

Knowledge on Self-care Management among Asthma Patients at Specialized Hospital in Dhaka

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Abstract:

➤ Background:

Asthma is one of the most common major non-communicable diseases. It is a global problem today that can attack adults with high morbidity and mortality rates.

➤ Aim:

The aim of this study is to assess the level of Knowledge on Self-care Management among Asthma Patients at Specialized Hospital in Dhaka.

➤ Methods:

A descriptive type of cross-sectional study was carried out from July 2023 to June 2024. The study sample 50 patients through the following purposive sampling technique. A structured questionnaire was used for data collection through face-to-face interview and descriptive statistics (mean, frequency, percentage) was done for data analysis.

➤ Results:

The study result showed that the mean age of the respondents was 42.8 years. 54% respondents were female and 46% were male. Among the respondents 82% were married, 12% were unmarried and 6% were widowed. 50% completed HSC, 8% were completed SSC, 32% were completed primary education and rest of 10% respondents had no any formal education. 40% female respondents were housewife; 32% male respondents were business man. The overall findings showed that 62% respondents had poor level of knowledge and only 6% respondents had excellent level of knowledge, 4% had very good level of knowledge, 10% had good level of knowledge, 18% had average level of knowledge regarding self-care management of asthma.

➤ Conclusion:

The researchers concluded that the patients had not sufficient knowledge about self-management of asthma. In this context, this study suggested that the need of awareness programme or health education programme about self-care management of asthma is expected to improve public knowledge.

Keywords: Asthma Patient, Knowledge, Self-care Management, Dhaka

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I. INTRODUCTION

➤ Background

Asthma is one of the most common major non-communicable diseases [7; 9]. Asthma is a global problem today that can attach children and adults with high morbidity rates and cause mortality in severe cases [2; 18]. The air passages in the lungs become narrow due to inflammation and tightening of the muscles around the small airways with symptoms are cough, wheeze, shortness of breath and chest tightness also triggers vary from person to person, but it can include viral infections (colds), dust, smoke, fumes, changes in the weather, grass and tree pollen, animal fur and feathers, strong soaps and perfume [19; 20].

Around 300 million people have asthma worldwide, it is likely that by 2025 a further 100 million may be affected. There is a large geographical variation in asthma prevalence, severity, and mortality. While asthma prevalence is higher in high income countries, most asthma-related mortality occurs in low-middle income countries [5]. Globally, Asthma is ranked 16th among the leading causes of years lived with disability and 28th among the leading causes of burden of disease [9]. Nowadays, despite many advances in asthma diagnosis and treatment, the prevalence of controlled asthma is still low worldwide. It is reported that the level of asthma control is still less than expected [14]. Worldwide, Asthma is estimated that approximately 300 million people currently suffered to the disease each year [2]. The recent Global Burden of Disease (GBD, 1990-2019) estimated the total burden in India as 34.3million, accounting for 13.09% of the global burden. It also attributed that 13.2 thousand deaths in India were due to asthma [4; 17].

In Bangladesh 2020, found that Asthma related deaths 8,893 or 1.24% of total deaths. Death Rate is 7.70 per 100,000 of population ranks Bangladesh 74 in the world. Although of being a global problem low- and middle-income countries suffer the most severe cases [13]. Currently, data are lacking regarding knowledge on the self-management of asthma in adult patients. In many countries including Bangladesh, although levels of asthma self-management are low (regarding both knowledge and practice of asthma patients), these can be improved by means of education and supported asthma self-management can lead to improved asthma control, fewer exacerbations/ hospital admissions, and improved quality of life [14].

Self-care management of asthma is crucial for disease control and has a positive impact on patient quality of life [1]. Self-care management of asthma is the strategy for asthma symptom control and future reduction of exacerbation, but it is poorly implemented in clinical settings due to the patients, professionals, and organizational related factors [2]. Self-care management of asthma is a behaviour that is carried out independently by suffers to manage and control asthma symptoms to prevent exacerbations [3]. However, there was very limited information available about self-care management and there was few previous study about self-care management in Bangladesh. Therefore, it is important to explore the level of knowledge on self-care management

among asthma patients at specialized hospital in Dhaka, Bangladesh.

➤ Justification

Asthma is a well-known worldwide illness with a noticeable burden at all health-care settings. Being a chronic illness, asthma may have a substantial impact on several facets of patient's life. It affects financial, medical, social and rest of the other dimension's variable levels [10]. In Bangladesh is strongly committed to reduce preventable asthma means non-communicable disease by 2030 to achieve the sustainable Development Goals (SDG). Uncontrolled asthma can have serious consequences. By improving self-care of the asthma knowledge can prevent, control and improve the symptoms of the asthma. Health education on self-care management of asthma is the strategy for asthma symptom control and future reduction of exacerbation, but it is poorly implemented in clinical settings due to the patients, professionals, and organizational related factors [2; 18].

Self-care management of asthma is a behaviour that is carried out independently by the sufferers to manage and control asthma symptoms to prevent exacerbations [1]. However, there was very limited information available about self-care management and there is few previous study about self-care management in Bangladesh. Therefore, it is important to explore self-care management that to identify the level of knowledge on self-care management in asthma patients. The result of this study will be helpful to recommend in providing appropriate knowledge on self-care management to protect health and wellbeing of asthma patients. So, researchers were interested to conduct the current study to assess the level of knowledge on self-care management among asthma patients at specialized hospital in Dhaka.

➤ Research Question

What is the level of knowledge on self-care management among asthma patients at specialized hospital in Dhaka?

➤ Research aim

The aim of this study is to assess the level of knowledge on self-care management among asthma patients at specialized hospital in Dhaka.

➤ Objectives

- To assess the level of respondents' knowledge regarding concept of asthma at specialized hospital in Dhaka.
- To find out the level of respondents' knowledge on self-care management of asthma at specialized hospital in Dhaka.
- To determine the level of respondents' knowledge regarding the complications of asthma at specialized hospital in Dhaka.
- To measure the level of respondents' knowledge regarding the prevention of asthma at specialized hospital in Dhaka.
- To state the socio-demographic characteristics of the respondents.

