RESULTS

I-Descriptive Data:

Table (12): Demographic data of the studied students in Elgharbia governorate

Demo-graphic data		N	%
Gender	Male	484	48.4
	Female	516	51.6
Residence	Urban	500	50
	Rural	500	50
Socioeconomic status	High	146	14.6
	Mid	465	46.5
	Low	289	28.9
Age group	6-12 years	500	50
	12-15 years	500	50

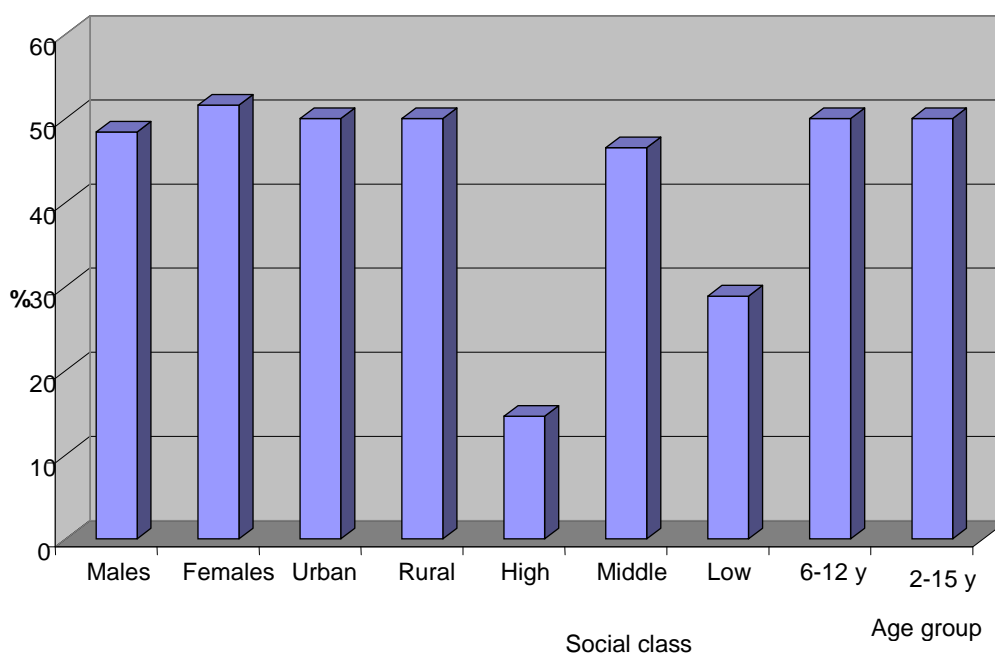**Figure (6):** some sociodemoghaphic data.

Table (13): Distribution of allergic diseases among studied students

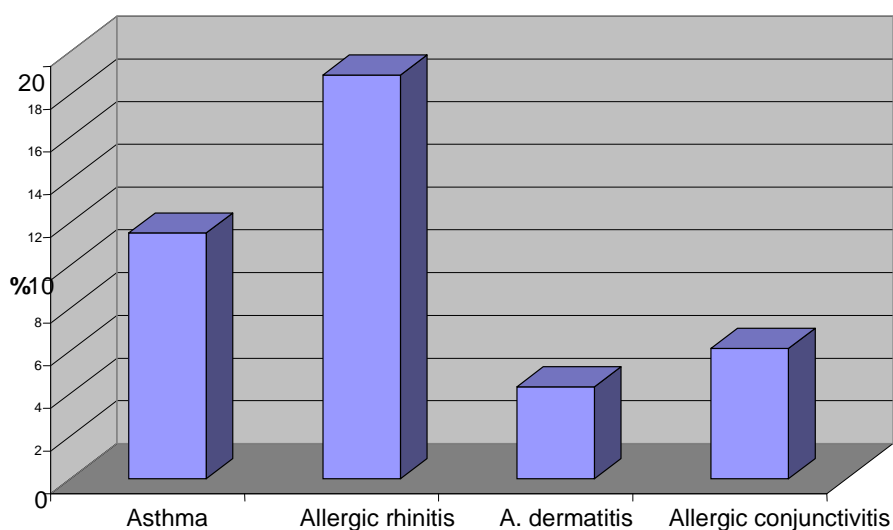| N=1000	Number	%
Asthma		
Yes	115	11.5
No	885	88.5
Allergic Rhinitis		
Yes	189	18.9
No	811	81.1
Atopic Dermatitis		
Yes	43	4.3
No	957	95.7
Allergic Conjunctivitis		
Yes	61	6.1
No	939	93.9

Figure (7): Distribution of allergic diseases among the study group.

