# Aspects in Adult Asthma Patients at Out Patient Department of a Specialized Hospital in Bangladesh: A Descriptive study

[1]Hosne Ara, RN,MSN, [2.] Nirmal Sarker, RN,MSN
Dr. Shariful Islam, RN, PhD.
*Faculty of Nursing, NIANER .Dhaka.*

*Background: Asthma is a reversible obstructive airway condition which is recognized as a major public health problem in Bangladesh. This causes recurrent attack, and decrease in quality of life of patient. According to World Health Organization (2016), it was estimated that approximately 383000 deaths occurred due to asthma in 2015. In Bangladesh, Asthma is one of the leading causes of death and disability. Approximately 11.6 million people suffer from asthma-related symptoms in Bangladesh (Mamun et al., 2016), whereas 15 to 20 million people were asthmatics in India (Burke et al., 2003). However, there are about 3 million asthmatics in Japan of whom 7% have severe and 30% have moderate asthma (Varalakshmi &amp; Rajinder, 2014). Severe acute asthma causes recurrent attack, frequent hospitalization, increase in treatment cost, increase in use of health resources, increase in societal, familial and economical burden and decrease in quality of life of asthma patient (Nathan et al., 2004). Objective: The aim of this study was to assess the characteristics of adult asthma patients. Method: A descriptive study was carried out by face to face interview among the patients attending at Out Patients Department in a specialized hospital in Bangladesh. Dates were collected from December 2018 to January 2019. A total of 111 adult asthma patients were conveniently recruited. Clinical characteristics of the adult asthma patients were identified using Socio-demographic Questionnaire (SDQ-08), Health and Disease related Questionnaire (HDQ-8) and Activity Tolerance Questionnaire (ATQ-12). Descriptive statistics such as frequency, percentage, mean and SD was used to measure the variables. Results: The results reveal that the mean age of patients was 39.35years (SD=13.20) and most (70%) of their monthly income was less than 31288.28 taka. Majority of the patients (68.4%) were living in semi-kacha to kacha house. Smoking (33.3%), and family history of asthma (74.8%), dust (100%) were identified as cause for occurring asthma and hypertension (46.8%) as co morbidities among the patients. Chest tightness (98.2%), coughing (95.5%), and shortness of breath (90.1%) were identified as major symptoms for asthma patient. However, most of the patients (98.2%) used short acting beta agonist to treat asthma related symptoms. Majority of the patients had 'very limited' to 'totally limited' in doing exercise (68.4%) and running upstairs (80.14%). Conclusion: The study aimed to identify the characteristics of adult asthma patients. This finding indicates that most of the participants are female living in semi-kacha house and the people with low income are more affected because of their financial status. The increased number of asthmatics is mainly due to (dust) environmental pollution. Hypertension found as co morbidities of asthmatics and most of them had a family history of asthma. Most patients exhibited a sign of wheezing, chest tightness, coughing and had a history of shortness of breath. Majority of the patients had a history of ''very limited' to 'totally limited' in exercising.. Therefore, it is necessary to develop strategy for the prevention and management of the clinical symptoms of asthma patient to reduce its morbidity and mortality rate.*
*Keywords: Asthma patient, Characteristics, Specialized Hospital.*

---

---

## I. INTRODUCTION

1 **Background:** Asthma is a chronic respiratory clinical symptom causing inflammation, reactivity, and spasm of the pulmonary airway, shortness of breath, wheezing, and a reversible obstructive airway which is recognized as a major public health problem in the world (Esmaelly, Hassankhani, Aghdam&Gharemohammadloo, 2016). According toWorld Health Organization (2016), it was estimated that approximately 383000 deaths occurred due to asthma in 2015. In Bangladesh, Asthma is one of the leading causes of death and disability. Approximately 11.6 million people suffer from asthma-related symptoms in Bangladesh (Mamun et al., 2016), whereas 15 to 20 million people were asthmatics in India (Burke et al., 2003). However, there are about 3 million asthmatics in Japan of whom 7% have severe and 30% have moderate asthma (Varalakshmi&

---

Rajinder,2014).Severe acute asthma causes recurrent attack, frequent hospitalization, increase in treatment cost, increase in use of health resources, increase in societal, familial and economical burden and decrease in quality of life of asthma patient (Nathan et al., 2004).

In asthma attack there are presence of increased mucus production, bronchial muscle become tight and swelling occur in the lining of the air passages, limiting airflow that producing the wheezing sound associated with asthma (National Library of Medicine., 2014).Predisposing factors of asthma include genetic predisposition with environmental exposure to inhaled substances and particles. Particles that provoke allergic reactions or irritate the airways comprises indoor allergens including house dust, mites in bedding, carpets and staff furniture, pollution and pet dander and outdoor allergens including pollens and molds, tobacco smoke, chemical irritants in the workplace and air pollution (WHO, 2016).

Clinical characteristics of asthma include a recurrent pattern of cough, wheezing, chest tightness, and dyspnea, which are become worse at night or upon walking and with exposures to triggers and allergen. Findings of assessing medical history, current medication, allergies, family history and social history can support the diagnosis of asthma (CDC., 2015; NHIS., 2015). However secondary complications of asthma include airway remodeling, COPD, respiratory failure, medication side effects, such as-high blood pressure, Cushing disease, osteoporosis, cataract and many other less serious side effects (National Heart, Lung, and Blood Institute, 2007). According to The National Asthma Education and Prevention Program (2003), asthma has been classified according to symptoms and lung function tests. Those include four categories: 1) Intermittent, 2) Mild persistent, 3) Moderate persistent and 4) Severe persistent. Study found that 28.77% of cases were severe persistent cases, 29.72%were mild persistent cases, and 41.51% were moderate persistent cases (Mabrouk, Abd El-Aziz, Agha &Kashlana, 2017).

The findings of the study would be contributed to develop strategy forthe prevention and management of the clinical symptoms of asthma patient. Further correlational study would be designed to confirm the relationship between the concepts of asthma. Asthma prevention program would be developed to reduce asthma related clinical problems for hospitalized patient in Bangladesh.

There is a dearth of research in this area in Bangladesh.Therefore, it was necessary to conduct a study on characteristics of adultasthma patients at NIDCH in Dhaka, Bangladesh.

## 2. Purpose
General Objective
The aim of this study wasto assess the characteristics of adultasthma patients at   Out Patient Department of a Specialized Hospital.
Specific objectives
1.To describe the socio-demographic characteristics of adultasthma patients.
2.To assess the health and disease related characteristicsof adultasthma patients.
3.To examine the activity tolerance of adult asthma patients.

## II.    LITERATURE REVIEW
This chapter focuses on review of literature related to clinical characteristics of asthma patient. The literature review covers the 1) importance of asthma. 2) clinical characteristics of asthma.3.Causes and Risk factors of asthma.4.Classification of asthma.5.Impact of Asthma.

### 1. Importance of asthma
Asthma is a chronic respiratory clinical symptom causing inflammation, reactivity, and spasm of the pulmonary airway, shortness of breath, wheezing, and a reversible obstructive airway which is recognized as a major public health problem in the world (Esmaelly M et al., 2016). According to WHO (2016), it estimates that approximately 383000 deaths occur due to asthma in 2015. In Bangladesh, Asthma is one of the leading causes of death and disability. About 11.6 million people suffer from asthma-related symptoms in Bangladesh (Mamun et al., 2016), whereas 15 to 20 million people are asthmatics in India (Burke et al., 2003). However, there are about 3 million asthmatics in Japan of whom 7% have severe and 30% have moderate asthma. There are 4 million estimated asthmatics in Germany and in Swiss population around 8% are suffer from asthma (Varalakshmi& Rajinder,2014).

### 2.Clinical characteristics of asthma
Clinical symptoms of asthma include a recurrent pattern of coughing, wheezing, chest tightness, and dyspnea, which are become worse at night or upon walking and with exposures to triggers and allergen. Findings of assessing medical history, current medication, allergies, family history and social history can support the diagnosis of asthma (CDC. 2015, (NHIS, 2015). A study conducted by Lotvall et al. , (2010) that shows Multi-symptom asthma is closely related to nasalblockage, rhinorrhea and symptoms of

chronicrhinosinusitis. A study was conducted in West Sweden in 2008 among 18067 asthma patient to determine whether multi-symptom asthma is related to signs of severe asthma, and to investigate the association between multi-symptom asthma and different symptoms of allergic and chronic rhinosinusitis. The study found that the patient experienced multi-symptom asthma had a high risk of night time awakenings, chest tightness, shortness of breath or cough compared with both the populations without asthma and fewer-symptom asthma.

