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## Prevalence of asthma in Tabuk province, 2022 Prepaired by

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### Abstract

**Background:** Asthma is a common heterogeneous chronic disorder of the airways, characterized by variable usually reversible and recurring symptoms related to one or more of airflow obstruction, bronchial hyper-responsiveness, and underlying inflammation and its prevalence variable around the world but It is one of the most common chronic diseases in Saudi Arabia.

**Research problem:** Asthma is a chronic inflammatory airway disease, affecting millions of people globally. The prevalence of asthma is variable around the world, ranging from 1-20% for both children and adults

**Methodology:** To determine socio-demographic status in the study population. And to identify frequency of risk factors in patient of asthma

Patients and methods:study design: A cross-sectional descriptive study

**study area:** 4 primary health centers will be selected randomly from health centers in tabuk **study population**: all asthmatic patients male and female above 16 years will included in the study and those whose refuse participate will be excluded.

**sampling:** The sample size was calculated using the sample size , and the sampling method we used was systematic random sampling technique.

**Results:** The current study found that patients do not have full education about the disease, and in spite of that in patients with asthma it does not prevent them from performing their jobs at work, and if the researcher found that the spread of the disease has nothing to do with genetic factors, as the disease history of the patients indicated that the prevalence of asthma disease Among the family members are few.

Keywords: Asthma- pulmonary disease- healthcare.



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#### Introduction

#### Background

Asthma is a common heterogeneous chronic disorder of the airways, characterized by variable usually reversible and recurring symptoms related to one or more of airflow obstruction, bronchial hyper-responsiveness, and underlying inflammation and its prevalence variable around the world but It is one of the most common chronic diseases in Saudi Arabia(1) These wide variations are related to environmental variations among countries, in addition to the use of different measurement tools and different epidemiological definitions of asthma (2) also we can define asthma is a common, chronic disorder of reversible airway obstruction caused by a triad of airway inflammation, bronchial smooth muscle contraction and increased airway secretions [3] While there have been huge advances in the control of chronic childhood asthma, acute exacerbations remain common, particularly during the viral season. Acute asthma has a low mortality rate but the condition is so common that it imposes a very high health care burden  $\{4\}$  the studies have shown that asthma exacerbations remain a major cause of emergency room visits and a leading cause of hospitalization in children {5} Its impact is manifested in patients, their families, and the community as a whole in terms of lost work and school days, poor quality of life, frequent emergency department (ED) visits, hospitalizations, and deaths<sub>{6,7,8}</sub> The symptoms of wheezing, cough, shortness of breath, and chest tightness are not specific for asthma and can be seen with other pulmonary diseases. However, the combination of these symptoms increases the probability of asthma. The pattern of symptoms is usually variable over time, and the patient may be entirely asymptomatic

between exacerbations<sub>{9}</sub>Symptoms are usually worse at night, particularly in children, and can be provoked by exercise or other triggering factors such as viral infections and/or smoke



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and Asthma control may be worsened by coexisting symptomatic gastroesophageal reflux disease (GERD), rhinosinusitis, obesity, sleep disorders, or the use of some medications such as beta blockers and nonsteroidal anti-inflammatory drugs (NSAIDs) including aspirin  $(ASA)_{\{10\}}$ .

### **Problem statement:**

Asthma is a chronic inflammatory airway disease, affecting millions of people globally. The prevalence of asthma is variable around the world, ranging from 1-20% for both children and adults{11}Al-Ghamdi et reported the prevalence of bronchial asthma in the southern region of Saudi Arabia, at sea level, as 19.5% and 6.9% at a higher altitude $_{12}$ .

## Justification:

Asthma is a common chronic disease affecting people nowadays due to several causes However accurate estimate of the prevalence of asthma among all patient resident in tabuk province is not yet developed.

## **General objective**

To assess prevalence of asthma in tabuk province,2018

## **Specific objectives**

1-To determine socio-demographic status in the study population

2-To identify frequency of risk factors in patient of asthma

## Patients and methods:

study design: A cross-sectional descriptive study

study area: 4 primary health centers will be selected randomly from health centers in tabuk

**study population**: all asthmatic patients male and female above 16 years will included in the study and those whose refuse participate will be excluded

**sampling:** The sample size was calculated using the sample size equation:

n=z 2 p (1-p)/e 2, and the sampling method we used was systematic random sampling technique.