Table (14): Presence of Environmental Factors among the studied students

Environmental Factors	N=365	%
Animals (cats, doges, farm animals)	166	16.6
Outdoor pollution	118	11.8
Both	81	8.1

Table (15): Distribution of severity of bronchial asthma, hospitalization due to asthma and Exercise induced asthma among asthmatic students

Variables	N=115	%
Severity of bronchial asthma		
Mild intermittent	59	51.3
Mild persistent	37	32.2
Moderate persistent	10	8.7
Severe persistent	9	7.8
History of hospitalization due to asthma		
Yes	29	25.2
No	86	74.8
Exercise induced asthma		
Yes	66	57.4
No	49	42.6

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

Table (16): Triggers of Asthma.

Triggers	No=115	%
Upper Respiratory Tract Infection	49	42.6
Exercise – induced	15	13.1
Both	51	44.3

Table (17): Distribution of asthma exacerbations in relation to seasonal affection

Seasonal affection	N=115	%
Spring	16	13.9
Summer	8	6.9
Autumn	2	1.7
Winter	71	61.9
More than one season	18	15.6

Table (18): Distribution of asthmatics on asthma medications

Asthma medication	N=115	%
Broncho-dilators. **(During the attack).**	67	58.3
Broncho-dilators and steroids (During the attack).	20	17.4
Prophylactic Mast cell stabilizers (in between attacks).	10	8.7
More than one medication (In between attacks).	18	15.6

II-Comparative Data:

Table (19): Comparison between prevalence of asthma in different age groups (6-12 and 12-15 years)

Age group	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
6-12 years **n=500**	64	12.8	1.66	>0.05
12-15 years **n=500**	51	10.2		

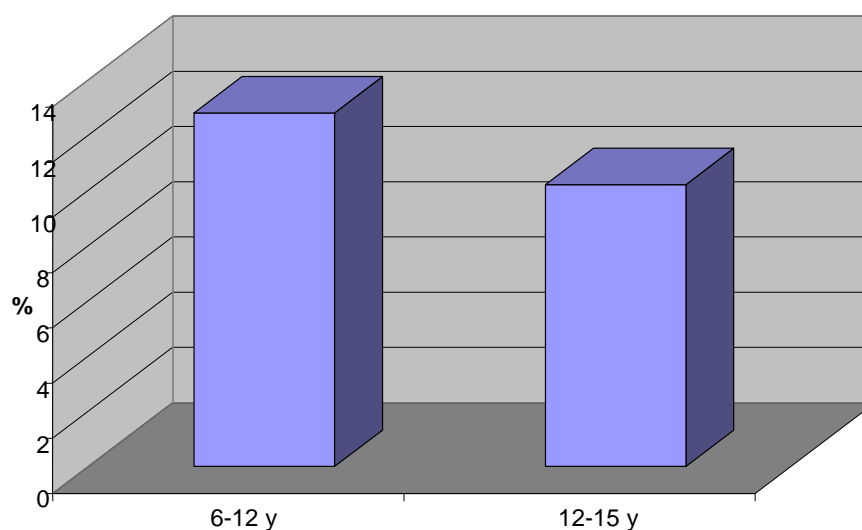There was no significant statistical difference in the prevalence of asthma in age 6-12 and 12-15 years.

Figure (8): Prevalence of asthma according to age group.

Table (20): Comparison between prevalence of asthma in male and female children in age group 6-15 years.

Sex	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
Males n=484	58	11.9	0.439	>0.05
Females n=516	57	11.1		

There was no significant statistical difference in the prevalence of asthma in male and female children in age group 6-15 years.