However secondary complications of asthma include airway remodeling, COPD, respiratory failure, medication side effects, such as-high blood pressure, cushing disease, osteoporosis, cataract and many other less serious side effects (National Heart, Lung, and Blood Institute, 2007).

3.Causes and Risk factors of asthma

Clinically asthma is caused by inflammation of the bronchiole that leading to restricted airflow (NHS, Asthma, 2014). Path biologically, asthma is characterized predominantly by eosinophilic inflammation and inflammation involving CD4 and T lymphocytes (Barns, 2008). In asthma attack there are presence of increased mucus production, bronchial muscle become tight and swelling occur in the lining of the air passages, limiting airflow that producing the wheezing sound associated with asthma (National Library of Medicine., 2014). Factors that contribute to develop asthma include genetic predisposition with environmental exposure to inhaled substances and particles. Particles that provoke allergic reactions or irritate the airways comprises indoor allergens including house dust, mites in bedding, carpets and staff furniture, pollution and pet dander and outdoor allergens including pollens and molds, tobacco smoke, chemical irritants in the workplace and air pollution (WHO, 2016).

4.Classification of asthma

According to The National Asthma Education and Prevention Program (NAEPP, 2003) asthma has been classified according to symptoms and lung function tests. Those include four categories: 1) Intermittent: Asthma considered as intermittent without treatment when the symptoms of difficulty breathing, wheezing, chest tightness, and coughing occurs fewer than 2 days a week, not interfere with normal activities and night symptom occurs on fewer than 2 days a month, Lung function test shows normal finding whereas person not having asthma attack.2) Mild persistent: In mild persistent asthma symptoms more than 2 days in a week and nighttime symptoms occur 3 to 4 times a month ,which interfere the daily activities with normal Lung function test 3) Moderate persistent asthma considered the symptoms occurs daily, needed short-acting inhaled medication used every day and daily activities interfere, nighttime symptom occurs more than one time in a week and Lung function test are abnormal 4) Severe persistent asthma considered where the symptoms occur throughout each day. Night symptom occur often, Lung function test 60% or less than expected value and PEF varies more than 30% from morning to afternoon. (Mabrouk, Abd El-Aziz, Agha &Kashlana, 2017) conducted a study of demographic and clinical characteristics of bronchial asthma patients Mahalla Chest Hospital during the period from March 2013 to February 2014 among 212 asthma patients to study bronchial asthma patients in Mahalla Chest Hospital as regards the epidemiology, demographic characteristics, clinical characteristics of the patients. The study found that28.77% of cases were severe persistent cases, 29.72% were mild persistent cases, and 41.51% were moderate persistent cases.

5.Impact of Asthma

Asthma patients often need emergency care, hospital admission, that increase the number of school missing or working days. It can also cause early permanent disability and premature death and limited the physical, social, professional aspect of life of asthma patient if it not well controlled. The concurrent treatment and co-morbidities of asthma increase direct & indirect cost. Direct cost includes asthma management cost (e.g. visit to emergency services, hospital admission, medication. outpatient visit, involving all human resources of family, complimentary investigation and treatment and other costs). Indirect costs include work- related losses (e.g. temporary disability in terms of partial or total loss of days, early & permanent disability) and mortality (Nunes et al., 2017). In United State of America about 25 million people suffer from asthma and the economic burden associated with that has been found US$19.7 billion (World Allergy Organization,2014). Annually more than14million day's losses school in children and it is a leading cause of work absenteeism in adult (Pawnkar et al.,2013).Severe acute asthma causes recurrent attack, frequent hospitalization, increase treatment cost, increase use of health resources, increase in societal, familial and economical burden and decrease in quality of life of asthma patient (Nathan et al., 2004).

# III. METHODS

1.Study Design

A descriptive study design was used to describe the characteristics of adultasthma patients at NIDCH, in Dhaka.

2.Study Participants

Theparticipants wereadult asthma patients which were recruited from all the asthma patients who receive their health care from Out Patient Department of NIDCH, Dhaka,Bangladesh. This hospital was selected because it was Chest Specialized Hospital where asthma patients were available. The patients who had confirmed diagnosed with asthma, more than 18 of age and had the ability to speak, read, write and competent in Bangla language were included in this study.

3.Sample size

Theparticipantswere111 adult asthmapatientsrecruited from Out Patient Department of NIDCH, Dhaka, Bangladesh. The required sample size was calculated by using G-power analysis. Correlation; Bivariate normal model, correlation ph1 0.3 and significance level of 0.05, power of $(1–β) = 0.05$ and correlation p Ho = 0. The calculated sample size was 84. To reduce attrition rate, 20% more sample were added.Therefore, final sample size was 111 in this study.

4.Instruments

The study variables include general characteristics of the patient, health and disease related characteristics and activity tolerance. The questionnaire comprises 3 Parts which was developed by the researcher based on literature review. The actual questionnaire was written in English and then it was translated into easy bangle language so that the patients could understand. The instruments are described below in detail:

1) Socio-Demographic Characteristics

Socio-Demographic Characteristics of adult asthma patients were assessed using 08 items Socio-Demographic Questionnaire (SDQ). The socio-demographic characteristics contained age, sex, religion, education, marital status, monthly family income, and housing.

2) Health and Disease related characteristics.

Patients' health and disease related characteristics were measured using 8 items which was developed by the researcher based on literature review. The respondents were asked to answer the question with Yes /No or multiple answers.

3)Activity tolerance

The patients' activity tolerance was measured using a 12-item Activity Tolerance Questionnaire (ATQ) with 5-point Likert scale ranging from 1 'totally limited' to 5 'not at all limited' which was developed by the researcher based on literature review. The questionnaire was subcategorized into three dimensions including 1) strenuous activity 2) moderate activity and 3) social activity. Higher score indicated higher activity tolerance or lower score indicated limited activity tolerance.

4. Data Collection

Data were collected from December 2018 to January 2019. Prior to data collection, the proposal was approved by the Institutional Review Board (IRB) of Bangabandhu Sheikh Mujib Medical University (BSMMU) and National Institute of Advanced Nursing Education and Research (NIANER), Dhaka, Bangladesh (IRB No: Exp.NIA-S-2018-07). Before data collection, written permission was taken from Hospital Director.The researcher communicated with Nursing superintendent, and nurses in charge of Out Patient Department to meet with the participants. Structured questionnaire was used to collect data through face-to-face meeting. Then researcher briefly introduced about the purpose of the study to the patients. The patients who were interested to participate in the study were invited to the survey voluntarily. Participants needed approximately 30 minutes to complete the questionnaire. A total of 111 respondents who completed the consent form were considered to be agreed to participate. Their participation was completely voluntary and anonymity was guaranteed. Patients were allowed to stop or withdraw their participation from the study at any time without any reason or penalty if they wished to, causing no risk of their treatment in case of personal or hospital. All necessary information collected from the subjects were kept confidential and placed in secure locked cabinet for three months and this would be destroyed after completion of the study.

5. Data Analysis

All data were entered into SPSS version 23. for statistical analysis. Descriptive statistics were used to summarize general characteristics of the patients, health and disease related characteristics and activity tolerance of the patients.

## IV. RESULTS

This chapter presents the results of the study.

1.Socio-Demographic Characteristicsof the patients

One hundred and eleven patients completed the survey. Among the participants, majority (52.3%) of them were male. The mean age of participants was 39.35 (SD=13.20) years old which was ranged from 19 to 72 years, majority of them(47.7%) in 19 to 35 years old age group. Most of them (91.0%) were Muslim. In case of education, majority of the participants (36.9%) were college or university graduated, and 27.9% of them completed primary school level. The participants mostly (81.1.4%) were married. Maximum female respondents (37.8.%) were house wives and one third (31.5%) of participant's occupation were private service.The average monthly income of family was 31288.28 (SD=24155.70) taka and most (70%) of their monthly income was less than 31288.28 takas. Majority of the patients (68.4%) were living in semi-kacha and kacha house. While one third (31.5%) of them were living in building. (Table-1)

**Table1**. Distribution of Socio-demographic Characteristics of patients (N=111)

| Variable | Category | Frequency | % | Mean (SD) |
|---|---|---|---|---|
| Age | 19-35 years | 53 | 47.7 | 39.35(13.20) |
| | 36-55 years | 42 | 37.8 | |
| | >55 years | 16 | 14.4 | |
| Gender | Male | 58 | 52.3 | |
| | Female | 53 | 47.7 | |
| Religion | Muslim | 101 | 91.0 | |
| | Hindu | 7 | 6.3 | |
| | Christian | 3 | 2.7 | |
| Education | Analphabet | 18 | 16.2 | |
| | Primary School | 31 | 27.9 | |
| | Secondary | 21 | 18.9 | |
| | College/University | 41 | 36.9 | |
| Marital status | Single | 21 | 18.9 | |
| | Married | 90 | 81.1 | |
| Occupation | Housewife | 42 | 37.8 | |
| | Business | 22 | 19.8 | |
| | Private service | 35 | 31.5 | |
| | Unemployed | 8 | 7.2 | |
| | Retired | 4 | 3.6 | |
| Monthly Income | <31288.28 | 78 | 70.3 | 31288.28(24155.70) |
| | 31288.28-80000 | 27 | 24.3 | |
| | >80000 | 6 | 5.4 | |
| Housing | Kacha | 30 | 27.0 | |
| | Building | 35 | 31.5 | |
| | Semi kacha | 46 | 41.4 | |

2. Health and Disease Related Characteristics of the Patient

Table 2 shows the distributions of frequency, percentage, mean and SD of health and disease related characteristics of adult asthma patients.

