

Nurses' Knowledge, Attitude, and Their Role Practice Regarding Asthma in Elobied Teaching Hospital 2025

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Abstract

Asthma is a chronic respiratory condition characterized by airway inflammation, leading to wheezing, breathlessness, chest tightness, and coughing. This study aimed to assess nurses knowledge attitude and practice regarding asthma and finding association between their knowledge attitude and practice with their socio demographic data. Material and Methods: exploratory descriptive cross sectional hospital based study conducted among nurses. Structured questionnaire applied which consist of definition. Etiology sign and symptoms and trigger factors, investigation and treatment consists of (25) questions. The part regard attitude consists of (12) questions and the last part on the practice how to do when someone has asthmatic attack (7) questions. Descriptive statistic for demographic data and inferential statistic for knowledge, attitude and practice using chi squire for correlation between knowledge attitude and practice and their social data. (sample size selected randomly by systematic random sampling. Results: In our study participants reported good attitude and practice regard asthma their P value, .000.

There is significant correlation between knowledge, attitude and practice and socio demographic data.

Conclusion: The study findings show that knowledge, attitude and practice regarding asthma is good and significant association between knowledge, attitude and practice and their socio-demographic data

Keywords: Knowledge, Nurse, attitude, practice, asthma, Elobied Teaching Hospital

Introduction

Asthma is a chronic respiratory condition characterized by airway inflammation, leading to wheezing, breathlessness, chest tightness, and coughing [13]

It affects people of all ages and can significantly impact their quality of life. According to the Global Initiative for Asthma (GINA) [20], asthma affects an estimated 300 million people worldwide, with projections suggesting a further increase in the number of cases [2].

Asthma is a significant non-communicable disease that affects both children and adults. It is the most common chronic disease among children [18].

Asthma is estimated to affect 300 million individuals globally, with increasing prevalence in developing countries associated with increasing cost of treatment and rising burden for patients and the community [3] Asthma causes a loss in productivity, seriously affects

children, and disrupts families, which, in turn, contributes to an unacceptable burden on the healthcare system and results in higher mortality, especially among children [10].

In recent years the incidence of bronchial asthma and other allergic diseases has increased. Such a tendency has been observed especially in highly developed and well-industrialized countries. There are many concepts explaining the causes of this process, and one of them is the impact of increasing pollution of the environment in which a human exists and functions [14]. Bronchial asthma constitutes a serious social and economic issue. If untreated or treated insufficiently, it significantly deteriorates the quality of life of patients, is the cause of frequent hospitalization, disability and even deaths. A person who is suddenly struck with an asthma attack, being fully aware of this fact, faces a threat. In a moment there appear a huge number of problems that completely change this person's functioning. [6]

Asthma causes symptoms such as wheezing, shortness of breath, chest tightness and cough that vary over time in their occurrence, frequency and intensity. Risk factors for developing asthma are a combination of genetic predisposition with environmental exposure to inhaled substances and particles that may provoke allergic reactions or irritate the airways, such as indoor allergens (for example, house dust mites in bedding, carpets and stuffed furniture pollution and pet dander) outdoor allergens (such as pollens tobacco smoke, chemical irritants in the workplace, and air pollution(GINA, 2020)

One of the environmental factors that can trigger asthma symptoms is air pollution. Pollutants such as particulate matter, nitrogen dioxide, and ozone can irritate the airways, leading to inflammation and exacerbation of asthma symptoms [16]. Long-term exposure to air pollution has been linked to an increased risk of developing asthma and worsening asthma control

Well-structured asthma education with reinforcing by the health care professional is the key to achieve effective self-care management of asthma. Learning is the transformation of experience into knowledge, skills, and behaviors. Knowledge is also an integral part of life which results in changing of behavior [19]. It is important to teach patients how to manage their asthma and to reinforce the importance of asthma recognition and proper treatment of exacerbations at each medical visit. Other essential aspects of patient education include proper inhaler technique, understanding the difference between long-term control and quick-relief medication, avoidance of environmental factors that worsen asthma, development of a written asthma action plan in partnership with patient and family, and encouraging family involvement to provide support [12]. Asthma management involves a combination of pharmacological and nonpharmacological interventions [9].

Medications such as bronchodilators and corticosteroids are commonly used to control symptoms and reduce inflammation in the airways [1]. However, patient education and self-management are crucial in improving asthma outcomes [4].

This study aimed to assess nurses' knowledge attitude and practice regard asthma and find association between knowledge attitude and practice with their socio demographic data.

Significant of the study:

Nurses play a crucial role in providing the best health care asthmatic patients by possessing full information about the disease, which consist of self-management skills, and discussing treatment options with patients and their families. The nurse's student's role, in daily practice in the hospital, however, can do more than this during her p/his practice by preventing severe complication which may occur to patients. In addition to her role, healthcare professionals, she/he hold a position of influence and education within the community. Therefore, it is essential to evaluate their knowledge, attitudes, and practices toward asthma. Therefore this study aimed

- To investigate the nurses' level of knowledge about asthma
- To determine the nurses' level of attitude regarding asthma
- To determine the immigrant under graduate the nurses' level of practice regarding asthma
- To find association between their socio-demographic data and their knowledge, attitude and practice Research questions:
- What is the nurses' level of knowledge about asthma
- What is the nurses' level of attitude about asthma
- What is the nurses' level of practice roles/services about asthma are there any correlation between their demographic data and nurses' knowledge, attitude and practice?

