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Research Article

**PREVALENCE RATE OF ASTHMA AND ASSESSMENT OF
PEOPLES KNOWLEDGE ABOUT ITS OCCURRENCE, A
RURAL AND URBAN SURVEY IN PAKISTAN**¹Dr.Haaris Mehmood, ²Dr.Arifa, ³Dr.Muhammad Farhan Ejaz

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Abstract:

Background: The aim of the study was to determine prevalence rate of asthma, also assesses knowledge about its occurrence among people of Pakistan living in different rural and urban areas.

Methods: study was conducted in the month of January 2019 in different rural and urban areas of Pakistan. Data was collected from peoples of different age groups suffered from asthma residing in different rural and urban areas of Pakistan. A self-structured questionnaire was designed containing different questions. Percentages of different variables were calculated.

Results: Total no. of 500 peoples suffered from asthma were approached including male 346(69.2%) and female 154(30.8%). Prevalence rate is higher in male as compared to females. In our survey mostly people suffered from disease were 32-44 years old 337(67.4%). Also peoples living in urban areas 273(54.6%) were more suffered from this disease as compared to rural 227(45.4%).

Conclusion: It is concluded from survey (knowledge assessment part) that peoples were well aware about reasons of occurrence of asthma but majority think dust, consumption of higher quantities of Ghee and rice and unhygienic conditions leads towards asthmatic conditions (table.3).

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INTRODUCTION:

Allergy and asthma are characterized by an overreaction of the human immune system to allergens due to elevated levels of IgE antibodies. [1], [2] Hypersensitive individuals have occasional episodes of asthma attacks, wheezing, breathlessness, and chest tightness. These attacks bring about airway hyper-responsiveness, which then leads to the narrowing of airway passages due to the hindrance or obstruction of airflow— a key feature of asthma. Despite the recent advances in the field of allergy medicine, the frequency of hay fever and asthma is increasing day by day throughout the world. [3],[4] Epidemiological studies from other parts of the world have also confirmed that asthma prevalence is increasing in the world, especially in the developing countries. According to the Global Initiative for Asthma (GINA), prevalence of asthma in Pakistan is 4-5%. [5] Although, precise reasons for this increase are unknown, it is likely that a number of environmental factors are at least partly responsible.

There was no study conducted before to find out prevalence rate of asthma and assessment of people knowledge about its occurrence in rural and urban areas of Pakistan.

Literature review:

An investigation was led in Birmingham to discover asthma predominance in younger students' and the investigation of the pervasiveness of asthma in younger students in Birmingham which was first done in 1956-57 was rehashed in 1968-69. There has been an expansion in the predominance of unquestionably analyzed asthma from 1-8% to 2-3%, excluding a considerably higher number of kids (3-2%) with wheezing. An extensively higher pervasiveness in young men than in young ladies was again discovered both for unequivocal asthma and for wheezing yet the inclination to recuperation in young men with clear asthma was slight though there was a stamped recuperation in instances of wheezing which more likely than not spoke to gentle asthma. Negro youngsters conceived in England had a comparative commonness to European kids yet kids brought into the world outside England in the West Indies or in Asia had an altogether lower pervasiveness of asthma and of wheezing for reasons which are not completely seen but rather which may beneficially be viewed as further. Asian kids, be that as it may, seemed to hold their low pervasiveness of asthma notwithstanding when conceived in England. [6]

