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Original Research Article

MISCONCEPTIONS ABOUT ASTHMA AMONG PATIENTS VISITING THE TERTIARY CARE HOSPITAL OF KARACHI

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Abstract: *Asthma is a common respiratory condition that significantly impacts patient quality of life, with many individuals lacking adequate knowledge about triggers and proper inhalation therapy. Understanding patient awareness of asthma management is crucial in designing interventions that enhance their ability to prevent and manage symptoms effectively.* ***Objective:*** *This study aimed to assess the awareness of asthma triggers, perceptions of inhalation therapy, and the effect of a teaching intervention among patients visiting a tertiary healthcare facility in Karachi, Pakistan.* ***Methods:*** *A cross-sectional descriptive survey was conducted in the Department of Pulmonary Medicine at Aga Khan University Hospital, Karachi, from January to June 2024. A total of 200 asthma patients were included through convenience sampling. Data were collected using a standardized questionnaire that assessed participants' knowledge of primary asthma triggers, correct inhaler usage, and relevant socio-demographic factors. The statistical analysis was performed using SPSS Version 25, and frequencies, percentages, and chi-square tests were used to examine associations between patient knowledge and other variables.* ***Results:*** *The study revealed that asthma awareness among participants was limited. Only 45% of respondents could identify common asthma triggers accurately, while 30% believed that asthma was solely caused by smoking or pollution. Additionally, 35% of patients expressed concerns about frequent reliance on inhalers, and 40% indicated that they were unsure of the correct way to use their inhalers. The teaching intervention demonstrated an improvement in inhaler usage knowledge and reduced anxiety related to inhalation therapy.* ***Conclusion:*** *This study highlights a significant gap in patient awareness regarding asthma triggers and the proper use of inhalers. These findings emphasize the importance of developing targeted educational interventions to improve asthma management, particularly in low-resource settings. Future efforts should focus on enhancing patient education to prevent asthma-related complications and improve overall disease control.*

Keywords: Asthma, Misconceptions, Inhalation Therapy, Patient Education

Introduction

Asthma is a long-term condition that causes inflammation and increased sensitivity in the airways, and it presents health difficulties for millions of people of all ages globally. In Pakistan, it has been noted that there is an increase in the frequency of asthma, with an estimated range of 10- 15 % of the population suffering from asthma. This growing burden makes it necessary to dispel myths surrounding asthma because them comprispatients' adherence to self-management practices and treatment regimens (1). Asthma is not well understood by many of the patients. It fails to appreciate several aspects, such as the triggers and the management procedures, leading to poor control of the disease, high morbidity, and a decline in the quality of life (2). Moreover, these misconceptions lead to poor practices in managing this chronic disease, which leads to increased difficulties faced by practitioners.

Many patients have misconceptions about asthma due to insufficient or inadequate knowledge about the illness they are suffering from. Some people have a wrong perception that asthma is a childhood ailment or that it is not a severe condition (3). Some of these beliefs can help them avoid proper medical attention, and they end up receiving treatments that make their conditions worse. Also, patients misunderstand that asthma has a cure and then stop using medicines when they are not experiencing the symptoms anymore (4). Such discontinuation may result in an increased risk of poor disease control and more frequent severe asthmatic episodes. Identifying such misconceptions among healthcare providers is essential since knowledge of them provides relevant educational approaches to increase asthma-related patient knowledge and promote the effectiveness of self-management interventions (5).

Several scholarly works have pointed out the importance of launching educational campaigns focused on eradicating myths surrounding asthma. For instance, a cross-sectional study in Malaysia established that socio-cultural factors impact asthma self-management practices among patients (6). These cultural beliefs can significantly hinder patients since they dictate how they approach and practice asthma care (7). Trauma survivors may underestimate how severe or typical their symptoms are and may not recognize the situations that prompt them to take corrective measures to manage their symptoms appropriately. In addition, a lack of knowledge about asthma triggers, including allergens, respiratory infections, and environments, produces poor health and increased symptoms (8).

