

## Prevalence of Childhood Asthma in Preschool Children in Qalyubiya Governorate

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### Abstract

Asthma is a genuine worldwide medical issue. Individuals of any age in nations all through the world are influenced by this constant aviation route issue that when uncontrolled can put extreme cutoff points on day by day life and is now and then lethal, it is more common in youngsters than in grown-ups. It was accounted for that the predominance of asthma is increasing. The point of the examination was to decide the commonness pace of bronchial asthma in a preliminary to recognize the extent of the issue of asthma and to distinguish some of hazard factors expanding the pervasiveness of it among preschool kids from 2-6years old in Qalubya Governorate utilizing the ISAAC survey, 1000 understudies were remembered for this investigation (475 were guys and 525 were females). in the period from Novaber 2019 to April 2020. The consequences of this poll among examined youngsters (1000 kid) indicated that: 164 (16.4%) of considered understudies were asthmatics. Our investigation as respects sexual orientation and its connection to youth asthma demonstrated that, the predominance of asthma in male kids was 17.5% and in female youngsters was 15.4% and this distinction was measurably insignificant ( $P < 0.05$ ). days was increasingly regular in a time of 1-3 days. Determination: There was a high pervasiveness of asthma among kids. Asthma was found to influence rest of kids in a few viewpoints. The instructive degree of guardians had no impact on the predominance of asthma.

**Keywords:** Asthma, Asthma prevalence, Children asthma.

### 1. Introduction

Asthma is a typical and possibly genuine constant illness that forces a significant weight on patients, their families and the network. It causes respiratory side effects, restriction of movement, and flare-ups (assaults) that occasionally require critical social insurance and might be fatal [1].

The point of the examination was to decide the pervasiveness pace of bronchial asthma in a preliminary to distinguish the greatness of the issue of asthma and to recognize some of hazard factors expanding the commonness of it among preschool youngsters from 2-6years old in Qalubya Governorate utilizing the ISAAC poll, 1000 understudies were remembered for this investigation (475 were guys and 525 were females) [2].

Universally, asthma is positioned sixteenth among the main sources of years lived with incapacity and 28th among the main sources of weight of ailment, as estimated by handicap balanced life years [3].

Barely any investigations have been led in Egypt to quantify asthma pervasiveness in kids, however dependent on accessible information, the predominance ranges from 3.25 to 9.4% [4]. Some particular reasons have been proposed as a reason for the expanded asthma pervasiveness, including both ecological and hereditary factors, for example, toxins, way of life, financial status, topographical territory, tobacco smoke allergens, viral diseases, low birth weight, and diet [5], the more noticeable of the referenced elements is the natural factor [6].

Asthma is a typical reason for crisis visits to clinics and nonappearance from school for school-matured kids; additionally, it causes dreariness which may even prompt demise [2]. Unfavorably susceptible issues including asthma cause high social and budgetary weight on the family and society [7].

The outcomes incorporate loss of work, nonappearance from school, hospitalizations, and low personal satisfaction [8].

Asthma is a non-reparable incessant issue, in any case, it has lower death rate than other comparative ceaseless issues [5]. History and understanding of asthma indications are considered as significant models in asthma determination, it additionally relies upon the reversibility and changeability of pneumonic capacity tests, wheeze inside a year is viewed as a marker for the conclusion of asthma [9]. One of the traps in the asthma the board is under-determination of asthma in youngsters [10].

There were studies to decide asthma predominance performed relying upon a normalized global stock called the International Study of Asthma and Allergies in Children [11; in view of these past examinations, there was orderly audits that indicated the mean commonness of asthma in Iran somewhere in the range of 1998 and 2003 was 13% [12].

Asthma predominance in youngsters matured from 2 to 6 years in certain nations including Austria, Belgium, Finland, France, Italy, and Switzerland was accounted for to be under 10%, while it was higher in different nations including Czech Republic (14.7%), Norway (13.6%), Bulgaria [13].

(14.5%), and Ireland (17.4%) . The predominance of asthma was 17% in Kuwait . In Egypt, it was accounted for that asthma commonness was 4.8% in Egyptian newborn children and kids matured under 4 years, from five governorates [14], while predominance in kids was 7.7% in the Nile Delta area of Egypt.

These distinctions in asthma pervasiveness between nations might be credited to the distinction in atmosphere, air contamination, financial status, way of life, introduction to respiratory disease, and fluctuation of allergen levels [15]. The current examination was set up to assess the predominance of asthma in kids.