➤ *Research Variables*• *Socio Demographic Variables*

- ✓ Age
- ✓ Gender
- ✓ Religion
- ✓ Marital status
- ✓ Educational qualification
- ✓ Occupation
- ✓ Monthly income

• *Knowledge Related Variables*

- ✓ Concept of Asthma (Meaning, Cause, Risk factors, Sign and Symptoms).
- ✓ Self-care management of Asthma
- ✓ Complications of Asthma
- ✓ Prevention of Asthma.

➤ *Operational Definition*• *Asthma Patient*

In this study asthma patient refers to the respondents who are admitted at Asthma ward (22/23 Male ward and 24/25 Female ward) at National Asthma Centre of NIDCH, Mohakhali Dhaka with confirm diagnosis of Asthma.

• *Knowledge*

Knowledge on asthma patients refers to those who are remembering and understanding about asthma (meaning causes, risk factors, sign and symptoms and management) with use of asthma medications, self-care management for control and prevention of asthma and the complications of asthma.

II. LITERATURE REVIEWS

A literature review is a comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research. The review should enumerate, describe, summarize, objectively evaluate and clarify this previous research.

➤ *Meaning of Asthma:*

Asthma is defined by Global Initiative for asthma (GINA) as a heterogeneous disease usually characterized by chronic airway inflammation and accompanied by a history of recurrent or persistent respiratory symptoms such as wheeze, shortness of breath, chest tightness and cough that vary over time and in intensity, together with variable airflow obstruction [19]. Asthma is a potentially life-threatening condition and one of the most common respiratory problems, causing lung airway obstruction. Asthma places a significant social and economic burden on patients, families, and healthcare systems [3].

➤ *Causes of Asthma:*

The causes of asthma is increasingly attributed to interactions between genetic susceptibility, host factors and

environmental exposures. This include environmental factors (air pollution, pollens, mold and other aeroallergens and weather), host factors (obesity, nutritional factors, infections, allergic sensitization) and genetic factors [15].

➤ *Sign and Symptoms of Asthma:*

The variation in symptoms and air flow obstruction can in most cases be associated with an identifiable risk factors are: Hereditary, Maternal smoking (in utero), Parental smoking (post-natal), Occupational exposure to pollutants, Family history of asthma, Pre-term birth, Cigarette smoke, Low birth weight, Exposure to infections early in life, Adverse environmental conditions [19].

Symptoms of asthma can vary from person to person. Symptoms get significantly worse. This is known as an asthma attack. Symptoms are often worse at night or during exercise. Common symptoms of asthma include:

- A persistent cough, especially at night
- Wheezing when exhaling and sometimes when inhaling
- Shortness of breath or difficulty breathing, sometimes even when resting
- Chest tightness, making it difficult to breathe deeply

Some people will have worse symptoms when have a cold or during changes in the weather [11; 20].

➤ *Management:*

Self-care management can be defined as the tasks that individuals must undertake to live with one or more chronic conditions. These tasks include having the confidence to deal with medical management, role management and emotional management of their conditions [16].

➤ *Complication:*

Asthma which is not carefully managed can lead to:

- Constant fatigue
- Frequent leave from work or school due to constant asthma flare-ups
- Pneumonia
- Increased mucus production
- Thickening and narrowing of bronchial tubes which can become permanent leading to respiratory failure
- Respiratory failure
- Severe chest pain

Asthma affects individuals differently, resulting in differing severity, presentation of symptoms, and responsiveness to treatment. When not treated, asthma can cause disability and even death [4; 8].

➤ *Knowledge on Self-care Management among Asthma Patients:*

A descriptive cross-sectional study conducted in Kalar General Hospital, by Abbas et al., (2019) among 83 asthmatic patients measured by attending structured questionnaire. The finding revealed that the proportion of knowledge regarding self-management for (62.7%) of asthmatic patients was poor, the (12.0%) of participants had good knowledge and asthma

for (13.3%) well-controlled. The rate of asthma control was low and the patients had wide gaps in knowledge of important items related to asthma preventive strategies and medication use which are crucial to self-management of the disease [1].

According to (Kaur *et al.*, 2019) A cross-sectional study was conducted on Assessment of knowledge regarding self-management of bronchial asthma among patients attending the outpatient department of a North Zone tertiary care centre, where 30-40 new cases of bronchial asthma seen on each outpatient day and 135 patients suffering from asthma were enrolled using a purposive sampling technique during the period July-November 2018. This study indicates that participants had inadequate knowledge related to self-care management measures. More than 10% (10.3%) of the participants had poor knowledge, Nearly, two-third (64.44%) of the participants had moderate knowledge and 25.19% had good knowledge. This study concluded that knowledge and awareness and self-management was insufficient, despite long-standing disease [10].

A cross-sectional study was conducted among 322 ambulatory patients in Ho Chi minh city, Vietnam on knowledge on self-management and levels of asthma control with convenience sampling by among using structured questionnaire. The finding revealed that the proportion of knowledge regarding self-management for (80.5%) of asthmatic patients was poor, (16.2%) of patients had adequate knowledge and only (0.3%) of patients had good knowledge. Also patients 52% stated erroneously that asthma can be cured, 30% were confused about control and rescue medications, 68% failed to correctly describe the inhalation technique and 15.5% could answer correctly about the management of an exacerbation. This study concluded that knowledge on asthma self-management and control was low so need to improve knowledge among asthma patients [14].

A quasi-experimental study conducted on Effect of an Educational program regarding self-care management behaviours for patients with bronchial asthma among 103 asthmatic patients was included in the study. The finding revealed that improvement in total self-care management behaviours from (81.6%) uncontrolled behaviours, pre-program to (49.5%) controlled behaviours post-program. The study results concluded that implementation of the asthma training program was associated with improvement in the use of medication, how to deal with asthma attacks, prevent a recurrent asthma attack, avoidance of the triggers for bronchial asthma, and the use of an inhaler [9].