Another investigation was directed in US to discover drifts in Childhood Asthma commonness, human services usage, and mortality. Asthma commonness

expanded by a normal of 4.3% every year from 1980 to 1996, from 3.6% to 6.2%. The pinnacle commonness was 7.5% in 1995. In 1997, asthma assault pervasiveness was 5.4%, yet changes in the NHIS structure in 1997 block correlation with past appraisals. Asthma assault commonness stayed level from 1997 to 2000. After a decline somewhere in the range of 1980 and 1989, the asthma office visit rate expanded by a normal of 3.8% every year from 1989 to 1999. The asthma hospitalization rate developed by 1.4% every year from 1980 to 1999. In spite of the fact that youth asthma passing are uncommon, the asthma demise rate expanded by 3.4% every year from 1980 to 1998. Kids matured 0 to 4 years had the biggest increment in commonness and had more prominent human services use, yet youths had the most elevated mortality. The asthma trouble was borne lopsidedly by dark youngsters all through the period. Racial variations were biggest for asthma hospitalizations and mortality: contrasted and white youngsters, in 1998– 1999, dark kids were >3 times as liable to be hospitalized and in 1997– 1998 >4 times as liable to kick the bucket from asthma. [7]

Another examination was directed in the Sultanate of Oman to discover the commonness and seriousness of asthma, unfavorably susceptible rhinitis and atopic skin inflammation in schoolchildren and from this investigation we discover that the pervasiveness rates of revealed determinations of asthma, hypersensitive rhinitis and dermatitis were higher in more established kids (20.7%, 10.5% and 14.4% contrasted and 10.5%, 7.4% and 7.5%, individually, in youthful kids). In youthful kids, 277 were present wheezers and of these 40.8% had rest irritating wheeze at any rate once per week and 45.1% had discourse constraining wheeze amid the previous year. So also, 283 more established youngsters were present wheezers, and of these 30.0% had rest aggravating wheeze at any rate once per week and 37.5% had discourse constraining wheeze amid the previous year. Exercise-instigated wheeze was higher in more seasoned kids (19.2% versus 6.9%; $P < 0.001$). Hypersensitive rhinitis and skin inflammation were additionally connected with noteworthy rest unsettling influence and impediment of movement in both age gatherings. [8]

Another examination was directed in Isra University Hospital, Hyderabad to distinguish the hazard factors related with youth asthma. Also, in this investigation we found that the kids were matured between a year and 8 years and 60% were male. The asthmatic kids were hospitalized more as often as possible than the non-asthmatic youngsters ($p < 0.0001$). The vast majority of the asthmatic youngsters lived in the

urban territories of Hyderabad [odd proportion (OR) = 16.7, 95% CI = 3.1– 14.6, $p < 0.0001$], had a parental history of asthma (OR = 26.8, 95% CI = 10.8– 68.2, $p < 0.0001$) or hypersensitive rhinitis (OR = 4, 95% CI = 1.2– 13.4, $p = 0.01$), 38.5% had something like one individual who smoked, and were weaned sooner than the non-asthmatic kids (OR = 12.4, 95% CI = 1.3– 4.4, $p < 0.01$).[9]

Another investigation was led in Karachi, Pakistan to discover the Prevalence of Asthma and Allergic Rhinitis Among School Children. Study results demonstrated that the recurrence of analyzed (recently observed by doctors) instances of asthma remained at 15.8%, while the recurrence of unfavorably susceptible rhinitis was observed to be 28.50% among these kids. Different parameters that were dissected included dry hack (20.1%), wheezing (11.7%), shortness of breath (15.40%), and skin inflammation (21.8%). Moreover, smoking by relatives was observed to be related with asthma (p esteem under 0.05), unfavorably susceptible rhinitis (p esteem under 0.05), shortness of breath (p esteem under 0.05), dry hack (p esteem 0.002), and wheezing (p esteem under 0.05). This examination uncovers that there is a noteworthy number of younger students in the metropolitan city of Karachi who have different unfavorably susceptible manifestations. It likewise reveals insight into the way that introduction to indoor natural factors just as family atopy can assume a key job in expanding the odds of a person to encounter asthma and other sensitivity side effects.[10]

METHODOLOGY:

Study settings:

A cross sectional study was conducted in the month of January 2019 in different rural and urban areas of Pakistan.in which data was collected from a total no

of 500 peoples of different age groups ranging from 19-55 years old.