### 2. Subjects and methods

The aim of the study was to determine the prevalence rate of bronchial asthma in a trial to identify the magnitude of the problem of asthma and to identify some of risk

factors increasing the prevalence of it among preschool children from 2-6years old in Qalubya Governorate using the ISAAC questionnaire, 1000 students were included in this study (475 were males and 525were females).

All students were given a written questionnaire including personal data (name, age, sex, residence), history as regards asthma, complementary questions for risk factors, were taken into consideration as (history of breast feeding, father education, environmental conditions and exposure to tobacco smoke).

The questionnaire was distributed to the KGs children to be completed by their parents at home .

**3. Results**

The aftereffects of this survey among examined kids (1000 youngster) demonstrated that: 164 (16.4%) of contemplated understudies were asthmatics.

Our examination as respects sexual orientation and its connection to youth asthma demonstrated that, the commonness of asthma in male kids was 17.5% and in female youngsters was 15.4% and this distinction was measurably insignificant(P<0.05).

Likewise the investigation found a higher level of quality of bronchial asthma among kids living in urban territories (18.2%) contrasted with youngsters living in rustic regions (14.6%).

As indicated by the seriousness of asthma it has been discovered that the asthmatic understudies were characterized into: Mild discontinuous 87(53.05%) of the complete asthmatic understudies, gentle industrious 59 (35.97%) of the all out asthmatic understudies, moderate tenacious 11 (6.71%) of the absolute asthmatic understudies, extreme tireless 7 (4.27%) of the all out

asthmatic understudies.

Asthma intensifications happened in winter season (68.9%), and (48.2%) of these intensifications prompted by upper respiratory tract diseases.

It was discovered that there is a higher factual increment of family ancestry of atopy among understudies with bronchial asthma (37.97%).and a higher level of asthmatic understudies were presented to natural tobacco smoke (21.7%).

The investigation discovered additionally a higher measurable critical increment of presentation to close by air contamination and creatures among asthmatic understudies (37.5%).

There was a higher measurable noteworthy increment of medical clinic affirmation among understudies with serious and moderate asthma than understudies with gentle asthma.

The investigation found that about (79.9%) of asthmatic understudies didn't take ordinary treatment (controller treatment), which might be because of damaged social insurance and healtheducation.

Our examination speak to that activity initiated asthma (EIA) happens in up to 59.1% of asthmatic understudies. What's more, the examination found a higher level of previous history of counterfeit taking care of among cases with asthma (32.9%) contrasted with understudies without asthma and the thing that matters is measurably profoundly critical.

The sociodemographic attributes of examined understudies indicated that there were a higher level of asthma patients among the center financial gathering (18.9%) contrasted with different gatherings, yet the thing that matters was measurably not noteworthy.

**Table (1)** Answers of participants about six questions.

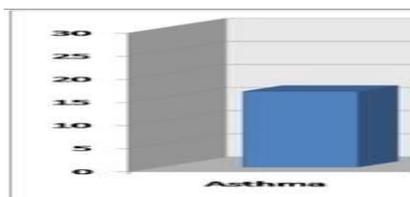
<b>Questions</b>	<b>N (%)</b>
<b>Did your children were disturbed during sleep as a result of breathing problems?</b>	
Yes	134 (86.5%)
No	21 (13.5%)
<b>Do the breathing problems of your children affect their daily and school activities?</b>	
Yes	73 (47.1%)
No	82 (52.9%)
<b>Do your children speak only one or two words between breathing?</b>	
Yes	50 (32.3%)
No	105 (67.7%)
<b>Do you need quick relief drugs to solve the breathing problems of your children?</b>	
Yes	86 (55.5%)
No	69 (44.5%)
<b>Do your children need cortisone administration via mouth to treat breathing problems which other drugs can't do?</b>	
Yes	40 (25.8%)
No	115 (74.2%)
<b>Did your child diagnosed of having bronchial asthma?</b>	

**Table (1) Continue**

Yes	56 (36.1%)
No	99 (63.9%)

**Table (2)** Distribution of asthma among studied students.

Variable	N=1000	%
<b>Asthma</b>		
Yes	164	16.4
No	836	83.6



**Fig (1)** Distribution of asthma among the study group.

prevalence of asthma among studied students was 16.4% .

**Table (3)** Presence of Environmental Factors among the studied students.

Environmental Factors	N=404	%
Animals (cats, doges, farm animals)	178	17.8
Outdoor pollution	130	13
Both	96	9.6

**Table (4)** Distribution of severity of bronchial asthma, hospitalization due to asthma and Exercise induced asthma among asthmatic students.