A descriptive cross-sectional study was conducted at two government hospitals (outpatient clinic, emergency room, medical and surgical wards) in Tabuk city. Only asthmatic patients who met the inclusion criteria (aged ≤ 18 years old) and both genders were considered in this study with using purposive sampling method. Returned responses numbered 112, with a response rate of 56%. Asthma knowledge questionnaire was used to evaluate their knowledge and attitudes concerning asthma symptoms. All data were analysed descriptively using statistics of percentage, mean, frequency and standard deviation. Of the

112 total respondents (52.7% female and 47.3% male), 40% declared that they had heard of this disease from a healthcare professional (doctor or nurse), 24% from the internet, and only 4% from television. Overall, 100% of participants reported that asthma can be caused by an allergy, air pollution, or any other type of irritant (dust, fumes, etc.); 83.9% believed that the common cold and exercise can lead to asthma; 79.5% thought that asthma is life-threatening; and 59.8% said that asthma is a genetic disease. Approximately 18% believed that asthma is not a dangerous disease; 82% reported that inhalers are the best medical intervention to alleviate asthma symptoms; and only 11% said that medication should be continued even if symptoms no longer occur. Educational programs about asthma should be adopted in health systems to improve the knowledge, attitudes, and practices of patients and their families regarding asthma attacks, in order to prevent acute exacerbations [3].

A descriptive type of explorative design was utilized for the conduction of this study was conducted at chest department and outpatient clinics for bronchial asthma affiliated El-Fayoum University hospital, Egypt. A convenient sample of 100 patients with bronchial asthma. Data were obtained through patient's interview questionnaire, patient's knowledge regarding asthma self-care management questionnaire and observational practice checklist. Mean age of patients was 31.5 ± 7.41 , while 63% of the studied patients were males and 70% of them were read & write. Also 69% of had unsatisfactory level of knowledge regarding bronchial asthma and self -management and 72% had unsatisfactory level of practice regarding bronchial asthma self-care management. Develop and implement an educational program based on patients learning needs regarding bronchial asthma [6].

A quasi-experimental study conducted on Effect of an Educational program regarding self-care management behaviours for patients with bronchial asthma among 103 asthmatic patients was included in the study. The finding revealed that improvement in total self-care management behaviours from (81.6%) uncontrolled behaviours, pre-program to (49.5%) controlled behaviours post-program. The study results concluded that implementation of the asthma training program was associated with improvement in the use of medication, how to deal with asthma attacks, prevent a recurrent asthma attack, avoidance of the triggers for bronchial asthma, and the use of an inhaler [9].

III. METHODS AND MATERIALS

➤ Research Design

The descriptive type of cross-sectional study was conducted to assess the level of knowledge on self-care management among asthma patient at Specialized Hospital in Dhaka.

• Duration of the Study:

The duration of the study was from July 2023 to June 2024.

➤ *Study Setting*

The study was conducted at National Asthma Centre (NAC) of National Institute of Diseases of the Chest and Hospital (NIDCH), Mohakhali, Dhaka. NIDCH is a super specialized hospital in Bangladesh. In 1955, the hospital was founded. It is 670 bedded Hospital. The hospital is modernized with modern technologies and other expert doctors and nurses and health facilities. It acts as referral hospital for better treatment facilities of all types of chest diseases especially asthma in the country. It offers patients services for curative, rehabilitative, and preventive care.

➤ *Study Population*

All the Asthma patients who were admitted in both male and female medicine wards mentioned as 22/23 and 24/25 ward at National Asthma Centre (NAC) which is under NIDCH. The total number of population were 95 admitted in both male and female medicine ward.

➤ *Sample Size*

The sample size 50 respondents were selected for this study.

➤ *Sampling Technique*

A non-probability type of purposive sampling technique was used in this study to select sample.

➤ *Selection Criteria:*

• *Inclusion Criteria*

- ✓ Respondents who were admitted in 22/23 and 24/25 ward in NAC of NIDCH, Mohakhali with confirm diagnosis of Asthma.
- ✓ Respondents who were voluntarily participate in this study
- ✓ Respondents who were stable during data collection period
- ✓ Respondents who were adult (more than 18 years)

➤ *Exclusion Criteria*

Respondents who did not meet the inclusion criteria.

➤ *Research Instrument*

A structured questionnaire was developed by the researchers according to the objectives and variables of the study after reviewing the relevant literature. The questionnaire was prepared in English then it was translated in Bangla language in the light of the objectives and variables. The questionnaire has consisted of two parts:

➤ *Socio-Demographic Part*

➤ *Knowledge on Self-care Management of Asthma.*

- **Part 1:** Socio- demographic questionnaire consisted of 7 items (age, gender, religion, marital status, educational qualification, occupation, monthly income).

• **Part 2:** Knowledge related questions.

Knowledge related questions regarding self-care management of asthma consisted of 4 domains. Domain-1: Concept of asthma which contains 07 questions, Domain-2: Self-care management of asthma which contains 09 questions, Domain-3: Complications of asthma which contains 02 question, Domain-4: Prevention of asthma which contains 02 questions. Each question had 04 options and 01(one) option is considered as correct answer. 1(one) mark was allocated for correct answer and thus total marks were 20(twenty). Then 20(twenty) marks (20x5) were converted in 100% by respondents during analysis.

➤ *Validity*

The validity of the instrument was examined by three experts in academic field. The researchers were modified the instruments based on expert recommendations.

➤ *Reliability*

Pre-testing was done in asthma department at Dhaka Medical College Hospital, Dhaka on the same characteristics of 10 asthma patients to check acceptance and consistency of the instrument. After that necessary correction was done before finalization of the questionnaire for data collection.

➤ *Ethical Consideration*

- **Written permission:** Written permission was obtained from the Principal, College of Nursing, Mohakhali, Dhaka and concerned hospital authority for data collection to conduct the study. **Memo no. P.F. /CN /208/1(7) and NIDCH/ACA/2024/150/1(7)**
- **Written consent, voluntary participation and right to withdraw:** Respondents were informed about the objectives and method of study and a written consent was taken from the participants prior to start the data collection with their permission and ensured about their right to withdraw from the study without any hesitations.
- **Confidentiality and Anonymity:** Respondents were ensured about their confidentiality and anonymity and maintained strictly by the researchers. The collected data was kept under lock and key in safe place.

➤ *Data Collection Procedure*

Prior to data collection, researchers obtained written permission from the Principal, College of Nursing, Mohakhali, Dhaka and hospital authority. Data was collected by the structured questionnaire through face-to-face interview by the researchers after brief discussion about the objectives of the study. It was taken 15-20 minutes for individual respondent.