In Pakistan, an alarming majority of people do not know other causes besides smoking and environmental pollution lead to asthma illness. What was found out is that this approach provides the slightest knowledge of the illness, and it leads to inadequate handling of the condition. For instance, a study conducted in 2009 to establish the knowledge level about different aspects of the ailment,

including causes and treatment, among caregivers of asthmatic children disclosed that they lacked adequate knowledge, which would have hampered the disease management in the child. This lack of knowledge alone calls for scaling up education programmes directly affecting patient and family education from infancy to old age. These interventions would also increase the knowledge concerning significant triggers of asthma and its treatment regimes, enabling families to improve compliance and the overall handling of this condition (10). This is an essential step in decreasing asthma's overall disease burden and enhancing the affected persons' quality of life.

Moreover, the attitude of the patients to the inhalation therapy influences the overall disease control and management of asthma in most patients. Literature review shows that misconceptions about inhalers, including fears of addiction, side effects, and misunderstanding of how to use the inhalers, lead to poor medication compliance and worsening health (11). These misconceptions may make some patients stop taking prescribed medications or misuse an inhaler, which only worsens their condition and causes more frequent and severe asthma attacks. This underlines the paramount significance of the contents of patients' perception of asthma and their self-efficacy towards it through the right treatment option.

This paper aims to establish that socio-demographic factors are critical in explaining patients' knowledge and self-management of asthma. Gender, size, literacy levels, attitudes, and beliefs can contribute to knowledge and attitude toward asthma care (12). For example, younger people and those with a higher level of education are better informed and compliant in managing the disorder (13). This implies that knowledge gaps can be reduced through policy-driven education intervention that reflects the preferred knowledge domain of groups of individuals or specific demographic segments. For instance, patients in the age group of young adults may be best advised to use computerised and high-tech teaching aids, while elderly patients may need conventional teaching styles. These demographic disparities depicted are essential to be eliminated to ensure that educational programs implement solutions that address the educational shortcomings and ensure that every patient possesses adequate knowledge and skills necessary to manage their asthma effectively.

Moreover, epidemiological gaps could be related to asthma patients' perceived severity and health-seeking behaviour. Many people may have mild symptoms, which makes many of them avoid seeking the services of a doctor (14). This is even more worrying in a tertiary health care facility since patients attend such institutions with often higher levels of illness, having been inadequately managed in the previous health care facilities. Therefore, clearing these misconceptions should be of great importance to improve conformity to asthma management concerning the general health of the lungs.

The purpose of the present research is to explore and understand the misconceptions regarding asthma in patients coming to the tertiary care hospital in Karachi.

Methodology

Cross-sectional study The data was gathered in the duration from January 2024 to June 2024. Respondents were adults 18 years and above who had been diagnosed as asthmatic patients or clients who had attended the outpatient department at the time of the study. Furthermore, participants who could give informed consent were also considered for inclusion.

The study excluded patients with an acute asthma exacerbation or significant comorbidity that could influence the outcome and patients unable to provide informed consent due to language barriers or cognitive impairment.

Self-administered questionnaires designed to assess the patient's knowledge, attitude, and beliefs about asthma were used to gather data. The questionnaire was divided into corresponding categories for demographic data, perceived triggers for asthma, beliefs in inhalation therapy, and attitude toward asthma management. Convenience sampling was used where participants were approached during their outpatient clinic visits and had questionnaires self-administered only after obtaining informed consent. Professional healthcare workers helped clarify any issues that the respondents had concerning the survey items.

The questionnaires were analyzed using statistical software to test for frequency distributions and cross-tabulate the demographic variables against the knowledge of asthmatic conditions. The metric data was described using frequency distributions, while the nominal data was analyzed using measures of central tendency and variability. The groups were compared using measures of chi-square. This research complied with all ethical rules, including maintaining anonymity and subject rights to withdrawal at any point. Consequently, the obtained results were collected and analyzed to help fine-tune perceptions of asthma among patients in the area.