Variables	N=164	%
<b>Severity of bronchial asthma</b>		
Mild intermittent	87	53.05
Mild persistent	59	35.97
Moderate persistent	11	6.71
Severe persistent	7	4.27
<b>History of hospitalization due to asthma</b>		
Yes	35	21.3
No	129	78.7
<b>Exercise induced asthma</b>		
Yes	97	59.1
No	67	40.9

Severity of asthma is determined according to the symptoms and their frequencies (ISAAC, 1998).

Exercise induced asthma (59.1%) is one of the major

triggering factors of pediatric bronchial asthma exacerbation.

**Comparative data**

**Table (5)** Comparison between prevalence of asthma in male and female children in age group 2-6 years.

Sex	Asthmatics N=164		
	Number	%	Z P value
Malesn=475	83	17.5	0.87 0.39 (NS)
Femalesn=525	81	15.4	

There was no significant statistical difference in the prevalence of asthma between male and female children in age group

2-6 years.

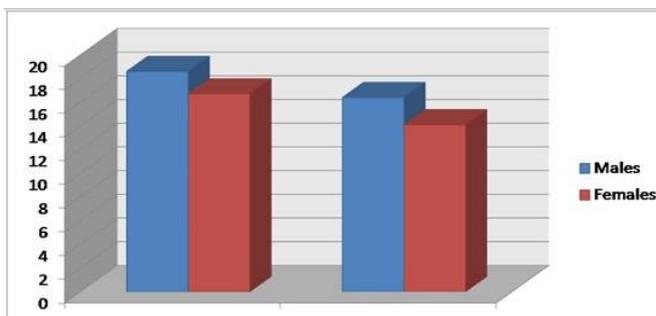


Fig (2) prevalence of asthma according to age and sex.

Table (6) Comparison between residence of students and prevalence of asthma.

Residence		Asthmatics		
		Number	%	Z P value
Urban	n=500	91	18.2	1.54 0.12 (NS)
Rural	n=500	73	14.6	

There was no significant statistical difference between prevalence of asthma in urban and rural areas.

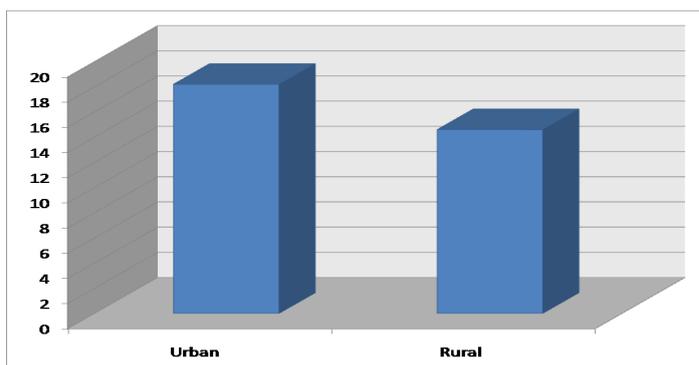


Fig (3) prevalence of asthma according to residence.

There was high significant statistical difference between asthmatic students as regards type of feeding in

the first 6 months of life being more with artificial feeding than Exclusive breast feeding.