The findings showthat all of the respondents had a history of asthma due to chemicals, smoke, fumes or dust. Majority (65.8%) of the participants used gas burning stove and around half of them (45%) used wood burning stove. However, most of the patients (84%) did not use exhaust fan in kitchen. One third (33.3%) of the patients had a history of smoking and majority of them (74.8%) had a family history of asthma. Approximately (46%8) of patients had co-morbid disease of Hypertension. All patients had a history of dust, tobacco, chemical, air pollution which were the major causes of exacerbation of asthma. Most patients (73.0%) exhibited a sign of wheezing, majority (98.2%) of them had a history of chest tightness, most of them (95.5%) had a history of coughing and most (90.1%) of the patients had a history of shortness of breath. It also reveals that majority of

the patients (93.7%) had a history of rapid heartbeat as a side effect of asthma treatment. With respect to current treatment, Majority (98.2%) of the patients were taking short acting beta agonist while nearly half (42%) of the patients were taking long acting beta agonist.Most (62.2%) of the respondents usedleukotriene modifier. Considering complimentary therapy, (38.7%) of respondents were taking homeopathic and (43.2%) were taking home remedies. The mean duration of suffering fromasthma was estimated as 9.19 years which was ranging from 1 year to 30 years.

**Table2. Distribution of Health and Disease Related Characteristics ofthe Participants (N=111)**

| Variable | Yes | | |
|---|---|---|---|
| | N | % | M±SD |
| Asthma caused by chemical, smoke, fume or dust | 111 | 100 | |
| Household pet | 26 | 23.2 | |
| Wood burning stove | 50 | 45 | |
| Gas burning stove | 73 | 65.8 | |
| Exhaust fan in kitchen | 18 | 16 | |
| Carpeting in room | 7 | 6.3 | |
| Smoking | 37 | 33.3 | |
| Family history of asthma | 83 | 74.8 | |
| Hypertension | 52 | 46.8 | |
| Diabetic | 24 | 21.6 | |
| Others lung disease | 1 | .9 | |
| Gastroesophageal reflux | 2 | 1.8 | |
| Others | 3 | 2.7 | |
| Exacerbation by dust | 111 | 100 | |
| Exacerbation by Pet dander | 26 | 23.4 | |
| Exacerbation by Tobacco | 77 | 69.4 | |
| Exacerbation by Chemical | 105 | 94,6 | |
| Exacerbation by Air pollution | 95 | 84.6 | |
| Others | 20 | 18 | |
| Asthma symptoms-wheezing | 81 | 73 | |
| Chest tightness | 109 | 98.2 | |
| Coughing | 106 | 95.5 | |
| Shortness of breath | 100 | 90.1 | |
| Chest pain | 44 | 39.6 | |
| Others | 1 | .9 | |

Table2. Distribution of Health and Disease Related Characteristics of participants (Continued).

| Variable | Yes | | M±SD |
|---|---|---|---|
| | N | % | |
| Side effect-Rapid heart beat | 104 | 93.7 | |
| Hoarseness | 3 | 2.7 | |
| Oral infection | 16 | 14.1 | |
| GERD | 1 | .9 | |
| Osteoporosis | 2 | 1.8 | |
| Others | 1 | .9 | |
| C. Treat-Long Acting Beta Agonist | 47 | 42 | |
| Sort Acting Beta Agonist | 109 | 98.2 | |
| Inhaled Corticosteroid | 1 | .9 | |
| Combined LABA&ICS | 38 | 34.2 | |
| Leukotriene modifier | 69 | 62.2 | |
| Complimentary-Ayurveda | 15 | 13.5 | |
| Homeopathic | 43 | 38.7 | |
| Naturopathy | 11 | 9.9 | |
| Home remedies | 48 | 43.2 | |
| Duration of asthma | | | 9.19 (7.311). |

**3.Activity tolerance of asthma patient**

According to findings of this table, majority (68.4%) of the patients had a history of 'very limited' to 'totally limited' exercising. Most of the patient (80.1%) had also a history from 'very limited' to 'totally in running upstairs. However most (76.5%) of the participants had 'very limited' to 'totally limited' in doing sports. Majority of the patients had some limitations in doing house work (52.3%), gardening (50.5%), shopping

(55.9%), and climbing stair (55.9%). In contrast, most of the patients had a history of a little limitation in talking (53.2%), playing with children or pet (44.1%) and visiting friends or visitors (58.6%).

Table-3. Distribution of activity tolerance of study participant (N=111)

| Variable | Category | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Totally limited | | Very limited | | Some limited | | A little limited | | Not at all limited | |
| Strenuous Activities- | n | % | n | % | n | % | n | % | n | % |
| Hurring | 4 | 3.6 | 36 | 32.4 | 48 | 43.2 | 19 | 7.1 | 4 | 3.6 |
| Exercising | 38 | 34.2 | 38 | 34.2 | 26 | 23.4 | 7 | 6.3 | 2 | 1.8 |
| Running Upstairs | 41 | 36.9 | 48 | 43.2 | 17 | 15.3 | 4 | 3.6 | 1 | .9 |
| Sports | 43 | 38.7 | 42 | 37.8 | 20 | 18 | 4 | 3.6 | 2 | 1.8 |
| Mod. Act-walking | 1 | .9 | 7 | 6.3 | 49 | 44.1 | 51 | 45.9 | 3 | 2.7 |
| House work | 2 | 1.8 | 14 | 12.6 | 58 | 52.3 | 35 | 31.5 | 2 | 1.8 |
| Gardening | 3 | 2.7 | 17 | 15.3 | 56 | 50.5 | 32 | 28.8 | 3 | 2.7 |
| Shopping | 3 | 2.7 | 24 | 21.6 | 62 | 55.9 | 21 | 18.9 | 1 | .9 |
| Climbing stair | 6 | 5.4 | 23 | 20.7 | 62 | 55.9 | 19 | 17.1 | 1 | .9 |
| Social act-Talking | 1 | .9 | 13 | 11.7 | 29 | 26.1 | 59 | 53.2 | 9 | 8.1 |
| Playing with pet/children | 2 | 1.8 | 10 | 9.0 | 41 | 46.9 | 49 | 44.1 | 9 | 8.1 |
| Visiting friend/visitor | 0 | 0 | 13 | 11.7 | 21 | 18.9 | 65 | 58.6 | 12 | 10.8 |

## V. DISCUSSION

This chapter describes the general characteristics, health and disease related characteristics and activity tolerance of asthma patients. One hundred and eleven participants were participated in the study. The aim of this study was to assess the characteristics of adult asthma patients at outpatient department of specialized hospital.

1.Socio-Demographic Characteristicsof adult asthma patients

In this study male patients were highly affected with asthma than those of female patients. This finding was similar to the previous study conducted by Barua (2013) and Sing et al.(2015). The male predominance may be related to a greater degree of bronchial labiality in males (Barua). However other studies found that female was more predominance than male due to use of cow-dung cakes as fuel for cooking leading to airway inflammation and asthma (Barua et al.). Mean age of this study patients was 39.35(13.20) years and majority of their age group was between 19-35 years. This finding is consistent with the previous study of Sing et al., (2015). According to finding of the study, most of the patients were in age group of 16-30 years. The finding differed from the study of Barua et al., (2013) that reported more people's age was between 31-60 years. The reason for difference age group is that an older aged people have anatomical and physiological changes in respiratory system so that old people are more prone to asthma (Yudistira, 2017).