Material and methods:

Study design:

This is cross-sectional descriptive hospital-based study was conducted on n nurses in Elobied Teaching Hospital.

Study duration:

From February to March 2024. Among 50 nurses to complete their education. The study sample size was calculated using the simple random sampling method, and a total of 50 nurses were included in the study. Before the data collection, written ethical approval was obtained from the participants after explained the purpose of the study.

Study population:

Our population study were nurses who work in Elobied Teaching Hospital

Inclusion criteria:

Nurses work in medical wards

Both male and female

Accept to participate in the study

Exclusion criteria

Nurses absent at the time of data collection

Refuse to participate in the study

Study duration:

Data were collected from January-February 2025

Study setting:

The study conducted in in Elobied Teaching Hospital

Sample size:

The participants were selected randomly using systematic simple random sampling=50 from a total of 101 nurses.

Data collection tools

To measure the knowledge attitude and practice of the students regarding asthma, a questionnaire constructed through literature search, which taken from study conducted in IN ELMAK NIMER, modified to be suitable to our study and to be suitable for our studied populations [20] and the questionnaire was reviewed by an expert college. The questionnaire consists of the first part which included the socio-demographic characteristics of the nurses and their experience regard asthma, the second part included questions on their experience and awareness as well as their knowledge on asthma definition. Etiology sign and symptoms and trigger factors, investigation and treatment consists of (25) questions. The part regard attitude consist of (12) questions and the last part on the practice who to do when someone has asthmatic attack (7) questions.

Data analysis

The data analysis was carried out using the SPSS (version 26). To define the tests to be used in the comparisons, the normality distribution was carried.

Descriptive analysis for knowledge with frequency, percent Mean SD. Scoring system for knowledge, mean scoring the answer with yes put (1), and zero for both no and I don't know the total is (15), scoring system for knowledge level (80-70%) and <70% consider poor knowledge, we do same analysis with attitude and practice level. for analytic statistic we use inferential statistic Mean SD and P value, chi square for correlation analysis for knowledge attitude and practice with their demographic data(age, qualification. For attitudes regarding asthma we used -item-Likert type scale evaluates the attitude toward asthma The scores obtained from the scale vary between 12and 36, divided into 3) for strongly agree, (2) for disagree, (1) for not decided , high scores (80-75%) indicate positive attitudes. 70% consider poor attitude.

Ethical consideration:

Before starting the study ethical approval was obtained, verbal consent were taken from participants after explaining the purpose of the study and explained that it has no any risks for them and they have right to withdraw from the study at any time without giving any reasons.

All data collected through what's group because these are colleges.

Results

Table 1: Distribution of Nurses socio demographic data (no= 50)

variable	frequency	Percent (%)	Mean	SD
Gender				
male	21	42%	1.5800	.49857
female	29	58		
Age by years				
20-23	23	46	1.5400	.50346
Above 23 years	27	54		
Qualification level				
Diploma certificate	8	16	2.2600	.72309
BSc	21	42		
MSc	21	42		
Experience by years				
2-3 years	15	30	1.7000	.46291
More than 3 years	35	70		
Work department				
Asthma room	20	40	1.6000	.49487
Emergency unit	30	60		

Table 2: Distribution of Nurses knowledge responses regard asthma (no= 50)

Item	yes	no	I don't know
Asthma is			
an inflammatory disorder	40(80%)	7(14%)	3(6%)
a syndrome	4(8%)	42(84%)	4(8%)
an infectious disease	3(6%)	46(92%)	1(2%)
Airflow obstruction	46(92%)	3(6%)	1(2%)
Etiology			
Asthma tend to run in the family	47(94%)	2(4%)	1(2%)
Asthma is usually more of a problem at night than during the day	41(82%)	3(6%)	6(12%)
Asthma can damages the heart	47(94%)	3(6%)	0
In asthma, the breathing tubes in the lungs become narrow due to swelling of their walls	50(100%)	0	0
In asthma, the breathing tubes also become narrow due to muscle tightening and mucous collection	50(100%)	0	0
Trigger factors			
Pets and fur are trigger factors	50(100%)	0	0
Mosquito bites trigger factor	38(72%)	10(20%)	2(4%)
Poor diet is trigger factors	1(2%)	47(94%)	2(4%)
Pollen is trigger factor	46(92%)	2(4%)	2(4%)
Aspirin is trigger factors	46(92%)	2(4%)	2(4%)
Symptoms of asthma			
1-Symptoms of asthma Audible wheezing	50(100%)	0	0
2- Cyanosis	50(100%)	0	0
3- Prolonged expiratory Phase	50(100%)	0	0
4- Frothy productive cough	50(100%)	0	9
investigations for Asthma			
1- Blood gases analysis	37(74%)	13(26%)	0
2- Peak expiratory flow rate	50(100%)	0	0
3- Chest x- ray	50(100%)	0	0
4- Pulmonary function test	50(100%)	0	0
Treatment for Asthma)			
1-Vaporizer is good treatment for asthma	41(82%)	4(8%)	5(10%)
2- when person with asthma is doing well they don't need to go to doctor	14(28%)	33(66%)	2(6%)
3- Inhaled medications for asthma have fewer side effects than tablets	41(82%)	4(8%)	5(10%)
4-short course of oral steroids (such as prednisolone) usually cause significant side effects	2(4%)	45(90%)	3(6%)
Mean knowledge	Frequency		Percent%
Good knowledge 80-70%	41		82
Poor knowledge <70%	9		18

