But this study finding is not similar to the study finding conducted by Saeed AA[13], where the prevalence of acute respiratory infection in children was 24%, mostly in children whose mothers were less educated. In a study Soe K[14] describes that mothers with higher level of education were more likely to engage in economic activities and may not be able to adopt exclusive breast feeding and devote enough time to take care of their children resulting in unwanted child health outcomes. This study showed the statically significant relationship of occupation of mother and diseases of children suffering from. In this study maximum mother were housewives and respiratory diseases (43.9%) were more

common among their children. Neurological diseases (50%) were common in mothers who were service-holder. In his study Soe K[14] shows that out of working mothers, in about two thirds cases higher incidence of illnesses especially of pneumonia and diarrhoea were found, possibly due to their increased consciousness of child sick reporting. Though the association of the diseases of the children with mothers' education and mothers' occupation were statistically significant but it is difficult to come in a conclusion which diseases are related to what level of mother's education or types of mothers' occupation. Here, qualitative time passing for child caring is important.

Conclusion

Children are the future prospect of the nation. They are the most vulnerable group and comprise a substantial percentage of our population both in civil and in Armed Forces. So, we should be very much concerned about their health. For development of better health of the children in Armed Forces it is essential to have proper and adequate knowledge for all concerned. The parents should be aware enough of prevailing major diseases of the children and necessary measures along with health education especially for mothers should be taken accordingly.

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