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Original Research Article

Knowledge, attitude and practices regarding childhood pneumonia among the parents: a cross sectional study on childhood pneumonia admitted cases in selected hospitals of Chattogram city, Bangladesh

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ABSTRACT

Background: Every year a large number of children die due to pneumonia, the most common infectious disease among the children. Nowadays it is a major public health concern for the children specially aged under five. The main objective of this study is to determine the knowledge, attitude and practice level of the parents regarding childhood pneumonia. Aim of the study were to improve knowledge, attitude and practices on childhood pneumonia among parents which will be helpful in prevention of associating risk factors and our ability to improve early detection of the disease.
Methods: A cross sectional study has been conducted with 300 parents from the admitted cases in selected hospitals of Chattogram City, Bangladesh. Interviewer administered structured questionnaire was used for data collection using non probability sampling technique. The questionnaire was divided into three sections as socio-demographic profile, level of knowledge, and level of attitude and practices.
Results: The study found that 83% of parents have knowledge about childhood pneumonia and most of them think that bacteria and viruses are the main causes of pneumonia. Parents mostly appear to private doctors and government hospitals when their children get sick.
Conclusions: The analysis shows that the literacy rate of the parents have been found similar with the findings of other research which is associated with the knowledge level of the parents. Therefore it is recommended to organize health education programs at household or community level or mass education campaigns to disseminate knowledge about childhood pneumonia.

Keywords: Childhood pneumonia, Acute respiratory infection, Mortality, Immunization, Bacteria, Viruses, Infectious disease

INTRODUCTION

Pneumonia is the single largest infectious cause of death in children worldwide. It is a major public health problem in many developing countries.[1] This disease has killed 740 180 children under the age of 5 in 2019, accounting for 14% of all deaths of children under 5 years old but 22% of all deaths in children aged 1 to 5 years.[2] It is one of the major causes of morbidity and mortality among the children. It is also called lower respiratory tract infection. More than 2 million children die annually because of this disease.[3] Among them 17-26% children under five age.[4] The causative organisms of this disease are bacteria, viruses and parasites. This infection is more frequent in urban countries than rural countries. The disease may result in the worst outcome if the caretaker fails to realize the immediacy of the necessary medical treatment.[5] That's why the early recognition of this disease is very much important.

Knowledge, attitude and practices of parents play a vital role in reduction of mortality due to childhood pneumonia because in most of the developing countries like Bangladesh community health status is determined by the level of socio-demographic variables like age, education of parents, family income, living place, family member etc. the first and foremost measure which influence health status is the socio-economic status of the community people. Then the second measure is education where the education of the mother is the most important one which we always neglect. Besides socio-demographic status the other contributing factors that influence pneumonia are incomplete immunization schemes, malnutrition, lack of health care, inadequate treatment etc.[6] Weak public health system, deficient financial and human resources, poor healthcare services, lack of acknowledgement about diseases are also underlying constraints of childhood pneumonia.[7]

According to WHO/ United Nations Children Fund (UNICEF), countries can reduce the mortality due to childhood pneumonia in community settings by, "integrating community pneumonia treatment activities with other efforts and initiatives that promote child health, especially malaria and diarrhea treatment at the household and community levels".[8] But a few countries could make such intervention policies. Especially in low income countries, the likely cause of childhood mortality is because of the poor formal health care system because in rural countries most children fall ill and die beyond the reach of public healthcare facilities. They are mostly treated at home without proper knowledge and practices which increases the prevalence of associating risk factors.[9] The study will generate more knowledge, change attitude and practices on childhood pneumonia among parents which will be helpful in prevention of associating risk factors and our ability to improve early detection of the disease.

METHODS

Study area and population

This study has been done in the Chittagong district of Bangladesh. The survey has been conducted with the information of the admitted cases in selected hospitals in Chittagong. 300 cases were selected for this survey.

Data collection tools

Data was collected using a semi-structured questionnaire, which covers relevant questions regarding socio-demographic data of the parents and their child, general knowledge of the parents about pneumonia, health information and health care practices of their child and lastly the attitude of parents towards their child when they fall sick. An informed consent has been taken from the participants before they go through the interview. The interview has been taken face to face to gather information according to the questionnaire.

Data analysis

Data was entered and encoded by trained personnel and the data was analyzed using Microsoft Excel-2016 version.

Study design

This is a descriptive quantitative cross-sectional, community-based study which was carried out in Chittagong district, Bangladesh.

Sampling method

The non probability and purposive sampling method has been used in this study to classify the collected data.

Inclusion criteria

People with given consent who willingly joined or participated in this study. Both male and female were selected as participants and as parents.

Exclusion criteria

People who felt unwilling to participate and were not able to provide information due to physical or mental illness or handicapped.

Study period

The study started from October 2022 and ended in April 2023.

Ethical approval

The ethical approval had been issued and the recommendations had been followed accordingly.

RESULTS

Socio-demographic characteristics

Table 1 shows the information about socio-demographic characteristics of the participants. Among the participants' babies, most babies were within the age 3 - 4 years and the number was 101 (33.5%). Among the 300 participants. 28.5% participants assigned their baby's age as 5-6 years. Among them, 63.5% were male children and the other 36.5% were female children.