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n = sample size

z = level of confidence

p = estimated proportion of the population

d = tolerated margin of error

N=4\*0.5\*0.5/0.0025=400

#### **Data collection:**

Data will be collected using structured questionnaire which included questions designed to fulfill the study objectives

### Statistical analysis:

All the data were analyzed using SPSS Descriptive statistics for the prevalence and quantitative variables and Chi-square test will be used. A 2-sided T test will be used to compare between groups. P-value of less than 0.05 will considered statistically significant.

Ethical concern: Permission to conduct the study was obtained from the Research and Ethics Committee at the College of Medicine in tabuk university, and the participation in the study was completely voluntary. Confidentiality of data for all participants will be maintained through out the whole work.

### **Literature Review**

In this chapter of the research, previous studies and literature related to athma disease and bronchial asthma were presented and presented. The researcher presents previous studies that were conducted in different regions and countries.

-A comparative study of anxiety and depression in patients with bronchial asthma, chronic obstructive pulmonary disease and tuberculosis in a general hospital of chest diseases presented by Bartis 2008. Patients suffering from BA and COPD have a significantly higher rate of anxiety and depression compared to the general population. A probable cause is the chronicity and severity of pulmonary disease. Detection and management of these mental disorders may



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ameliorate prognosis of the pulmonary disease and improve adaptation and quality of life of these patients.

-Study of Antonis Papaiwannou. 2014. Asthma and chronic obstructive pulmonary disease (COPD) are chronic diseases, very common in general population. These obstructive airway illnesses are manifested with chronic inflammation affecting the whole respiratory tract. Obstruction is usually intermittent and reversible in asthma, but is progressive and irreversible in COPD. Asthma and COPD may overlap and converge, especially in older people [overlap syndrome—asthma-chronic obstructive pulmonary disease overlap syndrome (ACOS)]. Although ACOS accounts approximately 15-25% of the obstructive airway diseases, is not well recognised because of the structure of clinical trials. COPD studies exclude asthma patients and asthma studies exclude COPD patients, respectively. It is crucial to define asthma, COPD and overlap syndrome (ACOS), as notable clinical entities, which they share common pathologic and functional features, but they are characterized from differences in lung function, acute exacerbations, quality of life, hospital impact and mortality.

-Enrique Diaz-Guzman 2011 pressent study titled Asthma, Chronic Obstructive Pulmonary Disease, and Mortality in the U.S. Population. COPD and asthma are common diseases in the U.S. population and can coexist. Our goal was to determine the prevalence of self-reported, physician-diagnosed asthma and COPD in a sample of the U.S. population and their association with lung function impairment and mortality. Methods: We used baseline data from NHANES III and the follow-up mortality data. We used logistic regression and Cox Proportional Hazards models, adjusting for age, sex, race/ethnicity, education level, smoking status, and disease stage. Results: The sample consisted of 15,203 subjects, of whom 4,542 died during the follow-up period. Coexisting COPD and asthma was reported by 357 (2.7%), COPD by 815 (5.3%), and asthma by 709 (5.3%). Subjects with both conditions had a higher proportion of obstruction (30.9%) than those with COPD (24.3%), asthma (13.3%), or no lung disease (5.4%). In survival models adjusting for all factors except baseline lung function, coexisting COPD and asthma had the highest risk for mortality (Hazard Ratio [HR] 1.83, 95% confidence interval [CI] 1.34,



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2.49), followed by COPD only (HR 1.44, 95% CI 1.28, 1.62), and asthma only (HR 1.16, 95% CI 0.94, 1.42). These affects were attenuated after controlling for baseline lung function: coexisting asthma and COPD (HR 1.45, 95% CI 1.06, 1.98), COPD only (1.28, 95% CI 1.13, 1.45), and asthma only (HR 1.04, 95% CI 0.85, 1.27). Conclusion: In this analysis, subjects who report coexisting asthma and COPD have a higher risk of obstruction on spirometry and a higher risk of death during follow-up.

Study of Samantha F 2010 in tittle Patients Diagnosed With Diabetes Are at Increased Risk for Asthma, Chronic Obstructive Pulmonary Disease, Pulmonary Fibrosis, and Pneumonia but Not Lung Cancer. **OBJECTIVE** There are limited data on the risk of pulmonary disease in patients with diabetes. The aim of this study was to evaluate and compare the incidence of asthma, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, pneumonia, and lung cancer in patients with and without a diagnosis of diabetes.

**RESEARCH DESIGN AND METHODS** We conducted a retrospective, longitudinal cohort study using the electronic records of a large health plan in northern California. Age and sex data were available for all cohort members (n = 1,811,228). Data on confounders were available for a subcohort that responded to surveys (n = 121,886), among whom Cox proportional hazards regression models were fit.