Table (21): Comparison between prevalence of asthma in male and female children in age group 6-12 years

Sex	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
Males n=227	29	12.7	0.01	>0.05
Females n=273	35	12.8		

There was no significant statistical difference in the prevalence of asthma in male and female children in age group 6-12 year.
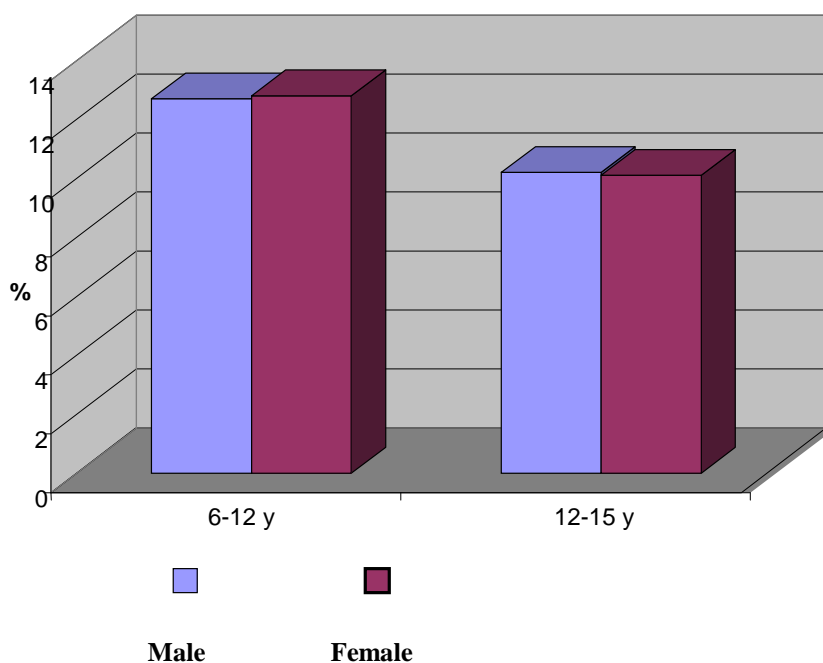
Table (22): Comparison between prevalence of asthma in male and female children in age group 12-15 years

Sex	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
Males **n=284**	29	10.2		
Females **n=216**	22	10.1	0.01	>0.05

There was no significant statistical difference in the prevalence of asthma in male and female children in age group 12-15 years.

Figure (9): prevalence of asthma according to age and sex

Table (23): Comparison between residence of students and prevalence of asthma

Residence		Asthmatics N=115			
		Number	**%**	**Z**	**P value**
Urban	**n=500**	67	13.4		
Rural	**n=500**	48	9.6	1.77	<0.05

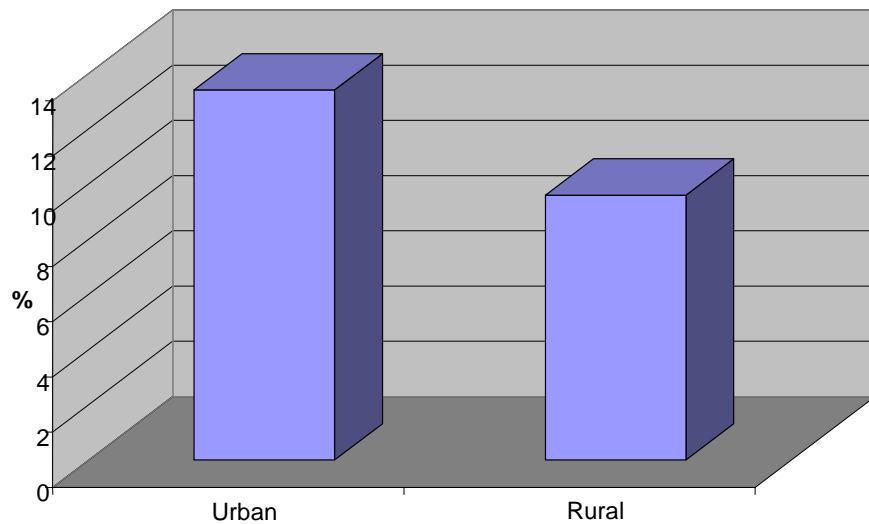There was a significant statistical difference between prevalence of asthma in urban and rural areas.

Figure (10): prevalence of asthma according to residence.