Table 2 shows the information about socio-demographic characteristics of the participants. Education level of the mother included 33.5% illiterate, 21.5% primary level, 18.5% SSC, 15.0% HSC, 7.0% Graduate and 4.5% post-graduate found. This data shows that the maximum number of mothers are illiterate here. Education level of the father included illiterate 21.0%, primary level 27%, SSC 16.5%, HSC 20.0%, graduate 6.5% and post

graduate 8.5%. From both of these information it is noted that the education level of majority of the parents are not that much higher.

Table 1: Socio-demographic characteristics (n=300).

Variables	Options	Total	%
Age in years (of the baby)	<1 year	46	15.5
	1-2 year	35	11.5
	3-4 year	101	33.5
	5-6 year	85	28.5
	>6 year	33	11.0
Gender (of the baby)	Male	190	63.5
	Female	110	36.5

Table 2: Socio-demographic characteristics of educational status (n=300).

Variables	Options	Total	%
Educational status of mother	Illiterate	100	33.5
	Primary	64	21.5
	SSC	56	18.5
	HSC	45	15.0
	Graduate	21	7.0
	Post graduate	14	4.5
Educational status of father	Illiterate	63	21.0
	Primary	80	27.0
	SSC	50	16.5
	HSC	61	20.5
	Graduate	20	6.5
	Post graduate	26	8.5

Table 3: Socio-demographic characteristics of occupation (n=300).

Variables	Options	Total	%
Occupation of mother	House wife	141	47.0
	Part time worker	36	12.0
	Govt. employee	11	3.5
	Private employee	77	26.0
	Businessman	0	0.0
	Farmer	0	0.0
	Retired employee	0	0.0
	Shopkeeper	0	0.0
	Student	35	11.5
Occupation of father	Part time worker	81	27.0
	Govt. employee	20	6.5
	Private employee	86	29.0
	Businessman	71	23.5
	Farmer	0	0.0
	Retired employee	0	0.0
	Shopkeeper	42	14.0
	Student	0	0.0

Table 3 shows the information about socio-demographic characteristics of the participants. About half of the mothers from the participants are housewives and the frequency is 47.0% and the fathers are occupied in different workplaces where majority of the fathers are private employee followed by part time worker.

Table 4: Socio-demographic characteristics of family (n=300).

Variables	Options	Total	%
Types of family	Nuclear	201	67.0
	Joint	99	33.0
Number of child	1 child	125	41.5
	2 child	131	43.5
	3 child	32	10.5
	>3 child	14	4.5
Monthly family income in BDT	~10k	71	23.5
	10k-20k	87	29.0
	20k-30k	107	35.5
	30k-40k	30	10.0
	>40k	6	2.0

Table 4 shows the information about socio-demographic characteristics of the participants. In this study majority (67%) of the families are nuclear. Majority of the parents mentioned about 2 children in their families. And majority (35.5%) of the respondents told about 20-30K as their monthly family income.

Knowledge and ideas of parents about pneumonia

From the 300 participants, 250 parents (83%) has agreed that they have knowledge about pneumonia and 50 parents (17%) told that they don't know about pneumonia which predicts that maximum participants could have basic idea about pneumonia (Figure 1).

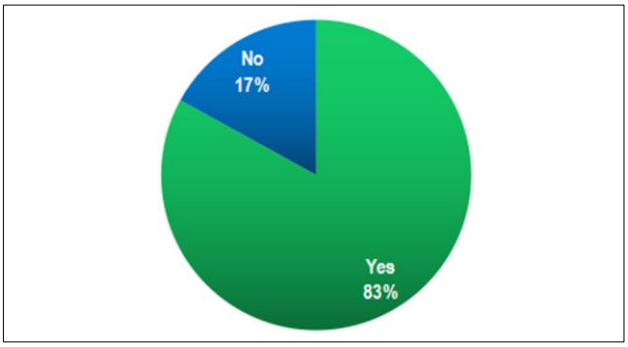

Figure 1: Percentage of respondents know about pneumonia.

From their knowledge, they have responded about the causes of pneumonia where most participants included bacteria (37%), virus (22%) and both (29%) as leading causes of pneumoni (Figure 2).

Figure 3 shows the participant's thoughts about common symptoms of pneumonia. They have excluded bleeding as a symptom of pneumonia. Most participants (164) included cold, cough and fever and 102 included

breathing problems as symptoms of pneumonia. 35 respondents included both as symptoms of pneumonia.

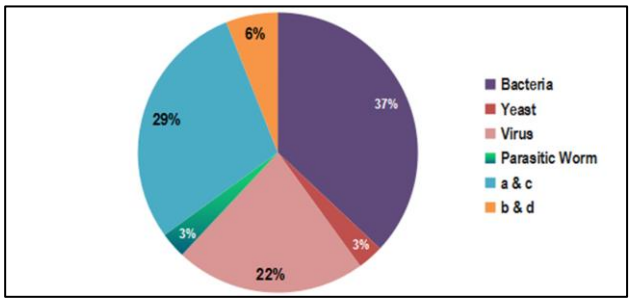

Figure 2: Percentage of respondents know about causes of pneumonia.