Table 3: Distribution of Nurses attitude responses regard asthma (no= 50)

Item	agree	disagree	neutral
Asthma care is expensive	40(80%)	8(16%)	2(4%)
Asthmatic patients should avoid certain foods	49(98%)	1(2%)	0
Asthmatic patients should avoid sports activities	50(100%)	0	0
Asthmatic patients should be educated on how to manage an acute asthmatic attack	50(100%)	0	0
The frequent use of antibiotics helps in diminishing the complications of asthma	2(4%)	44(88%)	4(8%)

asthma affects the social aspect of life	2(4%)	43(86%)	5(10%)
asthma does not affect pleasures in life	1(2%)	48(96%)	1(2%)
regular medications for asthma can help patient to live a normal life	32(64%)	13(26%)	5(10%)
taking inhalers in public is not embarrassing	36(72%)	13(26%)	1(2%)
medications for asthma have to be taken lifelong	31(61%)	14(28%)	5(10%)
People can get addicted to their asthma medicines	1(2%)	48(96%)	1(2%)
People without medical aid do not get asthma care	36(72%)	13(26%)	1(2%)
Mean attitude	frequency		Percent%
Good attitude 80-70%	32		64
Poor attitude <70%	18		36

Table 4: Distribution of Nurses practice responses regard asthma (no= 50)

item	yes	no	I don't know
Semi sifting position is suitable position for asthmatic patient	36(72%)	13(26%)	1(2%)
Do you teach the patient about avoiding dust in the environment	36(72%)	13(26%)	1(2%)
The emergency room is the best place to get treated for an asthma	32(64%)	14(28%)	4(8%)
Asthmatic patients should be educated on how to manage an acute asthmatic attack	29(58%)	19(38%)	2(4%)
Do you provide health education counseling to the patient & their relatives?	29(58%)	17(34%)	4(8%)
Do you demonstrate to the patient how to use an inhaler?	23(46%)	23(46%)	4(8%)
Do you encourage the patient to take regular medicine?	14(28%)	38(76%)	4(8%)
Mean practice	frequency		Percent %
Good practice 80-70%	28		56.0
Poor practice <70%	22		44.0

Table 5: Mean, SD and P value for participants knowledge, attitude and practice

items	Mean	SD	P value
knowledge	1.2815	.14316	.000
Attitude	1.36	.485	.048
practice	1.44	.501	.396

Table 6: correlation between knowledge, attitude and practice with participants socio demographic data

item	variable	P value
knowledge	gender	.016
	qualification	.089
	Years of experience	.000
	Work place	.074
Attitude	gender	.034
	qualification	.056
	Years of experience	.098
	Work place	.056
practice	gender	.0484
	qualification	.144
	Years of experience	.006
	Work place	.144

Discussion

The study revealed several important findings regarding the nurses' demographic characteristics and knowledge levels. The majority of the nurses were in the age group of 41-50 years, female, married, and their experience. This demographic profile reflects the typical composition of the nursing staff at the hospital. Demographic characteristics such as age, gender, and education level can influence an individual's knowledge and behavior. In this study, the nurses' demographic characteristics were consistent with previous research on nursing demographics. The study found that most nurses understood bronchial asthma as an inflammatory disorder and were aware of the importance of health education and counseling for patients. However, there were some gaps in knowledge, such as confusion regarding whether asthma is a syndrome or an infectious disease. Additionally, while most nurses were knowledgeable about the management of bronchial asthma, there were some who knew very well about the complications and etiological factors [17].

Other studies have also identified gaps in knowledge among nurses regarding asthma management, suggesting a need for ongoing education and training programs. Comparing our study findings with those of other studies can provide valuable insights into the knowledge and practices of nurses regarding bronchial asthma [15]. Regarding attitude, our participants showed positive attitude which came in different line with Less than half of the caregivers showed positive attitudes toward their children's asthma. The majority of the caregivers agreed that most people can control their asthma without seeing a doctor regularly. This differed from the findings of the study in Ilesa, Nigeria, where 65.4% of the caregivers believed that only doctors could prevent an asthma attack [11].

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