Table (24): Distribution of asthma in relation to Socio-economic status

Socio-Economic status		Asthmatics N=115			
		Number	**%**	**Z**	**P value**
High **N=146**		12	8.2	Z1=2.02	<0.05
Middle **N=465**		71	15.2	Z2=0.88	>0.05
Low **N=289**		32	11.1	Z3=1.52	>0.05

There was no significant statistical difference between prevalence of asthma in different Socio-economic classe**s**

Z1=high vs. middle
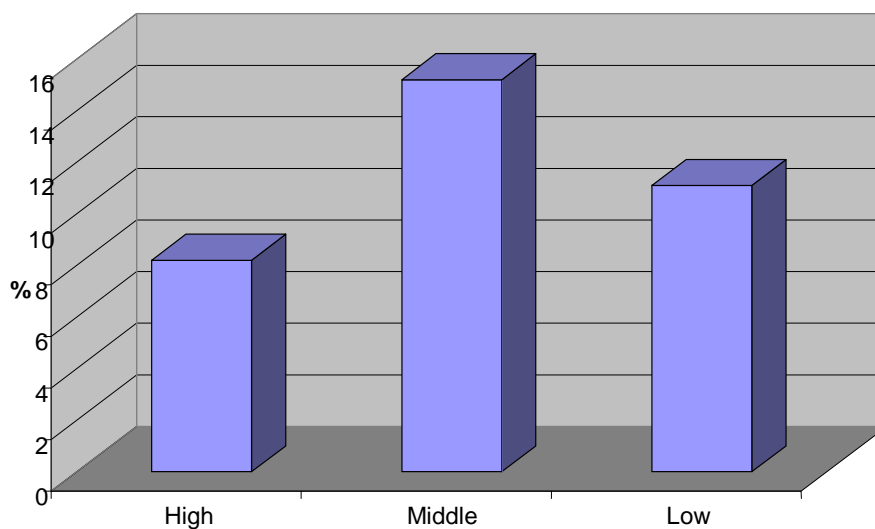
Z2=high vs. low

Z3=middle vs. low

Figure (11): prevalence of asthma according to socioeconomic status

Table (25): Distribution of asthma in relation to type of feeding in the first 6 months of life

Type of feeding	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
Artificial feeding **n= 65**	13	20		
Exclusive breast feeding **n = 935**	102	10.9	2.09	<0.05

There was a significant statistical difference between asthmatic students as regards type of feeding in the first 6 months of life being more in artificial feeding.
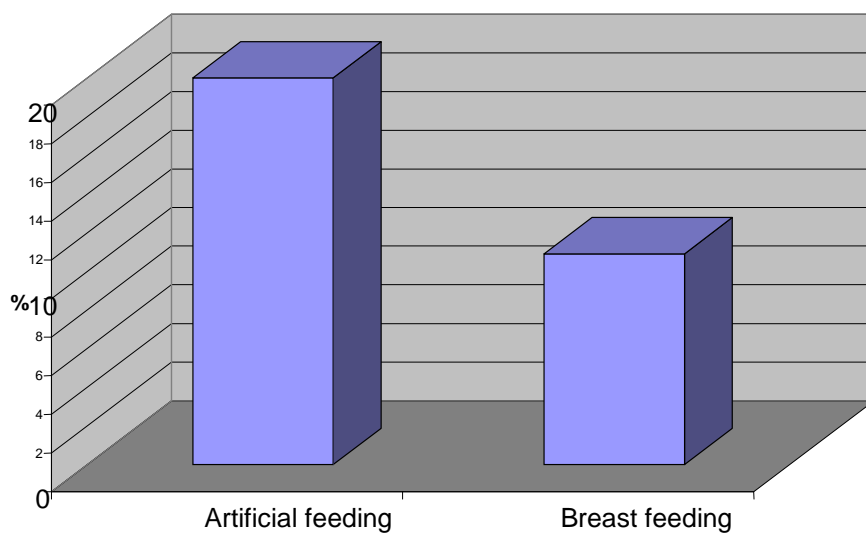

Figure (12): prevalence of asthma according to type of feeding.

Table (26): Comparison between prevalence of asthma in children with history of passive smoking and those with no history of passive smoking

Passive Smokers	Asthmatics N=115			
	Number	%	Z	P value
Yes N= 340	57	16.8		
No N= 660	58	8.8	3.52	<0.001