➤ *Data Processing and Analysis*

Collected data were checked, organized, edited and entered into the master sheet then it was analysed manually by the researchers with the help of scientific calculator and computer excel software. The descriptive statistics was done for the analysis of the participants' characteristics, distribution and level of knowledge on self-care management

in terms of frequency, percentages and mean. The important variables were analysed to fulfil the objectives of the study.

➤ *Data Presentation*

The results were presented by using tables and charts (Pie and Bar) with interpretation.

➤ *Grading Criteria*

Knowledge level	Grading criteria
Excellent knowledge	90-100%
Very good knowledge	80-89%
Good knowledge	70-79%
Average knowledge	60-69%
Poor knowledge	< 60%

IV. RESULTS

This chapter provided a detailed description of the results analysis presented with appropriate elaboration, depending on the nature of the variables. The results were

presented as simple percentages by using appropriate means. Initially demographic result was showed and after that knowledge based result was documented.

➤ *Part-I: Socio Demographic Information.*

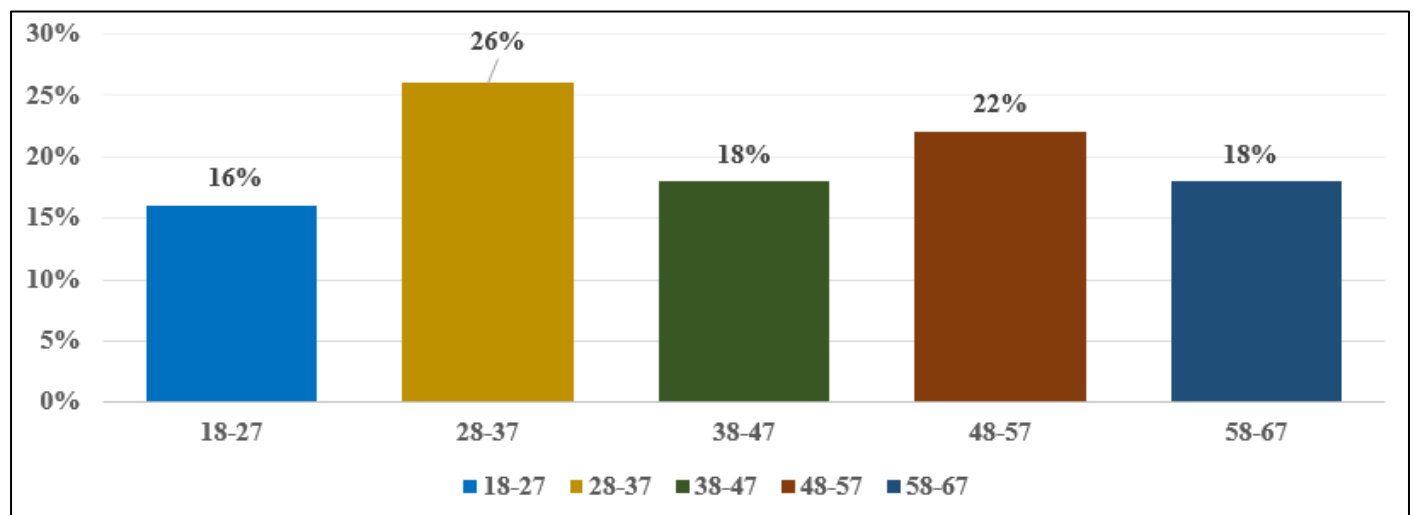


Fig 1 Distribution of Respondents by Age. n=50

• *Description:*

The figure-1, the bar chart shows that the respondents age, 26% respondents were within 28-37 years, 22% were 48-57 years, 16% were 18-27 years, 18% were 38-47 years and 18% were 58-67 years. The mean age of respondents was 42.5 years.

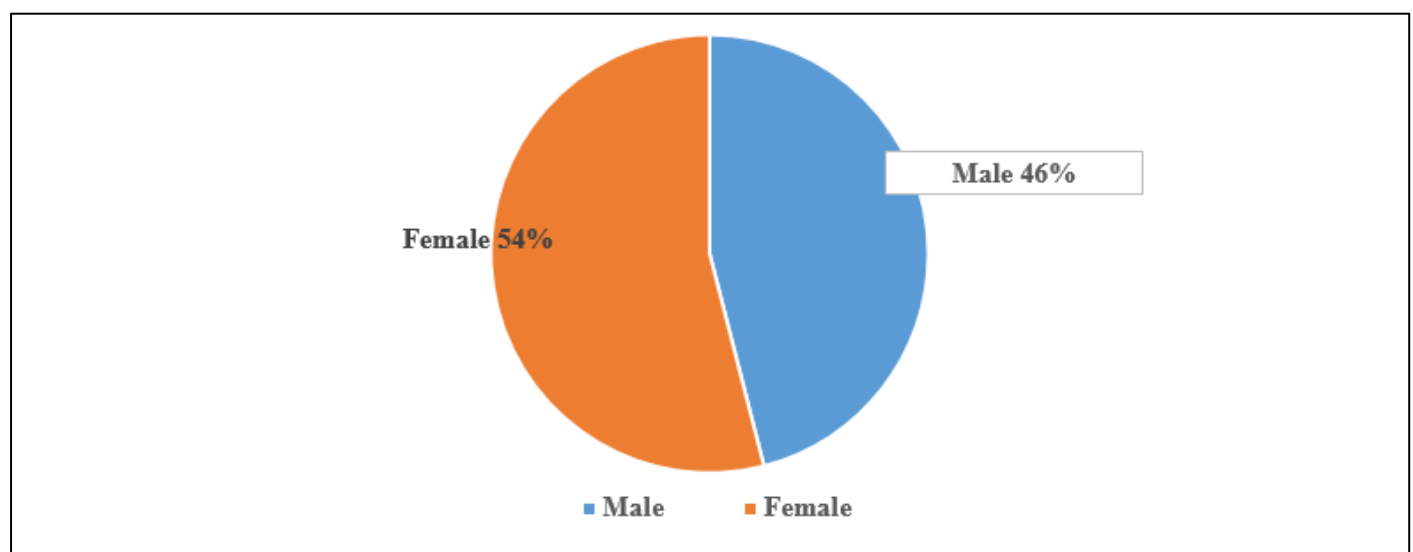


Fig 2 Distribution of Respondents by Gender n=50

- Description:**

The figure-2, pie chart shows that the most of the (54%) respondents were Female and rest of 46% were Male.