The current study found that majority of the patients were in low income group. The same finding was obtained in the study of Barua et al., (2013). Low income influence to the patient about poor living condition, poor hygienic situation, unhealthy food, poor medication adherence.

Living in semi-kacha and kacha house contributes to develop asthma. The current study found that majority of the patient were living in semi kacha and kacha house. Similar finding revealed in previous study conducted by (Hasan et al., 2005), study done in Dhaka city and coastal region. In coastal region, there was more asthmatic patients than those of Dhaka city. The houses in coastal area was damper than those of Dhaka city. Dampness in the home has been regarded a public health issue for the asthma and other chest disease in the subtropical countries (chang et al., 1998). Other study conducted ( Pacheco, 2014) in the USA showed that communities of low socioeconomic status tend to have low quality housing which increases many health condition, including anxiety, depression, asthma, heart disease and obesity (Srinivasan Fallon & Derry, 2003) .The relation of damp indoor spaces to respiratory disease has long been recognized. Understanding of the innate immune system components the serendipitous interaction of many types of biocontaminamts in damp indoor environments, including molds, is being more fully understood (Van, 2011). In this context, the relationship among dam environments, poor housing, and asthma is becoming appreciated (NRC

Washington,2000). A positive association was seen between asthma and lower socio-economic status people unlike the studies of Jain et al., 2010 and Prasad et al., 2007

.

2.Health and Disease Related characteristics of adult asthma patients

The findings of present study showed that all of the respondents had a history of asthma due to chemicals, smoke, fumes or dust. This finding similar to the previous study of Lotvall, (2010). In the present study majority of the participants used gas burning stove. This finding is similar to the study of Barua et al., (2013) reported that majority of the study group (65%) utilized LPG cooking gas. According to study of Hassan et al., (2005) Gas/Kerosene is a factor that contributes to exacerbation of asthma. Smoking emerged as a significant risk factor for asthma. Our study shows one third of the participants had history of smoking. This finding was similar with the study of (Barua et al., 2013).

Majority of them (74.8%) had a family history of asthma. This finding similar to the study of (Anuradha et al.,2011) that reported that 59.16% of the participants had family history of asthma, finding of the study were concurrent with the well documented strong association of family history of with the prevalence of asthma as seen in the studies of Prasad et al., Kaur et al., Jain et al.,In the present study approximately (46%8) of patients had comorbid disease of Hypertension. This finding was similar to the study of (Llanos et al.,2018). This may be due to age, as the younger participants in the asthma group would be less likely to have age-associated comorbidities, such as hypertension.

Most of the participants of the present study exhibited a sign of wheezing, majority of them had a history of chest tightness, most of them had a history of coughing and most of the patients had a history of shortness of breath. This finding similar to the previous study conducted by Barua, et al., (2013) and Yudistira, (2017). In asthma, increased mucus production, bronchial muscle become tight and swelling occur in the lining of the air passages, limiting airflow that producing the wheezing chest tightness, coughing and shortness of breath. (American National Library of Medicine, 2014).

In present study majority (98.2%) of the patients were taking short acting beta agonist while nearly half (42%) of the patients were taking long acting beta agonist. Most (62.2%) of the respondents usedleukotriene modifier. This finding near to similar with the study of (Yudistira et al., 2017), reported that Beta 2 agonist is the most common drug used for the treatment of asthma with 90% used for relieving the shortness of breath. Rapid-acting inhaled beta agonist is a drug choice for reducing the bronchoconstriction in adult and children, also used mucolytic/leukotriene modifier (59%) of patients that obtain from the result of same study.

The mean duration of asthma was estimated as 9.19 years which was ranging from the age of 1 year to 30 years. This finding was similar to the result obtained by (Hugo et al., 2016), where it was seen that themean of the duration of asthma patients was 8 years and ranges from 4-8 years.. Study of (Sano et al., 2016), reported the phenotype of asthma-OAD without emphysema had an earlier age of onset of asthma, a longer disease duration and worse lung function at baseline compared to the asthma predominant group, in agreement with the findings of Marco et al.,

3.Activity tolerance of adult asthma patients

In this study majority of the patients had a history from 'very limited' to 'totally limited'exercising. According to American Lung Association asthma is a leading cause of limitation of Daily activities. Previous study conducted by (Susan and sharmili, 2016) shows that up to 90% of patient with asthma exercise is a trigger of symptoms such as cough, wheezing shortness of breath.

## VI. CONCLUSION AND RECOMMENDATION

**1.Conclusion**

The study aimed to identify the characteristics of adult asthma patients. This finding indicates that most of the participants are female living in semi-kacha houseand the people with low income are more affected because of their financial status. The increased number of asthmatics is mainly due to (dust) environmental pollution. Hypertension found as comorbidities of asthmatics and most of them had a family history of asthma. Most patients exhibited a sign of wheezing, chest tightness, coughing and had a history of shortness of breath.Majority of the patients had a history of' 'very limited' to 'totally limited' in exercising.. Therefore, it is necessary to develop strategy for the prevention and management of the clinical symptoms of asthma patient to reduce its morbidity and mortality rate.

**Limitation**

In this study,sample size issmall. Data were collected only from outpatientdepartmentto assess the characteristics of asthma patients. Data needed to collect from all types of patients in other setting such as indoor and emergency department. Data were collected from only one hospital .. Time span of the researh and financial constraints also other limitations.

## 2.Recommendation

Further correlational study would be designed to confirm the relationship between the concepts of asthma. Asthma prevention program would be developed to reduce asthma related clinical problems for patient with asthma in Bangladesh.
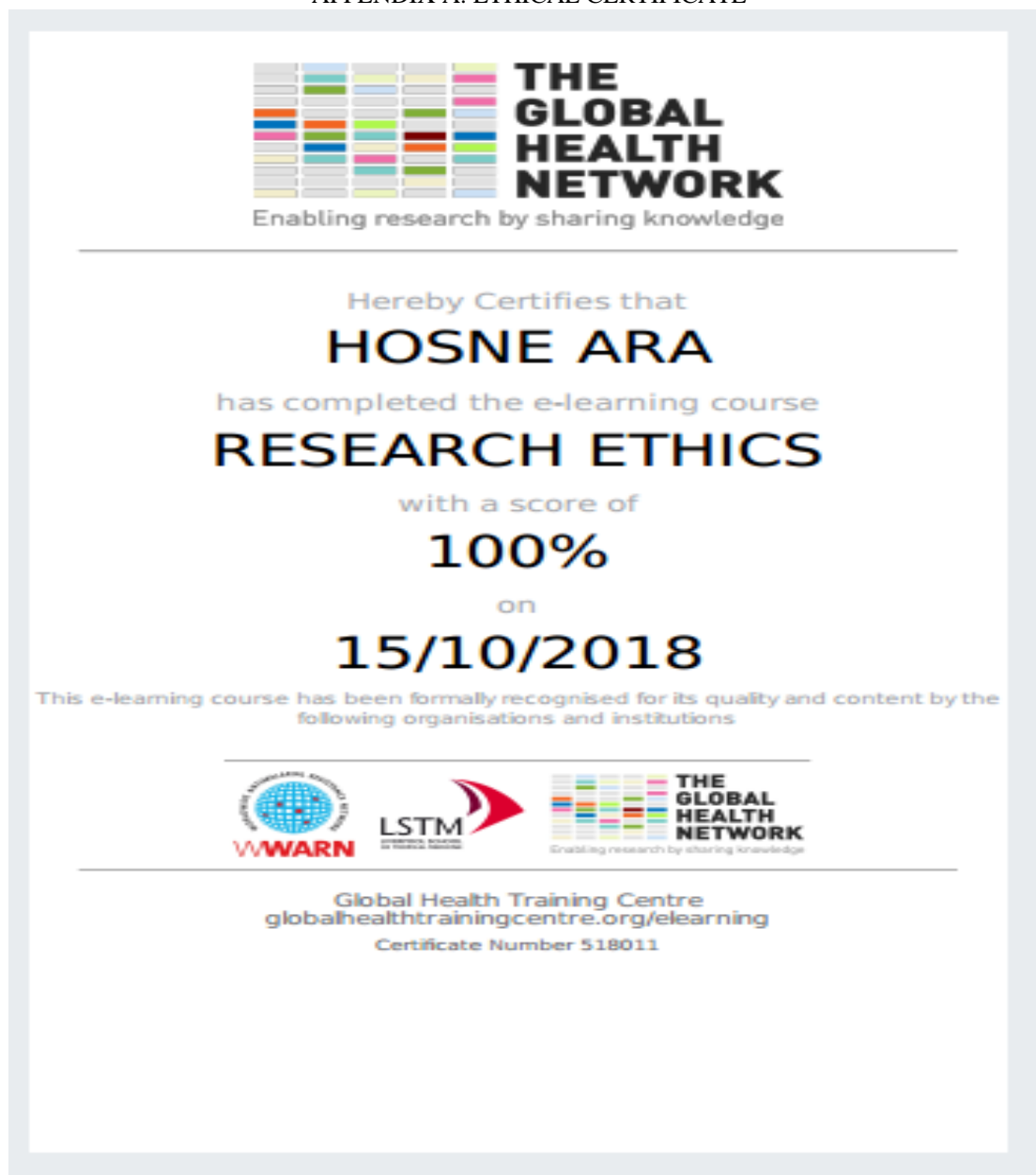
## REFERENCE

[1]. Amundson, D., Seda, G., &Daheshia, M. (2011). Recognizing asthma mimics and asthma complications. *Military medicine*, *176*(10), 1162-1168.