There was high significant statistical difference between prevalence of asthma in passive smokers and non passive smokers being more in the passive smokers.
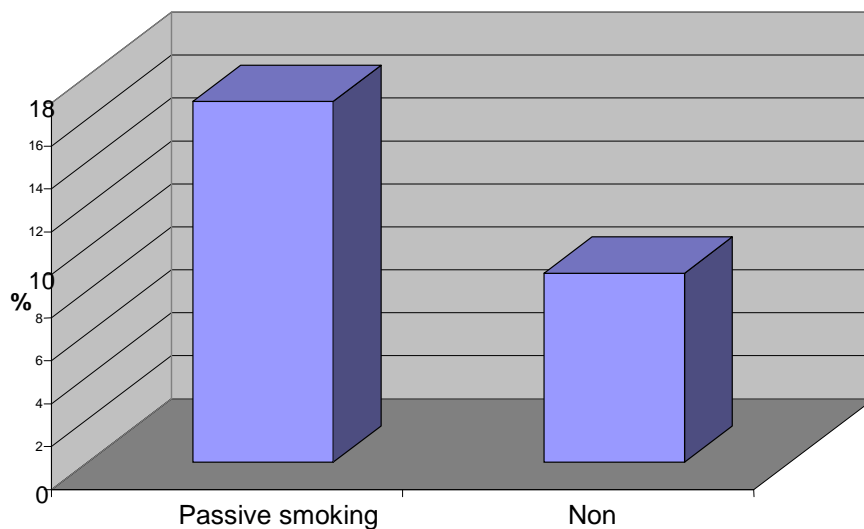

Figure (13): prevalence of asthma according to passive smoking.

Table (27): Distribution of asthma in relation to presence of nearby pollution

Nearby pollution	Asthmatics N=115			
	Number	**%**	**Z**	**P value**
Outdoor pollution n=118	20	16.9	Z1=3.85	<0.001
Animal n=166	30	18.1	Z2=4.66	<0.001
Both n=81	26	32.1	Z3=7.3	<0.001
No n=635	39	6.1		

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.

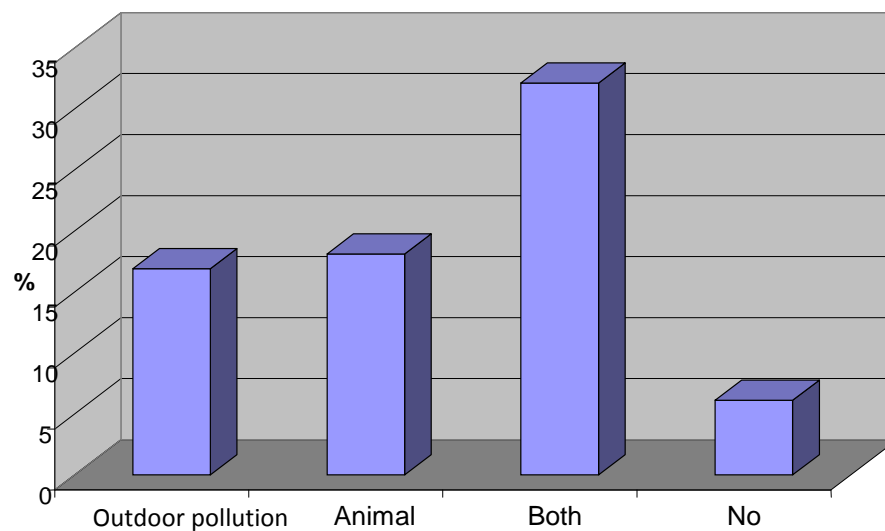Z1= No. vs. Outdoor pollution   Z2= No. vs. Animal   Z3=No. vs. B

Figure (14): prevalence of asthma according to presence of pollution.

Table (28): Distribution of asthma in relation to family history of atopy

Family history		Asthmatics N=115			
		Number	**%**	**Z**	P value
Yes	n=171	60	35.1		
No	n=829	55	6.6	9.99	<0.001

There was high significant statistical difference between prevalence of asthma in whom with family history of atopy and the others with no family history.
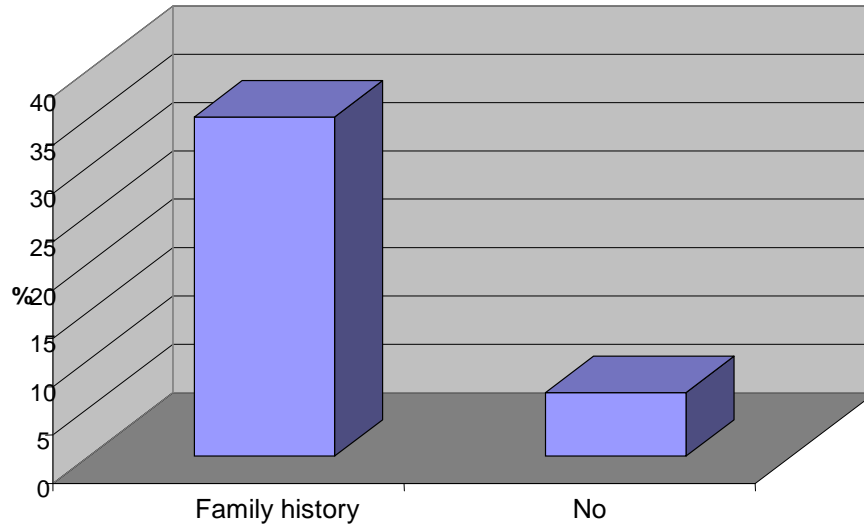