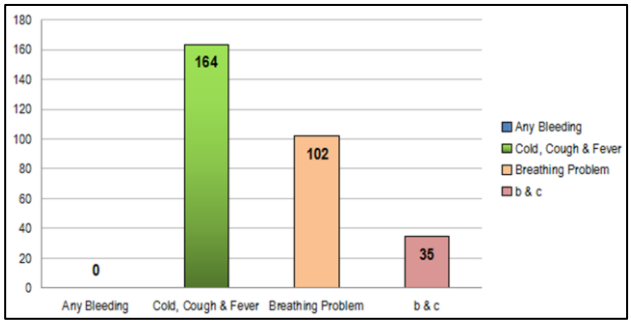

Figure 3: Respondents reply the common symptoms of Pneumonia.

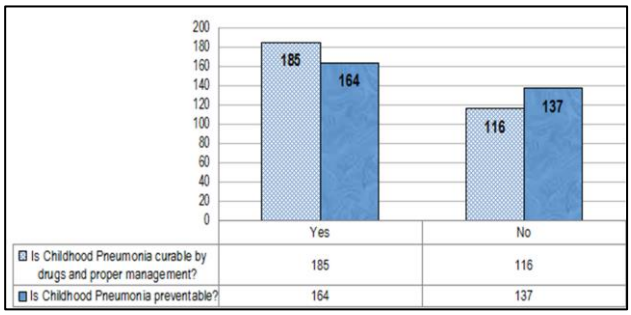

Figure 4: Respondents reply on childhood pneumonia curable & preventable or not.

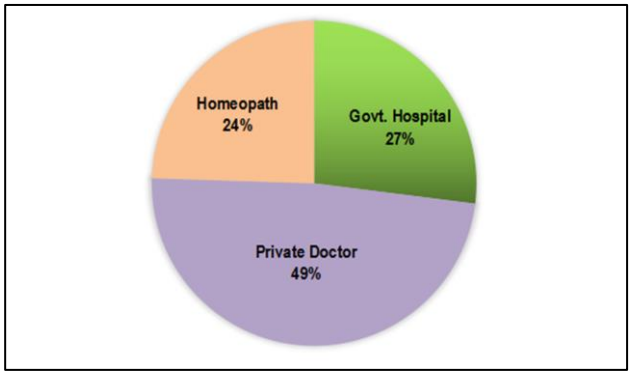

Figure 5: Percentage of respondents consult first after being sick.

Figure 4 shows that most (185) participants agreed that childhood pneumonia is curable by drugs and proper management. When asked if childhood pneumonia is preventable or not, the response ratio of the participants is almost equal. 164 participants agreed that it is preventable where other 137 participants disagreed.

Another important fact is that, the majority of the parents (49%) prefers to go to private doctors rather than government hospitals (27%). A few participants (24%) seek homeopathy when their child get sick (Figure 5).

DISCUSSION

According to the National Situation Analysis Report of Pneumonia 2018, two children die of pneumonia every hour in Bangladesh.[10-13] The study shows the knowledge, attitude and practice about childhood pneumonia among their parents in Chittagong district. The study focused on determinants of the disease, symptoms, knowledge about the illness, action taken after illness of their children, follow up of doctor's advice etc. The study showed an overall literacy rate of mothers being 66.5%. Of these, 22% were higher than secondary education. This is in comparison to a similar study conducted at Tharparkar showing overall literacy rate of mothers being 74% with urban background.[13] To assess the knowledge of parents about the cause of pneumonia, they were asked whether the disease is caused by bacteria, virus, parasites or worm infection. In response to this, most parents said that bacteria and viruses are the main cause of pneumonia, which is true. The most common cause of pneumonia is influenza and rotavirus.[10] This information of our study contrasts with another study of Saudi Arabia where the 51.25% participating mothers who have children under five years told that pneumonia is caused by germ infection but they are not sure about the microorganism of that. 83.5% participants said that they know what pneumonia is and when asked about symptoms, 34% participants noted cough and fever as the most common symptoms of pneumonia. This information matches with another study of Ghana which included cough, fever and lethargy (57%) as common symptoms of pneumonia.[11] Another similar study is also found regarding the symptoms where 84% participants responded that they know about pneumonia and 84% included that rapid breathing and chest retraction is the common sign of pneumonia. Immunization coverage of this study is 93.5% whereas it is 85% shown by a study conducted in Kenya.[12]

CONCLUSION

The study reveals that most of the parents have adequate knowledge about childhood pneumonia. They are aware of the origin of pneumonia and the common symptoms behind the disease. They believe that it can be prevented and cured by drugs and management. But most of them go to the private doctors while their babies got sick rather than govt. Hospital. The reason behind this can be that

they do not get enough health facilities or treatment from the government hospitals. Therefore, it is essential to develop more training programs and adequate health facilities for childhood pneumonia. Health education programs at household or community level or mass education campaigns should be implemented to disseminate knowledge about the signs and symptoms including danger signs of pneumonia requiring immediate treatment at facility level and preventive measures against childhood pneumonia.

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