[2]. Anuradha, A., Kalpana, V. L., &Narsingarao, S. (2011). Epidemiological study on bronchial asthma. *Indian J Allergy Asthma Immunol*, *25*(2), 85-9.

[3]. Barnes, P. J. (2008). Immunology of asthma and chronic obstructive pulmonary disease. *Nature Reviews Immunology*, *8*(3), 183.

[4]. Barua, U. K., Saha, S. K., Ghosh, D. K., & Ruble, M. M. K. (2013). Epidemiological Study on Bronchial Asthma at Shaheed Suhrawardy Medical College Hospital, Dhaka. *Journal of Shaheed Suhrawardy Medical College*, *5*(2), 77-80.

[5]. Burke, H., Davis, J., Evans, S., Flower, L., Tan, A., &Kurukulaaratchy, R. J. (2016). A multidisciplinary team case management approach reduces the burden of frequent asthma admissions. *ERJ open research*, *2*(3), 00039-2016.

[6]. Corbridge, S. J., &Nyenhuis, S. M. (2017). Promoting physical activity and exercise in patients with asthma and chronic obstructive pulmonary disease. *The Journal for Nurse Practitioners*, *13*(1), 41-46.

[7]. Esmaeily, M., Hassankhani, H., Aghdam, A. M., & Gharemohammadloo, R. (2016). The Correlation Between Efficacy of Asthma Control and Quality of Life in Asthmatic Patients. *Jundishapur Journal of Chronic Disease Care*, *5*(3).

[8]. Hugo, M. N. B., Walter, P. Y. E., Maïmouna, M., Malea, N. M., Ubald, O., Adeline, W., ... & Christopher, K. (2016). Assessment of asthma control using asthma control test in chest clinics in Cameroon: a cross-sectional study. *Pan African Medical Journal*, *23*(1).

[9]. Jain, A., Bhat, H. V., & Acharya, D. (2010). Prevalence of bronchial asthma in rural Indian children: A cross sectional study from South India. *The Indian Journal of Pediatrics*, *77*(1), 31-35.

[10]. Kaur, S., Behera, D., Gupta, D., & Verma, S. K. (2008). Demographic and Environmental factors in patients of bronchial asthma. *Indian Journal of Allergy, Asthma and Immunology*, *22*(2), 85-89.

[11]. Lötvall, J., Ekerljung, L., & Lundbäck, B. (2010). Multi-symptom asthma is closely related to nasal blockage, rhinorrhea and symptoms of chronic rhinosinusitis-evidence from the West Sweden Asthma Study. *Respiratory research*, *11*(1), 163.

[12]. Mabrouk, A. A., El-Aziz, A. A. A., Agha, M. A., &Kashlana, D. A. (2017). Study of demographic and clinical characteristics of bronchial asthma patients in Mahalla Chest Hospital during the period from March 2013 to February 2014. *Menoufia Medical Journal*, *30*(1), 241.

[13]. Mamun, M. M., Salauddin, A. S. A., & Hossain, M. F. (2016). Prevalence of asthma and its associated factors among the undergraduate students of Bangladesh Agricultural University. *International Journal of Natural and Social Sciences*, *3*(1), 32-36.

[14]. Mancuso, C. A., Sayles, W., & Allegrante, J. P. (2010). Knowledge, attitude, and self-efficacy in asthma self-management and quality of life. *Journal of Asthma*, *47*(8), 883-888.

[15]. Manchana, V., & Mahal, R. K. (2014). Impact of asthma educational intervention on self-care management of bronchial asthma among adult asthmatics. *Open Journal of Nursing*, *4*(11), 743.

[16]. Nathan, R. A., Sorkness, C. A., Kosinski, M., Schatz, M., Li, J. T., Marcus, P.,& Pendergraft, T. B. (2004). Development of the asthma control test: a survey for assessing asthma control. *Journal of Allergy and Clinical Immunology*, *113*(1), 59-65.

[17]. Nunes, C., Pereira, A. M., &Morais-Almeida, M. (2017). Asthma costs and social impact. *Asthma research and practice*, *3*(1), 1.

[18]. Nguyen, V. N., Huynh, T. T. H., & Chavannes, N. H. (2018). Knowledge on self-management and levels of asthma control among adult patients in Ho Chi Minh City, Vietnam. *International Journal of General Medicine*, *11*, 81.

[19]. National Health Interview Survey (NHIS) 2012. Data, Statistics, andSurveillance. Available at http://www.cdc.gov/asthma/nhis/2012/data.htm.Accessed 22 Oct 2014

[20]. Pawankar, R., Canonica, G. W., Holgate, S. T., Lockey, R. F., &Blaiss, M. S. (2013). WAO white book on allergy: update 2013. *World Allergy Organization*, 11-9.

[21]. Prasad, R., Verma, S. K., Ojha, S., & Srivastava, V. K. (2007). A questionnaire based study of bronchial asthma in rural children of lucknow. *Indian J Allergy Asthma Immunol*, *21*(1), 15-8

[22]. Pacheco, C. M., Ciaccio, C. E., Nazir, N., Daley, C. M., DiDonna, A., Choi, W. S., ... &Rosenwasser, L. J. (2014, November). Homes of low-income minority families with asthmatic children have increased condition issues. In *Allergy and asthma proceedings* (Vol. 35, No. 6, p. 467). OceanSide Publications.

[23]. Rao, S., Rao, S., Ashok, N. C., Jain, T., & Anuradha, R. (2011). Muralidhar. Influence of Associated Factors in the Prevalence of Asthma: A Community Based Study in Mysore. *J Clin Diag Res*, *5*, 721-4.

[24]. Sano, H., Iwanaga, T., Nishiyama, O., Sano, A., Higashimoto, Y., Tomita, K., &Tohda, Y. (2016). Characteristics of phenotypes of elderly patients with asthma. *Allergology International*, *65*(2), 204-209.

[25]. Schatz, M., Sorkness, C. A., Li, J. T., Marcus, P., Murray, J. J., Nathan, R. A., ... &Jhingran, P. (2006). Asthma Control Test: reliability, validity, and responsiveness in patients not previously followed by asthma specialists. *Journal of Allergy and Clinical Immunology*, *117*(3), 549-556.

[26]. Suzuki, E., Hasegawa, T., Koya, T., Mashima, I., Muramatsu, Y., Kondo, A., ... &Gejyo, F. (2002). Questionnaire-based characterization of bronchial asthma in the elderly: Analysis in Niigata Prefecture, Japan. *Allergology International*, *51*(4), 241-248

[27]. Singh, A. K., Jain, V. K., & Mishra, M. (2015). Clinical profile of bronchial asthma patients reporting at respiratory medicine outpatient department of teaching hospital. *Indian Journal of Allergy, Asthma and Immunology*, *29*(1), 3.

[28]. World Health Organization, (2016). *WHO Bronchial asthma. [online] Available* at: http://www.who.int/mediacentre/factsheets/fs206/en/ [Accessed 29 August. 2017].

[29]. WHO | Bronchial asthma. (n.d.). Retrieved from

[30]. http://www.who.int/mediacentre/factsheets/fs206/en/

[31]. Yudistira, J. A., Pranggono, E. H., Tjandrawati, A., &Sudjana, P. (2017). Characteristics of Asthma Patients Seeking Care at West Java's Top Referral Hospital, Indonesia. *Althea Medical Journal*, *4*(1), 78-82.