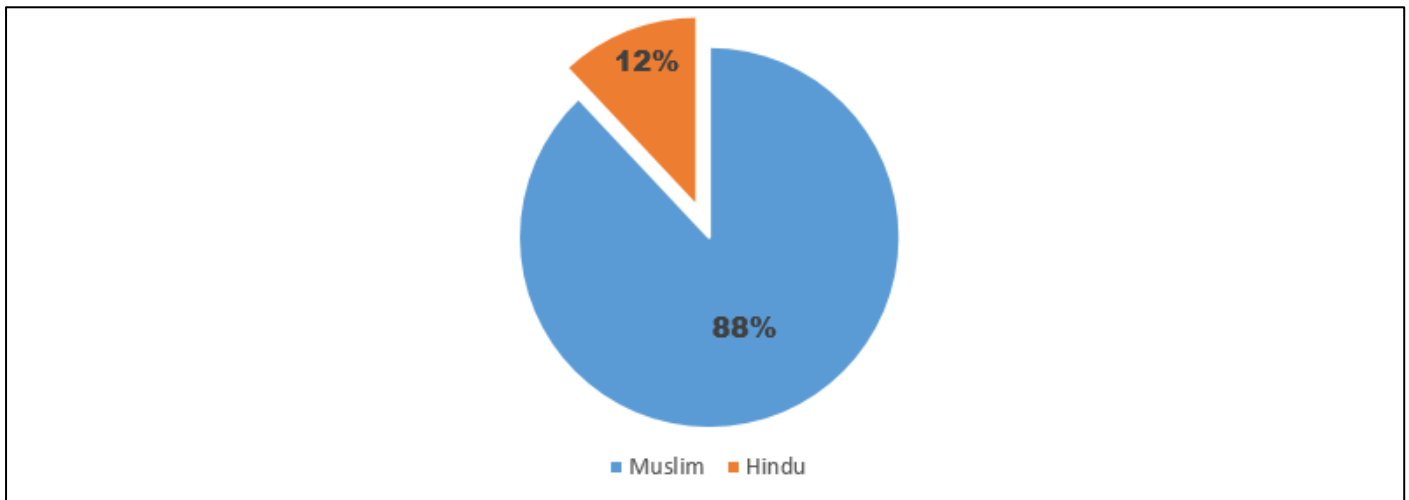


Fig 3 Distribution of Respondents by Religion n=50

- Description:**

The figure-3, pie chart shows that the most of the (88%) respondents were Muslim and rest of 12% were Hindu.

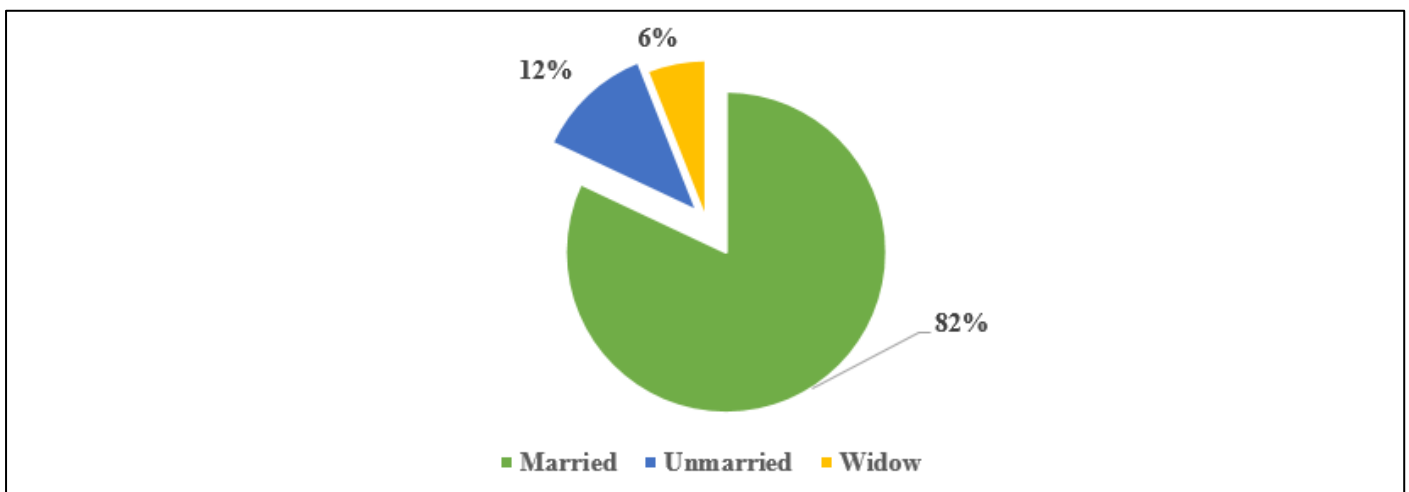


Fig 4 Distribution of respondents by marital status n=50

- Description:**

The figure-4, pie chart shows that among all of the respondents, 82% were Married, 12% were Unmarried, 6% were Widow.

Table 1 Distribution of respondents by educational qualification and occupation n=50

Variables	Categories	(f)	(%)
Educational Qualification	No formal education	05	10%
	Primary	16	32%
	S.S.C	04	8%
	H.S.C & Others	25	50%
Occupation	Service	9	18%
	Business	16	32%
	Unemployed	5	10%
	Housewife	20	40%

- Description:**

Table-1.: The above the table shows that among all of the respondents 50% had passed higher secondary and others, 32% had passed primary level and 10% had no formal

education and 8% had passed secondary level. On the other hand, 40% respondents were housewife, 32% were business, 18% were service and 10% were unemployed by their occupation.