**RESULTS** Age- and sex-adjusted incidence rates and 95% CIs were calculated for members with and without diabetes in the full cohort and the subcohort. No difference was observed for lung cancer, but the incidence of asthma, COPD, fibrosis, and pneumonia was significantly higher in those members with a diagnosis of diabetes. These differences remained significant in regression models adjusted for age, sex, race/ethnicity, smoking, BMI, education, alcohol consumption, and outpatient visits (asthma hazard ratio [HR] 1.08 [95% CI 1.03–1.12], COPD HR 1.22 [1.15–1.28], pulmonary fibrosis HR 1.54 [1.31–1.81], and pneumonia HR 1.92 [1.84–1.99]). The risk of pneumonia and COPD increased significantly with increasing A1C.

**CONCLUSIONS** Individuals with diabetes are at increased risk of several pulmonary conditions (asthma, COPD, fibrosis, and pneumonia) but not lung cancer. This increased risk may be a consequence of declining lung function in patients with diabetes.



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Study of Suchit Kumbhare 2016 in tittle Characteristics and Prevalence of Asthma/Chronic Obstructive Pulmonary Disease Overlap in the United States. Objectives: Because this population is prone to more frequent exacerbations, we hypothesized that comorbidities associated with ACOS are higher than those with COPD, asthma, and control populations in the United States.

Methods: We examined the self-reported demographics, smoking status, comorbidities, and hospitalization or emergency department (ED) visitation experience among study respondents older than 35 years of age (n = 90,851) in the Behavioral Risk Factor Surveillance System survey and compared participants with ACOS to COPD, asthma, and control groups. We used logistic regression to compare ACOS and COPD populations to model the impact of comorbid conditions and hospitalization/ED visits after adjusting for demographic factors and smoking status to generate odds ratios and confidence intervals.

Measurements and Main Results: The U.S. prevalence of ACOS was 3.2%, COPD alone was 6.0%, and both increased with age. Respondents with ACOS were younger  $(64.0 \pm 11.7 \text{ yr})$  than respondents with COPD  $(67.1 \pm 11.8 \text{ yr})$  and older than respondents with asthma  $(59.0 \pm 13.1 \text{ yr}; P < 0.0001)$ . The prevalence of comorbidities was higher in the group with ACOS and COPD than in asthma or control groups. The ACOS group had a higher body mass index, lower income, and lower education than other groups. The ACOS group was more likely to have at least one comorbidity (90.2 vs. 84%, P < 0.0001), more hospitalization or ED visits (22.0 vs. 13.2%, P < 0.0001), less exercise (50.0 vs. 58.6%, P = 0.0024), and more disability (70.8 vs. 58.6%, P < 0.0001) than the COPD group.

Conclusions: The patients with a dual diagnosis of asthma and COPD are younger and with more disparities than those diagnosed with COPD alone. ACOS has a higher burden of self-reported comorbidity, disability, and hospitalization or ED visitation than COPD alone.

Timothy E. Albertson study 2020 in tittle The pharmacological management of asthma-chronic obstructive pulmonary disease overlap syndrome (ACOS). This review evaluates the stepwise



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treatment of ACOS using pharmacological treatments used in both COPD and asthma. The most common medications involve the same inhalers used to treat COPD and asthma patients. Advanced stepwise therapies for ACOS patients are based on patient characteristics and biomarkers. Very few clinical trials exist that focus specifically on ACOS patients.

Expert opinion: After inhalers, advanced therapies including phosphodiesterase inhibitors, macrolides, N-acetylcysteine and statin therapy for those ACOS patients with a COPD appearance and exacerbations are available. In atopic ACOS patients with exacerbations, advanced asthma therapies (leukotriene receptor antagonists and synthesis blocking agents.) are used. ACOS patients with elevated blood eosinophil/IgE levels are considered for immunotherapy or therapeutic monoclonal antibodies blocking specific Th2/Type-2 interleukins or IgE. Symptom control, stabilization/improvement in pulmonary function and reduced exacerbations are the metrics of success. More pharmacological trials of ACOS patients are needed to better understand which patients benefit from specific treatments.