Study design:

Data was collected from a total no of 500 participants suffered from asthma. These participants were belongs to different residential areas rural or urban of Pakistan. The participants of different age groups 19-55 years old, belonging from different areas (rural or urban) were take part in our survey. We asked them a set of questions which were part of our self-structured questionnaire. The participants were received no reward or benefits to take part in our study.

Data collection tool:

We designed a questionnaire in order to collect data from participants, consists of different parts as following.

Part A: containing informed consent.

Part B: consist of participant ID, gender, age and residential area.

Part C: containing different questions to collect information about prevalence of asthma, causes of occurrence, reasons (genetic, dust, pollens, eating habits, living conditions) etc.

Analysis:

Percentages of different variables were calculated by using SPSS software.

RESULTS:

Total 500 participants take part in our study including 346(69.2%) male and 154(30.8%) females. These participants were belonged from different age groups ranging from 19-55 years old.Further frequencies and percentages given in tables below

Table 1.Demographic characteristics of participants N=50

Demographic variables	Frequencies (%)
Gender	
Male	346(69.2%)
female	154(30.8%)
Residential area	
urban	273(54.6%)
Rural	227(45.4%)
Age	
19-31	68(13.6%)
32-44	337(67.4%)
45-55	95(19%)

Table2. Categorical age distribution, prevalence rate(frequencies)of asthma and other variables (gender, living area, causes of occurrence)

Age (years)	Frequencies (prevalence rate)	Gender		Living area		Causes of occurrence	
		Male	female	urban	Rural	known	unknown
19-31	68	39	29	27	41	25	43
32-44	337	250	87	189	148	143	194
45-55	95	57	38	57	38	34	61

In table 2. Age is categorized into three different categories and gives information about the prevalence rate of asthma according to gender (male,

female), living areas (rural, urban),causes of occurrence of disease(known, unknown).

Table 3.knowledge assessment of participant about asthma

Age (years)	Knowledge assessment(reasons)						
	Genetic	Dust	Pollens	Eating habits		Living conditions	
				Ghee	Rice	hygienic	unhygienic
19-31	6	11	5	15	20	3	8
32-44	23	66	56	85	70	14	23
45-55	4	10	18	23	31	5	4

In table.3 age is again taken as dependent variable against which knowledge of people is assessed about reasons behind asthma occurrence either it is transferred genetically, dust or pollens, eating habits and living conditions and people with different age groups were respond differently according their knowledge about disease.

DISCUSSIONS:

This study aimed at determining the prevalence rate of asthma and assessment of people knowledge about its occurrence in rural and urban areas of Pakistan. In our survey we found that asthma prevailed in male and female living in rural and urban area of Pakistan, but prevalence rate is higher in males 346(69.2%) as compared to females154(30.8%). Also number of people residing in urban areas 273(54.6%) were more prone to asthma as compared to rural 227(45.4%). In accordance with age groups 32-44 year old were more asthmatic 337 (250 male and 87 female) as compared to others. And mostly people were unaware (unknown) about cause of occurrence of disease (table .2). In knowledge assessment we assessed that people suffering from asthma were aware about reasons of occurrence (genetically, dust, pollens, eating habits and living areas) but different people having different opinion.

CONCLUSION:

It is concluded from this survey that

- 1) The prevalence rate of asthma is higher in males as compared to females.
- 2) Peoples living in urban areas were more suffered from asthma as compared to rural.
- 3) 32-44 years old were more asthmatic as compared to other age groups. Also most of peoples were unaware about reason of occurrence of disease.
- 4) From knowledge assessment (table.3) part it is concluded that peoples think all (genetics, dust, pollens, eating habits and living conditions) were accountable towards asthma occurrence, but mostly peoples suffered from asthma (32-44 years old) were reported that dust, eating habits (more consumption of ghee and rice) and unhygienic living conditions are reasons behind the occurrence of disease.

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