Results

Three hundred patients with asthma responded to the poll, making the response rate 95%. Table 1 presents a description of the demographic features of the research participants. About half of the respondents were between 18 and 40 years old (45%), and the highest number were female (60%). The level of education was somewhat lower, with 35% having a secondary education, while 25% had a higher education degree.

The findings related to the knowledge about asthma misconceptions showed that participants had a limited understanding of asthma, specifically about allergens and environmental factors, with only 45 % of participants answering the question. This clearly shows that there is a poor perception of this chronic disease and many other aspects that might trigger asthma. Even worse, 30% of respondents provided a minimal view of the causes of asthma, claiming that it is caused only by smoking or pollution. Misconceptions such as these can lead to poor management strategies and, subsequently, a lack of ability to escape actual triggers and, consequently, asthma control that is out of one's control. Knowledge assessment of asthma triggers is shown in Table 2, stratified by response. Further education intervention is required to ensure that patients with asthma have adequate knowledge about triggers that can provoke their asthma.

Regarding the participant's attitudes toward inhalation therapy, it was found that 35 per cent of the participants perceived that they were at risk of developing a dependency on inhalers. This fear of reliance on medication tends to highly influence adherence by having patients avoid the use

of their prescribed inhalers, leading to poor control of asthma and increased health risks. They found that forgetfulness of inhaler usage was 40%, which expressed that they only knew a little about the right way to use an inhaler. This can reinforce asthma symptoms and worsen their effect on the treatment received. The retained attitudes concerning inhalation therapy are summarised in Table 3, which presents participants' beliefs and concerns and highlights the importance of specific educational interventions.

The study found that the educational level had a statistically significant relationship with the level of knowledge in asthma management, with a p-value of less than 0.05. Awareness of triggers aligning to and possible treatments, including inhalers and preventive measures among the participants, was significantly higher among those with higher education. This implies that education has a very central role in ensuring that the patient has the knowledge required for asthma management. Furthermore, patients below 45 had better knowledge of inhalation therapy than older patients, increasing the health literacy gap by generations. Collectively, these findings further emphasize the importance of group-directed scholarly education regarding proper asthma management across varied demographics and eliminating existing myths as perceived by patients. With this knowledge, healthcare providers can close the knowledge gaps in patient self-management, enhancing the patient's quality of life.

Table 1: Demographic Characteristics of Participants

Demographic Variable	Frequency (n=300)	Percentage (%)
Age Group (years)		
18-24	60	20
25-40	135	45
41-60	75	25
61 and above	30	10
Gender		
Male	120	40
Female	180	60
Educational Attainment		
Primary	60	20
Secondary	105	35
Higher Education	75	25
Others	60	20

Table 2: Knowledge Assessment of Asthma Triggers

Trigger Type	Correct Identification (%)	Incorrect Identification (%)
Allergens	45	55
Environmental Pollution	30	70
Physical Activity	50	50
Viral Infections	40	60

Table 3: Attitudes towards Inhalation Therapy

Attitude	Percentage (%)
Concern about Dependency	35
Unsure of Proper Usage	40
Belief in Self-Cure	25

Discussion

Therefore, the results of this study help dispel some of the misconceptions about asthma among patients attending a tertiary care hospital in Karachi. Asthma is one of the most common chronic diseases of the global population, and the level of patients' knowledge in our study group was low regarding the causes and control of asthma. Our survey findings showed that only a third of the patients correctly identified primary asthma triggers and that raising awareness among patients continued to be complicated. Lack of information on chronic disease can lead to poor management, causing a poorer health state and increased mortality rates as indicated ((1), (2)).