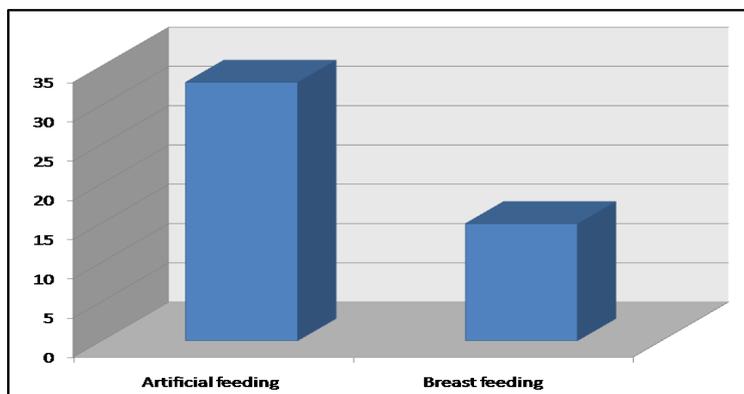


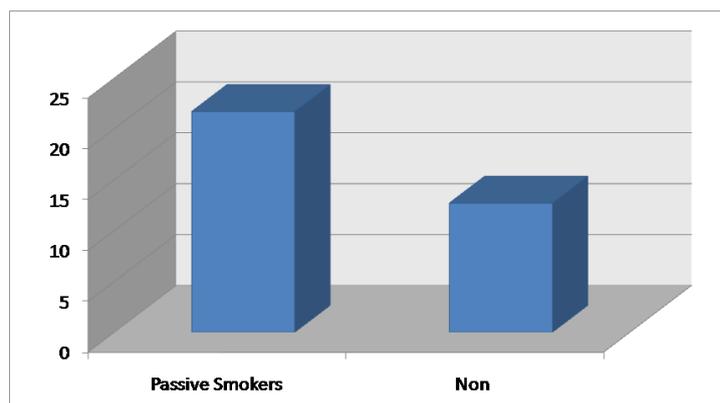
Fig (4) prevalence of asthma according to type of feeding.

**Table (7)** Comparison between prevalence of asthma in children with history of passive smoking and those with no history of passive smoking.

Passive Smokers		Asthmatics N=164			
		Number	%	Z	P value
Yes	N=410	89	21.7	3.78	<0.001 (HS)
No	N=590	75	12.7		

There was high significant statistical difference between prevalence of asthma in passive smokers and non

passive smokers being more in the passive smokers.

**Fig (5)** prevalence of asthma according to passive smoking.**Table (8)** Distribution of asthma in relation to presence of nearby pollution.

Nearby pollution	Asthmatics N=164			
	Number	%	Z	P value
Outdoor pollution n=130	34	26.2	5.5	<0.001 (HS)
Animal n=178	41	23.1	5.1	<0.001 (HS)
Bothn=96	36	37.5	7.8	<0.001 (HS)
Non=596	53	8.9		Reference category

There was high significant statistical difference between prevalence of asthma in who exposed to nearby pollution than non exposed being more in the group exposed to both pollutions.

#### 4. Discussion

Personal satisfaction can be adversely affected because of incessant lack of sleep influencing an individual's capacity to capacity to changing degrees at work or school. Asthma can influence an individual's efficiency because of continuous nonattendances from school or work [16].

It has been recorded that the commonness of pediatric asthma has risen forcefully in the course of recent years in numerous pieces of the world with huge topographical varieties [17].

The current work expected to decide the pervasiveness pace of bronchial asthma among preschool kids in Qalubia Governorate ( KGs youngsters) in a preliminary to recognize the greatness of the issue of asthma and to distinguish some of hazard factors expanding the commonness of them.

This investigation was done in the period from November 2019 up to April 2020. An aggregate of 1000

understudies were enlisted from 4 urban areas (Banha-Touch - k.Shokr-Shubra El-Kheima) and 4 related towns (warwara – mansoura namol-asnite – Om biomy). The understudies were 475 guys and 525 females. Their ages were 2-6 years

A composed survey embraced from ISAAC poll in which various themes were added to accomplish our examination goals and converted into Arabic and appropriated to kids to be finished by the guardians of the understudies .

In our examination, a few elements proposed to be unsafe for activating or disturbing the conditions were contemplated

Our outcomes indicated that commonness of bronchial asthma among (1000) preschool kids matured 2-6 years in Qalubia Governorate was 16.4 % of thestudied understudies.

In Egypt, various investigations attempted to gauge the predominance of asthma among kids . utilized interpreted and adjusted form of the ISAAC poll was disseminated to an example of 2645 younger students matured 6-8 years. They uncovered that wheeze during the most recent year was 14.7% and doctor analyzed asthma was 9.4%.

Furthermore, recommended a relationship between traffic thickness near spots of kids' home and predominance of respiratory ailments and all the more particularly of asthma or hypersensitive rhinitis side effects in them. Incessant introduction during early stages to traffic related poisons may quicken or even incite, among hereditarily delicate subjects, interruption of the ordinary administrative and fix forms in the end adding to the expansion of asthma frequency.

Our investigation found a higher level of asthmatic understudies among those living with creatures inside the house contrasted with those not having creatures in the house and the thing that matters was measurably profoundly critical. 23.1 % of understudies who had creatures inside the house were asthmatics and among the other gathering who didn't have creatures, the rate was 8.9 % (P <0.001).

## 5. Conclusion

Pediatric asthma is considered the most common chronic pediatric chest problem, which has its impact on a child's quality of life.

The results of our questionnaire among studied students (1000 students) showed that: prevalence of bronchial asthma was (16.4%) and 164 of studied students were asthmatics .

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