Abbreviations: 5-LOi: 5-lipoxygenase inhibitor; ACOS: asthma – COPD overlap syndrome; B2AR: Beta2 adrenergic receptors; cAMP: cyclic adenosine monophosphate; cGMP: cyclic guanosine monophosphate; CI: confidence interval; COPD: chronic obstructive pulmonary disease; CRS : chronic rhinosinusitis; cys-LT: cysteinyl leukotrienes; DPI: dry powder inhaler; EMA: European Medicines Agency; FDA: US Food and Drug Administration; FDC: fixed-dose combination; FeNO: exhaled nitric oxide; FEV1: forced expiratory volume in one second; FVC: forced vital capacity; GM-CSF: granulocyte-macrophage colony-stimulating factor; ICS : inhaled corticosteroids; IL: interleukin; ILC2: Type 2 innate lymphoid cells; IP3: Inositol triphosphate; IRR: incidence rate ratio; KOLD: Korean Obstructive Lung Disease; LABA: long-acting B2 adrenergic receptor agonist; LAMA: long-acting muscarinic receptor antagonist; LRA: leukotriene receptors; MRA: muscarinic receptor antagonist; NAC: N-acetylcysteine; NEB: nebulization; OR: odds ratio; PDE: phosphodiesterase; PEFR: peak expiratory flow rate; PGD2: prostaglandin D2; PRN: as needed; RR: risk ratio; SABA: short-acting B2 adrenergic receptor agonist; ceceptor antagonist; SAMA: short-acting muscarinic receptor antagonist; SAMA: short-acting muscarinic receptor antagonist; SDMI: spring-driven mist inhaler;



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Th1: T helper cell 1 lymphocyte; Th2: T helper cell 2 lymphocytes; TNF-α: tumor necrosis factor alpha; US : United States.

## Result

The study included 400 pateints, 165 (41.3%) were from 4 primary health centers will be selected randomly from health centers in tabuk

and All age groups of the study sample are more than 16 years old.

Through Table (1), we find that the percentage of males in the study is 58.8%, and the percentage of females is 41.3%. The study sample individuals with athma disease and in the age groups ranged between 194 individuals, or 48.5% of the study sample individuals with athma disease. As for the individuals of the study sample in the age of more than thirty 30, their number equals 165 with a ratio of 41.317-30

We also find that the individuals of the study sample with asthma and their place of residence in the countryside numbered 148 individuals by 37%. As for the study sample individuals with asthma, their number was 252, or 63%.

Bio-demographic data	Νο	%
Gender		
Male	235	58.8
Female	165	41.3%
Age in years		
17-30 years	194	48.5%
Over 30 years	206	51.5%
Residency		

 Table 1. Biodemographic data of asthmatic patients in Tabuk province , 2018



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Rural	148	37.0%
Urban	252	63.0%

Fig1.Gender of asthmatic patients in Tabuk province, 2018



Fig2.Age groups of asthmatic patients in Tabuk province, 2018







Fig3.Age groups asthmatic patients in Tabuk province, 2018



Table 2 shows the frequency and percentages of the study sample of patients with bronchial pulmonary disease in the city of Tabuk, Saudi Arabia, where we find that the percentage of the study sample who Have you ever been diagnosed with asthma is equal to only 14% of the study



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sample, and we find that 85.7 of the sample individuals The study was not diagnosed on the basis that they have asthma or for the people who you have a family member with asthma, we find that the percentage is small and is equal to 13%, which leads to the fact that the athma disease was not hereditary, but rather it was caused by the environment, where we find that the study sample members who They have a previous medical history, as their rate is equivalent to only 9%, which is also a small percentage. We find that the answers of the study sample members to the question Do you ever wake up at night with coughing, wheezing, or a hard time breathing get drunk, only 7.5% of the study sample who answered yes And for those who answered no, their percentage is equal to 92.5%. We also find that 7.5% of the study sample individuals have heard wheezing in your chest when you breathe, and we find that the percentage of smokers of both sexes is very weak and is equal to 12%. The study sample, who are not affected by the disease, their percentage is equal to 94.2%.