APPENDIX
A. Research Ethics Certificate
B. Institutional Review Board (IRB) Clearance Certificate
C. Data collection Permission Letter from NIANER
D. Granted Permission Letter from Selected Institution for Data Collection
E. Informed consent from (English/Bengali)
F. Research Instrument (English/Bengali)

APPENDIX A: ETHICAL CERTIFICATE

**THE GLOBAL HEALTH NETWORK**
Enabling research by sharing knowledge

Hereby Certifies that

**HOSNE ARA**

has completed the e-learning course

**RESEARCH ETHICS**

with a score of

**100%**

on

**15/10/2018**

This e-learning course has been formally recognised for its quality and content by the following organisations and institutions

WWARN     LSTM     **THE GLOBAL HEALTH NETWORK**
Enabling research by sharing knowledge

Global Health Training Centre
globalhealthtrainingcentre.org/elearning
Certificate Number 518011

## B: IRB APPROVAL LETTER

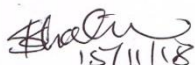IRB No. Exp.NIA-S-2018-07                    15th November 2018

Hosne Ara
Faculty of Adult and Elderly Health Nursing
NIANER, Dhaka-1214

National Institute of Advanced Nursing Education and Research
Dhaka-1214

Sub: **Institutional Review Board (IRB) Clearance**

With reference to your application on the above mentioned subject, this is inform you that your
Research Proposal entitled "Describing Characteristics of Asthma Parents in Tertiary
Level Hospital Bangladesh" has been reviewed and approved by the Institutional Review Board
(IRB) of National Institute of Advanced Nursing Education and Research in its 1st meeting held
on 30th October, 2018.

You are requested to follow the Institutional Review Board (IRB) guidelines.

15/11/18
Shanzida Khatun, PhD, RN
Chair
Institutional Review Board (IRB)
National Institute of Advanced Nursing Education and Research,
Dhaka-1214

## C: PERMISSION LETTER FOR DATA COLLECTION

Government of the People's Republic of Bangladesh
Director's office
National Institute of Advance Nursing Education & Research (NIANER)
Mugda, Dhaka.

Memo No– NIANER/General/2016/..2.7.6....                    22/11/ 2018

To
Director/Principal/Head Master
----------------------------------------------------------------------

From
Director
National Institute of Advanced Nursing Education and Research (NIANER)
Dhaka-1214

Sub: Permission for the Data Collection.

In reference to above mentioned subject and memo, I would like to inform that
......... Hosne Ara .........................................a MSN student of 2$^{nd}$ batch, dept.
of.. Adult and Elderly Health Nursing............ .., NIANER,
Dhaka-1214. She is going to conduct a research entitle: "...Describing the....
Characteristics of Asthma Patient at Specialized
Hospital in Bangladesh:.........................................................
...............................................................................................".
The research proposal has been approved by the Institutional Review Board (IRB) of
NIANER. Collected data will be used for research purpose only.
It will be highly appreciated if you give them permission to collect data from your institution.

Deputy Director
National Institute of Advanced Nursing
Education and Research (NIANER)
Dhaka-1214

Memo No– NIANER/General/2016/..2.7.6.(.4)                    22/11/ 2018
Copy is sent for you kind attention:
1. Director General, Directorate of Nursing & Midwifery, here Bangla Nagar, Dhaka.
2. Project Director & Secretary- General, Health ministry of health, Bangladesh.
3. Chairman IRB, BSMMU, Shahabag, Dhaka.
4. Nursing Superintendent ----------------------------------------------------------.

Deputy Director
National Institute of Advanced Nursing
Education and Research (NIANER)
Dhaka-1214

D. GRANTED PERMISSION LETTER FROM SELECTED INSTITUTION FOR DATA COLLECTION

**Government of the People's Republic of Bangladesh**
Office of the Director
National Institute of Diseases of the Chest & Hospital, Mohakhali, Dhaka

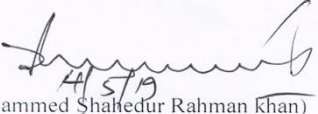Ref :                                                                                    Date :

From
Director
National Institute of Diseases of the Chest & Hospital
Mohakhali, Dhaka-1212.
To
Hosne Ara
Student ID: MSN 170104
Specialty: Adult and Elderly Health Nursing
National Institute of Advance Nursing Education and Research (NIANER)
E-mail:hosna01815461389@gmail.com

Sub: Permission for data collection on titled "Describing the Characteristics of Asthma patient
at Specialized Hospital in Bangladesh"

In reference to afore said Subject,  Hosne Ara, a Master student (Specialty: Adult and Elderly
Health Nursing ) of the National Institute of Advance Nursing Education and Research
(NIANER), Mugda, Dhaka has been allowed to conduct a thesis of the Course in last Semester as
approved for the recruitment of the course entitled "Describing the Characteristics of Asthma
patient at Specialized Hospital in Bangladesh " For this you are permitted to collect data from the
subjects of this institution from December, 2018 to January, 2019.

Thanking you

(Prof. Dr. Mohammed Shahedur Rahman khan)
Director
National Institute of Diseases of the Chest & Hospital
Mohakhali, Dhaka-1212.

Mohakhali, Dhaka-1212, Bangladesh. Phone : +8802-55067149, PABX : +8802-55067147. Ext-101. Fax : 88-02-55067146, e-mail :nidch@hospi.dghs.gov.bd

E: INFORMED CONSENT

## Research Information Sheet (English)

**1.Name of the Research:**Describing the Characteristics of Asthma patient at Specialized Hospital in Bangladesh.

**2.Name of the Researcher:** Hosne Ara

**3.Research Location:** National Institute of Diseases of the Chest and Hospital, in Bangladesh.

**4.Research Purpose:** The aim of this study is to assess the characteristics of Asthma patient at NIDCH in Bangladesh

**5.Work Process:**After getting permission from Institutional Review Boardof NIANER and BSSMMU and hospital authority. Researcher will start datacollection by face to face interview with the asthma patient by self. Every working day of the week the researcher will collect data fromtheasthma patientwho will attain the outpatient department at NIDCH, Dhaka.

**6.Rights as a participant in these researching activities:** Participation into this research depends on you and your choice. You have the right to take back you at any time from this research.

**7.Potential Risk:** There is no physical risk. May be some responded are not give the actual data.

**8.The Effective Usefulness:** The findings of the study would be contributed to develop a nursing care policy to reduce incidence and prevalence of asthma

**9.Confidentiality:** All of the data and information will be stored in a way, which will not be disclosed to anybody else except the researcher only.

**10.Contact Information:** Hosne Ara, Adult & Elderly Health Nursing, NIANER, will conduct this research and you can ask any question to her regarding this research if you have any query or any complain then you can directly contact with researcher, Mobile No:01815461389 and e-mail hosna01815461389@gmail.com.

Principal Investigator                                   Participant's Signature

……………..                                                  ……………

Phone Number:01815461389 Participants' name

E-mail……………                                            …………

Date:                                                            Date:

1

Institutional Review Board(IRB)
National Institute of Advanced Nursing Education and Research
Mugda, Dhaka 1214

## Research Information Sheet (English)

**1.Name of the Research:** Describing the Characteristics of Asthma patient at Specialized Hospital in Bangladesh.

**2.Name of the Researcher:** Hosne Ara

**3.Research Location:** National Institute of Diseases of the Chest and Hospital, in Bangladesh.

**4.Research Purpose:** The aim of this study is to assess the characteristics of Asthma patient at NIDCH in Bangladesh

**5.Work Process:** After getting permission from Institutional Review Boardof NIANER and BSSMMU and hospital authority. Researcher will start datacollection by face to face interview with the asthma patient by self. Every working day of the week the researcher will collect data fromtheasthma patientwho will attain the outpatient department at NIDCH, Dhaka.

**6.Rights as a participant in these researching activities:** Participation into this research depends on you and your choice. You have the right to take back you at any time from this research.

**7.Potential Risk:** There is no physical risk. May be some responded are not give the actual data.

**8.The Effective Usefulness:** The findings of the study would be contributed to develop a nursing care policy to reduce incidence and prevalence of asthma

**9.Confidentiality:** All of the data and information will be stored in a way, which will not be disclosed to anybody else except the researcher only.

**10.Contact Information:** Hosne Ara, Adult & Elderly Health Nursing, NIANER, will conduct this research and you can ask any question to her regarding this research if you have any query or any complain then you can directly contact with researcher, Mobile No:01815461389 and e-mail hosna01815461389@gmail.com.