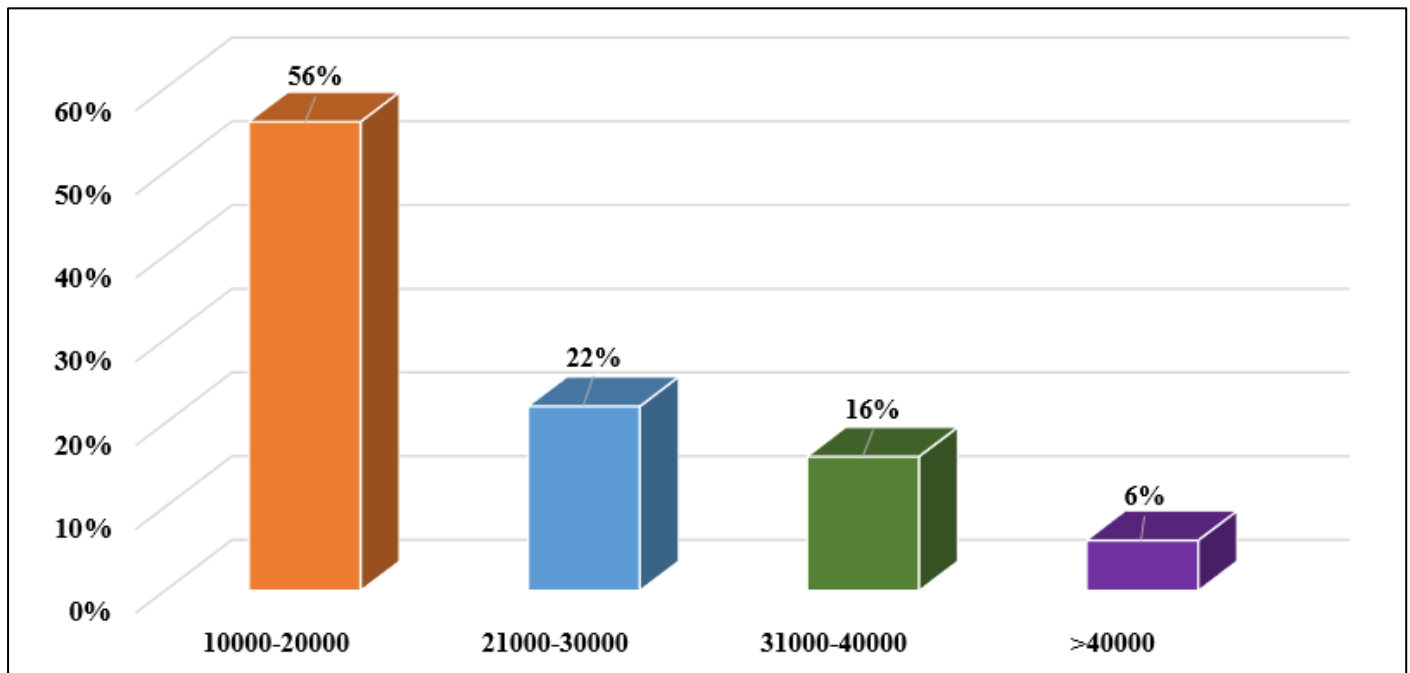


Fig 5 Distribution of Respondents by Monthly Income n=50

• **Description:**

The figure 5, Bar chart indicated that about 56% respondents' monthly income had 10,000-20,000 BDT, 22% had 21,000-30,000 BDT, 16% respondents had 31,000-40,000

BDT and only 6% respondents' monthly income had >40,000 BDT.

➤ **Part-II: Knowledge based Information**

Table 2 Distribution of Respondents' Knowledge Regarding Concept of Asthma n=50

SL No	Variables	Correct Answer		Incorrect Answer	
		(f)	(%)	(f)	(%)
01	Asthma is a lung disease	49	98	1	2
02	Asthma is controlling and preventive disease.	12	24	38	76
03	Asthma is common in all ages	16	32	34	68
04	Hereditary or allergic disease is the risk factor of Asthma	20	40	30	60
05	Taken allergic food and air pollution are the causes of Asthma	32	64	18	36
06	shortness of breath is a common symptom of Asthma	45	90	5	10
07	Chest tightness with restricted breathing is the symptom of Asthma attack	31	62	19	38

• **Description:**

Table-2, shows that the knowledge of concept related questions had 7 (seven) items. Maximum correct answer was 98% regarding meaning of asthma is lung disease and minimum correct answer was 24% regarding asthma is controlling and preventive.

Table 3 Level of Patients' Knowledge Regarding Concept of Asthma n=50

Variables	Level	Grading Criteria	(f)	%	Mean Score
Concept of Asthma	Excellent	90-100%	4	8	35
	Very Good	80-89%	6	12	30
	Good	70-79%	10	20	25
	Average	60-69%	-	-	-
	Poor	<60%	30	60	15.2
Mean of total Score= 20.5 (58.6%)					

• **Description:**

Table-3, shows the knowledge level regarding concept of asthma. Out of all respondents' 60 % had poor level of knowledge, 20% had Good level of knowledge, 12% had very

good level of knowledge and only 8% had excellent level of knowledge regarding concept of asthma. Mean of total knowledge score was=20.5 out of 35 (7 items) which indicates the poor level of knowledge in the area of concept of asthma.

Table 4 Distribution of Respondents' Knowledge Regarding Self-Management of Asthma n=50

SL No	Variables	Correct Answer		Incorrect Answer	
		(f)	(%)	(f)	(%)
01	Basic component of effective management of asthma is education, medication and caution	39	78	11	22
02	Firstly, asthma is diagnosed by doctor.	36	72	14	28
03	Peak expiratory flow (PEF) and spirometry is the immediate diagnostic procedure of asthma.	5	10	45	90
04	Asthma can be managed by medication.	49	98	1	2
05	Effective treatment of asthma is inhaler and nebulizer.	38	76	12	24
06	Preventive and reliever type of inhaler is used during asthma	6	12	44	88
07	Propped up position is a comfortable position for asthma patient	30	60	20	40
08	Liquid and warm type of diet is given during attack for asthma patient	19	38	31	62
09	Mouth wash/ gargle have to done after using steroid inhaler	38	76	12	24

• *Description:*

The table-4 shows that the knowledge of self-care management, which related 9 (Nine) items. About 72% respondents answered that firstly, asthma can be diagnosed by doctor. Maximum (98%) respondents provided correct answer regarding asthma can be managed by medication, 76% respondents accepted that effective treatment of asthma

is inhaler and nebulizer while 90% respondents provided incorrect answer regarding peak expiratory flow (PEF) and spirometry is the immediate diagnostic procedure of asthma. Only 12% respondents provided correct answer that preventive and reliever type of inhaler is used during asthma. On the other hand, 62% respondents provided incorrect answer regarding liquid and warm type of diet is given during attack for asthma patient.