Athema factor		YES		NO	
3. Have you ever been diagnosed with asthma?	57	14.3	343	85.7	
4.Do you have a family member with asthma?	52	13.0	348	97.0	
5.Do you have any drug history ?	37	9.3	363	90.7	
6. Do you ever wake up at night with coughing, wheezing, or a hard time breathing?	30	7.5	370	92.5	
7. Have you felt scared or worried about having problems breathing?	34	8.5	366	91.5	
8. Have you heard wheezing in your chest when you breathe?	30	7.5	370	92.5	
9. Do you take any medication for your asthma/breathing problems?	20	0.50	380	99.5	
10. Do you have one main doctor or nurse practitioner who usually checks your asthma?	11	2.8	38	97.2	
11. Do you ever have a hard time getting to the doctor / clinic if you need to go?	22	5.5	378	94.5	

 Table 2.. Frequency and percentage of asthmatic patients in t province , 2018



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12. Do you use a Peak Flow meter (device which measure how air flow from your lungs)?	12	3.0	388	97.0
13.Do you smoke ?	48	12.0	352	88.0
14. Does anyone smoke at home?	40	10	360	90.0
15.Does your asthma affect on your performance at work?	23	5.8	377	94.2

Table 3 shows the meaning of the relationship between Demographic data and Have you ever been diagnosed with asthma, where the Pearson chi square test was used, as we find that there are statistically significant differences between the sexes in the diagnosis of athma, where we say that the diagnosis of the athma is different between the members of the study sample, males and females. The value of the P-value was 0.02, which is less than the level of statistical significance 0.05, and this is evidence of the existence of statistically significant differences between males and females. As for the effect of age, we find that there is no statistical indication of the existence of differences between the ages of the study sample in the previous diagnosis of the athma disease in the second district of the significance 0.05, and we also find that the classification of the study sample individuals on the basis of rural and urban has no relation to the diagnosis of disease in the diagnosis.

## Table 3. Relation between Demographic data and Have you ever been diagnosed with asthma

Demographic data		Have you ever been diagnosed with asthma?			
		Chi df		P-value	
Gender	Male	2.331	1	0.02	
	Female				
Age in years	17-30 years	0.554	.554 1	0.52	
	Over 30 years			0.02	



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Residency	Urabn	0.971	1	0.34
	Rural			

Table 4 shows the meaning of the relationship between Demographic data and Do you have a family member with asthma, where the Pearson X2 test was used, as we find that there are statistically significant differences between the sexes in terms of a family member's injury to the athma, where we say that the diagnosis of the athma does not differ between individuals The study sample, males and females, where the P-value value reached 0.30, which is greater than the level of statistical significance 0.05, and this is evidence that there are no statistically significant differences between males. Family members affected by the athma, where the statistical significance value is equal to 0.45, which is greater than the level of statistical significance 0.05. Also, we find that the classification of the study sample members on the basis of rural and urban has no relationship as the injury of one of the family members to the athma in the diagnosis

 Table 4. Relation between Demographic data and Do you have a family member with asthma

		Do you	have a far	nily member with	
Bio-demographic data		asthma ?			
		Chi	df	P-value	
Gender	Male	0.66	0.66	1	0 30
Gender	Female		-	0.00	
Age in years	17-30 years	0.84	0.84 1 0.45	0.84 1	0.45
Age in years	Over 30 years				0.45
Residency	Urabn	0.78	1	0.55	
	Rural		-	0.00	

Through Table 5, we find that the three demographic variables do not affect the disease history of the patient with asthma, we find that all the values of the chi-square test coefficients are



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greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing to do with the patient's disease history.

demographic data		Do you have any drug history			
		Chi	df	P-value	
Gender	Male	0.99 1 0.6	0.65		
Gender	Female		-		
Age in years	17-30 years	0.87	27 1	0.56	
	Over 30 years	0.07			0.50
Residency	Urabn	_ 0.65 1 0.	0.65 1	0.45	
	Rural			0.45	

## Table 5. Relation between Demographic data and Do you have any drug history

Through Table 6, we find that the three demographic variables do not affect the **Do you ever** wake up at night with coughing, wheezing, or a hard time breathing. The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to **Do you ever wake up at night with coughing, wheezing, or a hard time breathing**.

# Table 6. Relation between Demographic data and Do you ever wake up at night with coughing, wheezing, or a hard time breathing

	. Do you ever wake up at night with
demographic data	coughing, wheezing, or a hard time
	breathing?



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		Chi	df	P-value
Gender	Male	0.58	1	0.78
	Female	0.50	-	0.70
Age in years	17-30 years	0.57	7 1	0.76
	Over 30 years			0.70
Residency	urabn	0.81	1	0.78
	Rural		-	

Through Table 7, we find that the three demographic variables do not affect the Have you felt scared or worried about having problems breathing The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to Have you felt scared or worried about having problems breathing.