Principal Investigator                                   Participant's Signature

……………..                                                ……………

Phone Number:01815461389 Participants' name

E-mail……………                                          …………

Date:                                                       Date:

1

Institutional Review Board(IRB)
National Institute of Advanced Nursing Education and Research
Mugda, Dhaka 1214

## Research Information Sheet (Bangla):

(গবেষণা তথ্য শীট)

১. গবেষণার নাম: বাংলাদেশের বিশেষায়িত হাসপাতালে এজমা আক্রান্ত রোগীর বৈশিষ্ট্য বর্ণনা।

২. গবেষকের নাম: হোসনে আরা

৩. গবেষণার স্থান: জাতীয় বক্ষব্যাধী ইন্সটিটিউট ও হাসপাতাল, বাংলাদেশে।

৪. গবেষণার উদ্দেশ্য: এই অধ্যয়নেরউদ্দেশ্য হলো বাংলাদেশেরজাতীয়বক্ষব্যাধীইন্সটিটিউট ও হাসপাতাল এর এজমা রোগীর বৈশিষ্ট্য মূল্যায়নকরা।

৫. কাজেরঅগ্রগতি: নিয়ানার এর প্রাতিষ্ঠানিক পর্যালোচনা বোর্ড এবং বিএসএমএমইউ এবং হাসপাতাল কর্তৃপক্ষের অনুমতি প্রাপ্তহয়ে, এজমা আক্রান্ত রোগীদের সাথে মুখোমুখি আলোচনার মাধ্যমে গবেষক তার তথ্য অনুসন্ধান করা শুরু করবেন। সপ্তাহের প্রতিটি কর্ম দিবসে গবেষক এজমা আক্রান্ত রোগীদের নিকট হতে তথ্য সংগ্রহ করা শুরু করবেন যারা জাতীয় বক্ষব্যাধী ইন্সটিটিউট ও হাসপাতাল, ঢাকার বর্হিবিভাগের রোগী হিসেবে চিকিৎসা নিচ্ছেন।

৬. এই গবেষণা কর্মকান্ডে অংশগ্রহণকারী হিসেবে অধিকার: এই গবেষণার অংশগ্রহণকারী হিসেবে অংশগ্রহণ করা নির্ভর করছে আপনার ও আপনার পছন্দের উপর। এই গবেষনা হতে যে কোন সময়ে আপনি নিজেকে প্রত্যাহার করে নেওয়ার অধিকার আপনার রয়েছে।

৭. সম্ভাব্য ঝুঁকি: এতে কোন শারিরীক ঝুঁকি নেই।

৮. ফলপ্রসূ উপযোগীতা: এই অধ্যয়নের অনুসন্ধান এজমার ব্যাপ্তী কমাতে এবং প্রাদুর্ভাব হ্রাসকরনে সেবা প্রদানের নীতির উন্নতিতে অবদান রাখতে পারে।

৯. গোপনীয়তা: সকল তথ্য এবং নথি এমন ভাবে সংরক্ষণ করা হবে যাতে তা শুধুমাত্র গবেষক ব্যতীত অন্য কারো নিকট উন্মুক্ত না হয়েপড়ে।

১০. যোগাযোগের ঠিকানা: হোসনে আরা, এডাল্ট এন্ড এলডারলি হেল্থ নার্সিং, নিয়ানার এই গবেষণা পরিচালনা করবেন এবং এই গবেষণার বিষয়ে যদি আপনার কোনপ্রশ্ন থাকে তবে আপানি তাকে যেকোন প্রশ্ন জিজ্ঞাসা করতে পারেন অথবা কোন অভিযোগ থাকলে আপনি সরাসরি গবেষকের সাথে যোগাযোগ করতে পারেন, মোবাইল নাম্বার: ০১৮১৫৪৬৪৩৮৯ এবং ই-মেইল: hosna01815461389@gmail.com

প্রধান অনুসন্ধান কারী

.............................
ফোন নাম্বার: ০১৮১৫৪৬১৩৮৯
ই-মেইল: .............................
তারিখ:

অংশগ্রহণকারীর স্বাক্ষর

.............................
অংশগ্রহণকারীর নাম
.............................
তারিখ:

1

Institutional Review Board(IRB)
National Institute of Advanced Nursing Education and Research
Mogda, Dhaka 1214

## F: QUESTIONNAIRE(ENGLISH)

## QUESTIONNAIRE (ENGLISH)

Code------------                                      Date--------------

**Part I: Socio-demographic Data**

Instructions: Please, tick ( √ ) the relevant box for any option chosen and written in the space providing for answers.

1. How old are you? ...................................... years

2. Gender

   ☐ Male                                ☐ Female

3. Religion

   ☐ Muslim                              ☐ Hindu
   ☐ Christian                           ☐ Buddhist

4. The highest Level of education

   ☐ Analphabet                          ☐ Primary School

   ☐ Secondary                           ☐ College/ University

5. Marital Status

   ☐ Single                              ☐ Married
   ☐ Divorce                             ☐ Separated

6. Occupation

   ☐ House wife                          ☐ Business
   ☐ Govt. Service                       ☐ Private Service
   ☐ Unemployed                          ☐ Retired

7. Monthly income in your family.......................... Taka.

8. Housing

   ☐ Kacha                               ☐ Building

   ☐ Semi kacha                          ☐ Others

3

Institutional Review Board(IRB)
National Institute of Advanced Nursing Education and Rese
Mugda, Dhaka 1214

**Part II. Health &Disease related Questionnaire**

Instructions: Please, tick ( √ ) the relevant box for any option chosen and written in the space providing for answers.

| S/No1 | Factor influencing to causes asthma | Yes | No |
|---|---|---|---|
| a. | Was your asthma caused by chemicals, smoke, fumes or dust? | | |
| b. | Does your household have pets such as dogs, cats, birds or other pets that spend time indoors? | | |
| c. | Is a wood burning stove used for cooking? | | |
| d. | Is a gas burning stove used for cooking? | | |
| e. | Is an exhaust fan that vents to the outside used regularly when cooking in your kitchen? | | |
| f. | Do you have carpeting in your room? | | |
| g. | Do you smoke? | | |
| h. | Is there any other person suffering with asthma in your family? | | |

2. Do you have any other following disease? (check all that apply)

a) Hypertension b) Kidney disease c) Diabetic

d) Any other lung disease e)Gastro Esophageal Reflux f) Others

3.What are the causes of exacerbation of asthma?

a)Dust b) Pet dander c)Tobacco smoke d) Chemical e) Air pollution f)others

4. What are the asthma symptoms do you have? (check all that apply)

a) Wheezing b) Chest tightness c) Cough

d) Shortness of breathe)Chest pain f) Other

5. What complications /side effect do you have from asthma treatment? (check all that apply)

a) Rapid heartbeatb) Hoarsenessc) Oral Infection

d) Gastro Esophageal Refluxe)osteoporosisf)others.

6. What pharmacological medication you are taking currently? (check all that apply)

,,, a) Long Acting Beta Agonists-Salmeterolb) Short Acting Beta Agonists-Salbutamol c) Inhaled Corticosteroids -      Cesonide.d) Combined LABA and ICS-Seroxine). Leukotriene modifiers -Montelukast f. Others

7. What complimentary therapy are you taking currently? (check all that apply)

a) Ayurvedab) Homeopathy medicine c)Yoga

d)Naturopathye)Homeremediesf) Others.