Table 5 Level of Patients' Knowledge Regarding Self-Management of Asthma n=50

Variables	Level	Grading Criteria	(f)	%	Mean Score
Concept of Asthma	Excellent	90-100%	2	4%	45
	Very Good	80-89%	3	6%	40
	Good	70-79%	5	10%	35
	Average	60-69%	10	20%	30
	Poor	<60%	30	60%	20.5
Mean of total Score =26 (57.7%)					

• *Description:*

Table 5, shows that the knowledge level regarding self-care management of asthma. Out of all respondents' 60 % respondents had poor level of knowledge, 20% had average level of knowledge, 8% had good level of knowledge, 8% had

very good level of knowledge and only 4% respondents had excellent level of knowledge regarding self-care management of asthma. Mean of total knowledge score was= 26.1 out of 45 (9 items) which indicates the poor level of knowledge in the area of self-care management of asthma.

Table 6 Distribution of Respondents' Knowledge Regarding Complications of Asthma n=50

SL No	Variables	Correct Answer		Incorrect Answer	
		(f)	(%)	(f)	(%)
01	Constant fatigue is the early complication of asthma	20	40	30	60
02	Death due to cardio-respiratory failure is the late complication of asthma	13	26	37	74

• *Description:*

Table-6, shows that the knowledge of complications regarding asthma. The related questions had 2 (two) items.

About 40% respondents provided correct answer regarding constant fatigue is the early complication of asthma and 26% respondents provided correct answer regarding death due to cardio-respiratory failure is the late complication of asthma.

Table 7 Level of Patients' Knowledge Regarding Complication of Asthma n=50

Variables	Level	Grading Criteria	(f)	%
Complication of Asthma	Excellent	90-100%	6	12
	Very Good	80-89%	-	-
	Good	70-79%	-	-
	Average	60-69%	-	-
	Poor	<60%	44	88
Mean of total Score=3.3 (33%)				

- Description:**

Table-7, shows that the knowledge level regarding complication of asthma. Near about all (88%) of the respondents' had poor level of knowledge, only 12%

respondents had excellent level of knowledge regarding complication of asthma. Total Mean of knowledge score was= 3.3 out of 10 (2 items) which indicates the poor level of knowledge in the area of complication of asthma.

Table 8 Distribution of Respondents' Knowledge Regarding Prevention of Asthma n=50

SL No	Variables	Correct Answer		Incorrect Answer	
		(f)	(%)	(f)	(%)
01	Maintain health check-up is the preventive measure for asthma	3	6	47	94
02	Mouth wash is essential after using steroid inhaler for prevention of mouth sore.	45	90	5	10

- Description:**

The table-8, shows that the knowledge regarding prevention of asthma, related questions had 2 (two) items. Maximum (90%) answered correctly regarding mouth wash

is essential after using steroid inhaler for prevention of mouth sore and only 6% respondents provided correct answer regarding maintain health check-up is the preventive measure for asthma.

Table 9 Level of Patients' Knowledge Regarding Prevention of Asthma n=50

Variables	Level	Grading Criteria	(f)	%	Mean Score
Concept of Asthma	Excellent	90-100%	3	6	10
	Very Good	80-89%	-	-	
	Good	70-79%	-	-	
	Average	60-69%	-	-	
	Poor	<60%	47	94	4.47
Mean of total Score=4.8 (48%)					

- Description:**

Table-9, shows the knowledge level regarding prevention of asthma. Out of the all respondents' most of the respondents (94%) had poor level of knowledge and only 3%

respondents had excellent level of knowledge regarding prevention of asthma. Mean of total knowledge score was= 4.8 out of 10 (2 items) which indicates the poor level of knowledge in the area of prevention of asthma.

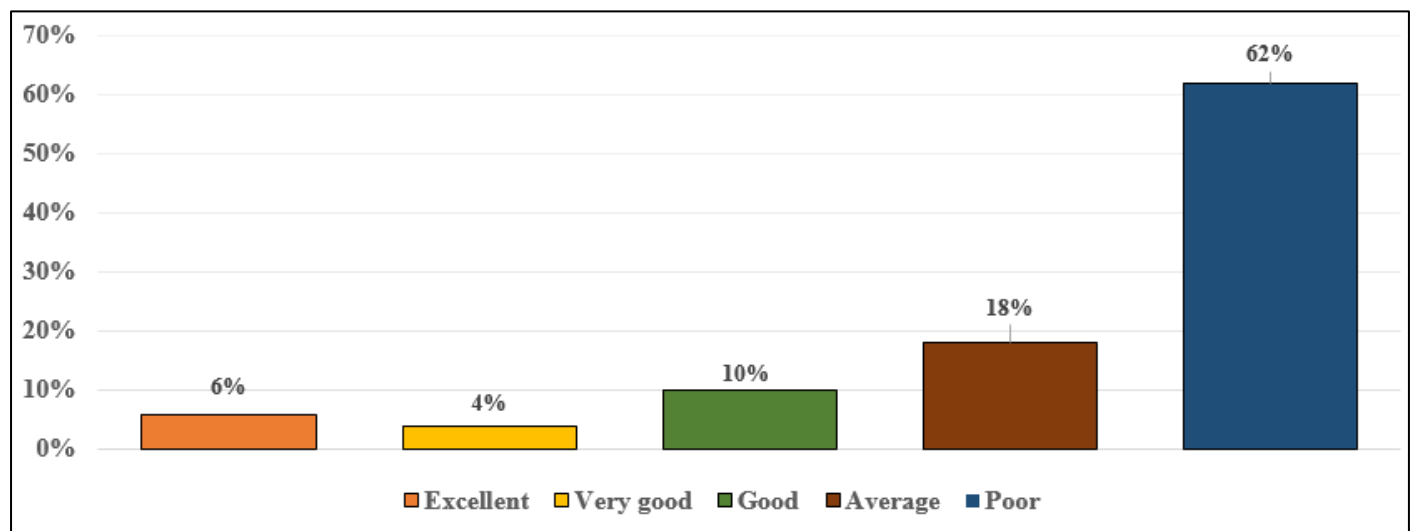


Fig 6 Distribution of Respondents' overall level of Knowledge Regarding Self-care Management of Asthma according to Grading Criteria. n=50