## Table 7. Relation between Demographic data and Have you felt scared or worried about having problems breathing

		Have you felt scared or worried			
demographic data		about having problems breathing?			
		Chi	df	P-value	
Gender	Male	0.87	0.87	1	0.47
Gender	Female				
Aae in vears	17-30 years	0.45 1 0.56	0.45 1	0.56	
	Over 30 years				
Residency	urabn	0.88	1	0.65	
	Rural	0.00			



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Through Table 8, the researcher found that the three demographic variables do not affect the question **Have you heard wheezing in your chest when you breathe** 

The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to **Have you heard wheezing in your chest when you breathe.** 

demographic data		Have you heard wheezing in your chest when you breathe?		
		Chi	df	P-value
Gender	Male Female	1.98	1	0.020
Age in years	17-30 years Over 30 years	1.67	1	0.030
Residency	urabn Rural	0.82	1	0.54

## Table 8. Relation between Demographic data and Have you heard wheezing in your chestwhen you breathe

Through Table 9, the researcher found that the three demographic variables do not affect the question **Do you take any medication for your asthma/breathing problems.** The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to **Do you take any medication for your asthma/breathing problems** 



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## Table 9. Relation between Demographic data and Do you take any medication for your asthma/breathing problems

		Do you t	ake any m	nedication for your
dem	ographic data	asthi	ma/breath	ning problems?
		Chi	df	P-value
Gender	Male	0.87	1	0.63
	Female			
Aae in vears	17-30 years	0.58	1	0.23
, ge yeare	Over 30 years		_	0.20
Residency	urabn	0.91	1	0.70
······	Rural		_	

Through Table 10, the researcher found that the three demographic variables do not affect the question **Do you have one main doctor or nurse practitioner who usually checks your asthma.** The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to **Do you have one main doctor or nurse practitioner who usually checks your asthma.** 

## Table 10. Relation between Demographic data and Do you have one main doctor or nursepractitioner who usually checks your asthma

		Do you	u have one	e main doctor or
dam	ographic data	nurse practitioner who usually		ner who usually
uem		C	checks you	ır asthma?
		Chi	df	P-value
Gender	Male	0.78	1	0.45



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	Female			
Aae in years	17-30 years	0.65	1	0 51
rige in years	Over 30 years	0.00	-	0.01
Residency	urabn	0.87	1	0.61
nesidency	Rural	0.07	-	0.01

Through Table 11, the researcher found that the three demographic variables do not affect the question **Do you ever have a hard time getting to the doctor / clinic if you need to go.** The researcher found that all the values of the chi-square test coefficients are greater than the significance level of 0.05, and therefore it can be said that the demographic variables in general have nothing effect to **Do you ever have a hard time getting to the doctor / clinic if you need to go** 

# Table 11. Relation between Demographic data and Do you ever have a hard time getting tothe doctor / clinic if you need to go

		Do yo	ou ever ha	ive a hard time
	· · · · · · · · · · · · · · · · · · ·	getting	to the do	ctor / clinic if you
dem	ographic data		need	to go?
		Chi	df	P-value
Gender	Male	0.88	1	0.64
Centre	Female		-	
Age in years	17-30 years	0 71	1	0.45
, ige in years	Over 30 years		-	0.40
Residency	urabn	0.68	1	0.44



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### Discussion

Through the results obtained, we find that the study concluded that demographic factors have an effect on where we find that the diagnosis of the athma is different between the members of the study sample, males and females. The value of the P-value was 0.02, which is less than the level of statistical significance 0.05, and this is evidence of the existence of statistically significant differences between males and females. As for the effect of age, we find that there is no statistical indication of the existence of differences between the ages of the study sample in the previous diagnosis of the athma disease in the second district of the significance 0.05, and we also find that the classification of the study sample individuals on the basis of rural and urban has no relation to the diagnosis of disease in the diagnosis.

This result is consistent with the same results in a study of Bartis 2008. Also the study consistent with Enrique Diaz-Guzman 2011.

The current study agreed with the previous studies in the methodology as the current study agreed with the study Suchit Kumbhare 2016 in terms of methodology, where both studies followed the analytical and descriptive method.

### Conclusions

The current study found that patients do not have full education about the disease, and in spite of that in patients with asthma it does not prevent them from performing their jobs at work, and if the researcher found that the spread of the disease has nothing to do with genetic factors, as the disease history of the patients indicated that the prevalence of asthma disease Among the family members are few.

### Recommendations



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Through the results of the study, discussions and observations, the study recommends the following:

- The interest in spreading awareness among members of society so that asthma does not spread among members of society.

- Provision of assistive devices used by patients.

- Provision of medication for preventing asthma completely in hospitals and pharmacies.

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