8. Duration of asthma------------------------- years.

4

**Part III. Activity tolerance**

Instructions: Please, tick ( √ ) on the options you feel appropriate to rank your activities.

| Strenuous Activities | Totally Limited | Very Limited | Some Limited | A little Limited | Not at all Limited |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 1.Hurrying | | | | | |
| 2, Exercising | | | | | |
| 3.Running Upstairs | | | | | |
| 4.Sports | | | | | |
| Moderate Activities | | | | | |
| 5.Walking | | | | | |
| 6.House work | | | | | |
| 7.Gardening | | | | | |
| 8.Shopping | | | | | |
| 9.Climbing stair | | | | | |
| Social Activity | | | | | |
| 10.Talking | | | | | |
| 11.Playing with pet/children | | | | | |
| 12.Visiting friend/relatives | | | | | |

৩.তথ্য সংগ্রহের উপকরন (বাংলা)

কোড----------------------                                              তারিখ----------------------

অংশ ১: আর্ত সামাজিক তথ্য

দিকনির্দেশনাঃ অনুগ্রহ করে নিচের প্রাসঙ্গিক ঘরে যা আপনি বাছাঁই করেছেন তাতে টিক ( ✓ ) চিহ্ন প্রদান করুন এবং
উত্তরের জন্য প্রদত্ত খালি জায়গায় উত্তর লিখুন।

| ১. | আপনার বয়স কত?................................................বছর | | | | |
|----|----|----|----|----|----|
| ২. | লিঙ্গ | | | | |
| | | ☐ | পুরুষ | ☐ | নারী |
| ৩. | ধর্ম | | | | |
| | | ☐ | মুসলমান | ☐ | হিন্দু |
| | | ☐ | খ্রিস্টান | ☐ | বৌদ্ধ |
| ৪. | লেখাপড়ার সর্বোচ্চ স্তর | | | | |
| | | ☐ | অক্ষরজ্ঞান | ☐ | প্রাথমিক বিদ্যালয় |
| | | ☐ | মাধ্যমিক | ☐ | কলেজ/ বিশ্ববিদ্যালয় |
| ৫. | বৈবাহিক অবস্থা | | | | |
| | | ☐ | অবিবাহিত | ☐ | বিবাহিত |
| | | ☐ | তালাকপ্রাপ্ত | ☐ | আলাদাবসবাসকারী |
| ৬. | পেশা | | | | |
| | | ☐ | গৃহিনী | ☐ | ব্যবসা |
| | | ☐ | সরকারীচাকুরী | ☐ | বেসরকারীচাকুরী |
| | | ☐ | বেকার | ☐ | অবসরপ্রাপ্ত |
| ৭. | আপনার পরিবারের মাসিক আয়-------------------------------------টাকা | | | | |
| ৮. | বাড়ি | | | | |
| | | ☐ | কাঁচা | ☐ | ঋবন |
| | | ☐ | আধাকাঁচা | ☐ | অন্যান্য |

3

Institutional Review Board(IRB)
National Institute of Advanced Nursing Education and Research,
Mugda, Dhaka 1214

অংশ ২. স্বাস্থ্য ও রোগ বিষয়ক প্রশ্নাবলী

দিকনির্দেশনা: অনুগ্রহ করে নিচের প্রাসঙ্গিক ঘরে যা আপনি বাছাই করেছেন তাতে টিক ( ✓ ) চিহ্ন প্রদান করুন এবং উত্তরের জন্য প্রদত্ত খালি জায়গায় উত্তর লিখুন।

| ক্র.নং১ | এজমার কারন হিসেবে যে বিষয়গুলো প্রভাব ফেলছে | | |
|---|---|---|---|
| ক. | আপনার এজমা কি কোন রাসায়নিক, ধুমপান, ধোঁয়া বা ধুলোর কারনে হয়েছে? | হ্যাঁ | না |
| খ. | আপনার বাড়িতে কি কোন পোষাপ্রাণী যেমন কুকুর, বিড়াল, পাখিবা অন্য কোন প্রকারের প্রাণী থাকে কি না যখন আপনি গৃহ অভ্যন্তরে অবস্থান করেন? | | |
| গ. | রান্না করার জন্য জ্বালানী হিসেবে কাঠ ব্যবহার করা হয় কি? | | |
| ঘ. | রান্না করার জন্য জ্বালানী হিসেবে গ্যাস ব্যবহার করা হয় কি? | | |
| ঙ. | বাতাস বাহিরে পাঠিয়ে দেওয়ার জন্য আপনার কোন এক্সস্ট ফ্যান আছে কিনা যা রান্না করার সময় নিয়মিত চালানো হয়? | | |
| চ. | আপনার কক্ষে কোন কার্পেট আছে কিনা? | | |
| ছ. | আপনি কি ধুমপান করেন? | | |
| জ. | আপনার পরিবারে আর কোন সদস্যের কি এজমা রোগ আছে? | | |

২.আপনার কি নিচের অন্যকোন রোগ আছে? (যে গুলো আছে তার সবগুলো তে টিক দিন)

    ক ) উচ্চ রক্তচাপ      খ )কিডনী রোগ      গ)ডায়াবেটিস

    ঘ)অন্যকোনফুসফুসের রোগ    ঙ)গ্যাস্ট্রো ইছুফেগিয়েলরিফ্লেক্স    চ)অন্যান্য

৩. এজমার তীব্রতার কারন কি? (যে গুলো আছে তার সব গুলোতে টিক দিন)

    ক )ধুলো      খ) পোষাপ্রাণীর লোমহতে      গ )তামাকজাতীয়ধুমপান

    ঘ)রাসায়নিকহতে      ঙ)বায়ু দূষণ      চ)অন্যান্য

৪.আপনারএজমার লক্ষণ গুলো কি কি? (যেগুলো আছে তার সবগুলোতে টিকদিন)

    ক )বুকে শব্দ হওয়া      খ)বুকে টান অনুভব করা      গ)কাশি

    ঘ)নিশ্বাসে স্বল্পতা      ঙ)বুকে ব্যাথা      চ)অন্যান্য

৫. এজমার চিকিৎসায়আপনার জটিলতা/ পার্শ প্রতিক্রিয়া গুলো কি কি? (যে গুলো আছে তার সবগুলোতে টিক দিন)

    ক ) দ্রুত হৃদস্পন্দন      খ)রুক্ষতা      গ)মুখে সংক্রমণ/ ইনসফেকশন

    ঘ)গ্যাস্ট্রো ইছুফেগিয়েলরিফ্লেক্স    ঙ)হাড়েরক্ষয় রোগ    চ)অন্যান্য

৬. আপনি বর্তমানে কোন ধরনের ওষুধ সেবন করছেন? (যে গুলো আছে তার সবগুলোতে টিক দিন)

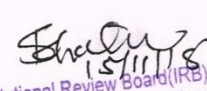    ক ) লংঅ্যাকটিং বেটাএগোনিস্ট- সালমিটিরোল      খ)শর্ট অ্যাকটিং বেটাএগোনিস্ট -সালবুটামোল

    গ)ইনহেলড করটিকোসটিরোইডস- সিসোনিড      ঘ) কম্বাইন্ড এলএবিএএবংআইসি এস- সিরোন্ত্রিন

    ঙ)লিউকোট্রিনি মডিফাইয়ারস- মোনটিলুকাস্ট      চ)অন্যান্য

৭. বর্তমানে আপনি অন্য কোন ধরনের থেরাপী গ্রহণ করছেন? (যেগুলো আছে তার সবগুলোতে টিক দিন)

    ক )আয়ুর্বেদিক      খ) হোমিওপ্যাথি ওষুধ      গ)ইয়োগা

    ঘ)প্রাকৃতিকউপায়ে রোগেরচিকিৎসা    ঙ)বাড়িতেনিরাময়    চ)অন্যান্য

৮.    এজমার সময় কাল.....................বছর

4

**অংশ ৩: কার্যকলাপ সহনশীলতা**

দিকনির্দেশনা: অনুগ্রহ করে নিচের প্রাসঙ্গিক ঘরেযাআপনি উপযুক্ত বলে মনে করেন তাতে টিক (✓) চিহ্ন প্রদান করুন।

| শ্রমসাধ্য কর্মকান্ড | পুরোপুরিসীমাবদ্ধ | খুবইসীমা বদ্ধ | কিছুটাসীমাবদ্ধ | সামান্য সীমাবদ্ধ | সীমাবদ্ধ নয় |
|---|---|---|---|---|---|
| | ১ | ২ | ৩ | 8 | ৫ |
| ১. তূরান্বিত | | | | | |
| ২. অনুশীলন | | | | | |
| ৩. সিড়িতে দৌড়ানো | | | | | |
| ৪. খেলাধূলা | | | | | |
| মাঝারিশ্রমসাধ্য | | | | | |
| ৫. হাটা | | | | | |
| ৬. বাড়িরকাজ | | | | | |
| ৭. বাগানকরা | | | | | |
| ৮. বাজারকরা | | | | | |
| ৯. সিড়িদিয়েউপরেউঠা | | | | | |
| সামাজিককর্মকান্ড | | | | | |
| ১০. কথাবলা | | | | | |
| ১১. পোষাপ্রাণী/ শিশুদের সাথে খেলাকরা | | | | | |
| ১২. বন্ধু/ আত্রীয়দের দেখতে যাওয়া | | | | | |

Hosne Ara, RN,MSN, et. al. *"Aspects in Adult Asthma Patients at Out Patient Department of a Specialized Hospital in Bangladesh: A Descriptive study." IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 10(06), 2021, pp. 44-65.