- Description:**

Figure-6, the bar chart shows the respondents' overall level of knowledge regarding self-care management of asthma according to grading criteria. More than half of the respondents (62%) had poor level of knowledge, 18% respondents had average level of knowledge, 10% had good level of knowledge, 4% respondents had very good knowledge and only 6% respondents had excellent level of knowledge regarding self-care management of asthma.

V. DISCUSSION

This chapter deals with the discussion of the results, obtained from statistics, analysis based on the data of the study. A descriptive type of cross sectional study was designed to assess the level of knowledge on self-care management among asthma patient admitted at NIDCH, Mohakhali, Dhaka.

➤ *Socio-Demographics Characteristics of the Respondents*

The present study involved 50 asthma patients with the mean age was 42.5 years. More than half of the respondents (54%) were female and rest of (46%) male. Most of the respondents were Muslim (88%) and rest of them Hindu 12%. Among the respondents 82% were married, 12% were unmarried and 6% were widowed. Half of the respondents were (50%) completed HSC, 8% were completed SSC, 32% respondents were completed primary education and rest of 10% respondents were no formal education. Most of the female respondents (40%) were housewife, male respondents (32%) were business, (18%) service holder and (10%) were unemployed.

➤ *Knowledge on Self-care Management among Asthma Patients*

In current study, result showed that the mean score of concept part was 58.6 which indicate the poor level of knowledge on asthma which is similar (Mohamed & Moghazy., 2022) to a study, result showed that about one third (32.0%) patients had satisfactory knowledge regarding bronchial asthma and 70.0% had moderate knowledge about persistent asthma [12]. In this present study, out of all respondents' 60 % respondents had poor level of knowledge, 20% had average level of knowledge, 8% had good level of knowledge, 8% had very good level of knowledge and only 4% respondents had excellent level of knowledge regarding self –care management of asthma. Mean of total knowledge score was= 26.1 out of 45 (9 items) which indicates the poor level of knowledge in the area of self-care management of asthma. According to Elsadee *et al.*, (2023) a study found that 69% of the studied patient's had unsatisfactory level of knowledge regarding bronchial asthma and self-care management which is near to consistent of the present study [6].

In present study, the area of complications of asthma, about 40% respondents provided correct answer regarding constant fatigue is the early complication of asthma and 26% respondents provided correct answer regarding death due to cardio-respiratory failure is the late complication. Near about all (88%) of the respondents' had poor level of knowledge, only 12% respondents had excellent level of knowledge regarding complication of asthma. About 90% respondents answered correctly regarding mouth wash is essential after using steroid inhaler for prevention of mouth sore and only 6% respondents provided correct answer regarding maintain health check-up is the preventive measure for asthma. Abbas *et al.*, (2019) conducted a study and found that knowledge and the rate of asthma control was low and the patients had wide gaps in knowledge of asthma preventive strategies and medication use which are crucial to self-management of the disease. That is also consistent with current study [1].

Over all findings of the study showed that, more than half (62%) of respondents' had poor level of knowledge, 18% had average level of knowledge, 10% had good level of knowledge, 4% had very good level of knowledge and only 6% respondents had excellent level of knowledge regarding self-care management of asthma. The findings indicate that the respondents had no sufficient knowledge on self-care

management among asthma. In Vietnam, a study revealed that the proportion of knowledge regarding self-management was 80.5% had poor level of knowledge, 16.2% of patients had adequate level of knowledge and only 3% of patients had good level of knowledge which is near to similar to the current study [14]. Another study in North Zone at tertiary care centre, in 2019, which is also indicates that 10.3% of the participants had poor level of knowledge, nearly two-third (64.44%) of the participants had moderate level of knowledge and 25.19% had good level of knowledge regarding self-care management of asthma which inconsistent to the present study [10].

➤ *Limitations of the Study*

- The study was conducted with limited sample size. So, these findings cannot be generalized.
- There were limited sources to carry out the research like as relevant books, Bangladeshi literature, journals, magazines and other sources for conducting the study properly.
- A purposive sampling technique was follow due to limitation of the study period and time of data collection.

VI. CONCLUSION AND RECOMMENDATION

➤ *Conclusion*

Asthma stills a significant burden due to lack of self-care management and also rising public challenge with its increasing prevalence. Despite the revolutionary changes in asthma management the morbidity and mortality due to asthma is increasing worldwide. Over all findings of the study showed that, more than half of respondents' (62%) had poor level of knowledge, 18% had average level of knowledge, 10% had good level of knowledge, 4% had very good level of knowledge and only 6% respondents had excellent level of knowledge regarding self-care management of asthma. The researchers concluded that the patients had not sufficient knowledge about self-management of asthma. In this context, this study suggested that the need of awareness programme or health education programme about self-care management of asthma is expected to improve public knowledge.

➤ *Recommendations*

On the basis of the findings of the study following recommendation is being made:

- Arrange continuing health education session on asthma and self-care management of asthma to the asthmatic patients in the asthma ward and also outpatient department at NAC in NIDCH hospital to develop awareness regarding asthma and its minimize the risk factors and complications.
- Proper and constant guidance, monitoring and counselling should be given to vulnerable, negligence and inattention group.
- Need to involve family members in health education session.
- To increase asthma patients' knowledge, regular education through mass media, patients' clubs, asthma

prevention and control education leaflets and counselling on asthma should be provided.

- Need to providing sufficient knowledge with behavioural therapy are essential to reduce adverse effect of asthma.
- The policy makers of the selected hospital should be concerned to promote asthma patient care.

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