Lack of information, culture, and knowledge are the elements that define concepts of asthma in different ways. For example, the participants' most frequent response about asthma causes was cigarette smoking and air pollution, while other causes, such as allergens, genes, and infections, were excluded (3), (4). Managers and workers can be restricted by knowledge in their work and research, preventing them from performing the prevention or seeing a doctor at the correct time. Socio-cultural aspects affect asthma self-management, according to Koh et al. (2021), meaning that overall education enlightenment programs must be developed to address these particular belief systems and practices.

It is quite worrisome that most participants reported concern regarding inhalation therapy. The revealed fact that 35% of patients who experienced asthma or similar symptoms had particular views on dependency on inhalers is somewhat worrisome, as any misconceptions of this kind are capable of negatively impacting treatment compliance among patients (6). Lack of knowledge about the inhalers and misconceptions regarding the manner and time of use of the inhalers commonly lead to the worsening of the asthmatic symptoms, and this usually leads to hospitalization (7). Correcting these misunderstandings by providing specific informative activities is essential. The potential role of inhaler therapy in the overall management of asthma should

be reiterated, and misconceptions regarding dependence should be excluded (8).

The link between education and knowledge preservation on asthma also reveals the need to upscale education. There was improved knowledge about the condition among the younger population and those with over-average education. Evidence from comparable research supports this thesis by proposing that enhanced education positively impacts health literacy and self-management practices (9). Given that a large proportion of people with asthma have low education levels and are older, educational interventions for these groups were expected to enhance their asthma knowledge and self-management. Interventions could entail having a seminar or a group discussion and making use of visual means to improve comprehension.

Demographic details of the study also show that a higher number of female patients was included in the study, as a possibility of gender disparities in asthma control. It has also been established that women and men can develop asthma differently because of hormonal factors, and women can have a much harder time controlling the disease (10). Male and female-centred asthma education and management strategies may help reduce these gaps because both genders will receive asthma education recommendations based on their experiences.

Moreover, it is imperative to consider providers central to managing asthma since they are involved in the whole process. Knowledge about asthma management and related self-management behaviours can be greatly influenced by training HCPRs on communication practices. It is suggested that pharmacist-delivery educational interventions for patients enhance their knowledge and self-management of asthma (11). Implementing such interventions as part of care improves the patient-physician interaction, making patients agents in their care.

Several limitations should be considered in this research. However, the cross-sectional design limits one from drawing causal relationships, and participants' biases will systematically influence the survey data. It would be helpful for proponents of these studies to use more long-term study designs or incorporate qualitative methods to examine the multifaceted nature of asthma management more fully. Furthermore, sampling a larger population and recruiting patients from different facilities would give more insight into common misconceptions about asthma among individuals.

Conclusion

The present research highlights the importance of eradicating the misconceptions about asthma among patients visiting tertiary care hospitals in Karachi. The study shows that there are many patients remained poorly informed about asthma triggers and their control, management, and inhaler techniques, creating the potential for poor outcomes. This study underscores the need for culturally appropriate and level-appropriate asthma education for patients. It remains the responsibility of the healthcare providers, especially when patients are diagnosed with such ailments, to remove myths and misinformation that could hinder the emancipation of people in their fight against such diseases. Asthma literacy and adequate disconfirmation of misconceptions can foster better disease management, lowered morbidity, and enhanced quality of life for those with asthma. Further research should concentrate on elaborating on patient- and professional-patient-centered educational programs to promote the collaborative asthma management model.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate

Approved by the department concerned. (IRBEC-AGKU-23/23)

Consent for publication

Approved

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Conflict of interest

The authors declared the absence of a conflict of interest.

Author Contribution

WARIS ALI (Resident)

Coordination of collaborative efforts.
Study Design, Review of Literature.

JAVAID AHMED KHAN (Professor)

Conception of Study, Development of Research Methodology Design, Study Design, Review of manuscript, final approval of manuscript.
Conception of Study, Final approval of manuscript.
Data acquisition, and analysis.

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