Figure (15): prevalence of asthma according to family history.

Table (29): Comparison between severity of asthma and hospitalization due to asthma

Severity of Asthma		Hospitalization			
		Number	%	Z	P value
Mild Intermittent	n= 59	2	3.4		
Mild Persistent	n= 37	10	27	Z1=3.9	<0.001
Moderate Persistent	n= 10	8	80	Z2=5.88	<0.001
Severe Persistent	n= 9	9	100	Z3=6.71	<0.001
Total	n= 115	29	25.2		

There was higher percentage of hospitalization among students with severe and moderate asthma compared to mild cases and the difference was highly significant.

Z1=Mild intermittent vs. Mild persistent   Z2= Mild intermittent vs. Moderate persistent

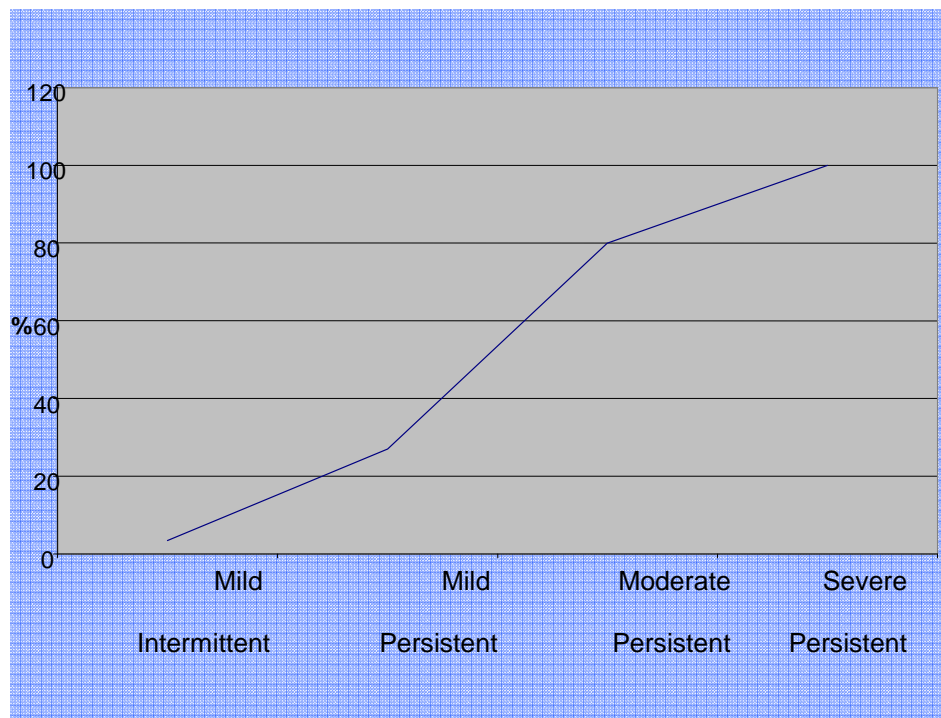Z3= Mild intermittent vs. Severe persistent

Figure (16): severity of asthma and hospitalization**.**

Table (30): Comparison between prevalence of asthma in children with and without other atopies

	Non Asthmatic		Asthmatic		Chi	P Value
	No	**%**	**No**	**%**	**Square**	
Allergic Rhinitis						
Yes	127	14.4	62	53.9	103.93	<0.001
No	758	85.6	53	46.1		
Atopic Dermatitis						
Yes	30	3.4	13	11.3		
No	855	96.6	102	88.7	15.49	<0.001
Allergic Conjunctivitis						
Yes	44	4.9	17	14.8		
No	841	95.1	98	85.2	17.1	<0.001

There was high significant statistical difference between prevalence of asthma in children with and without other atopies.

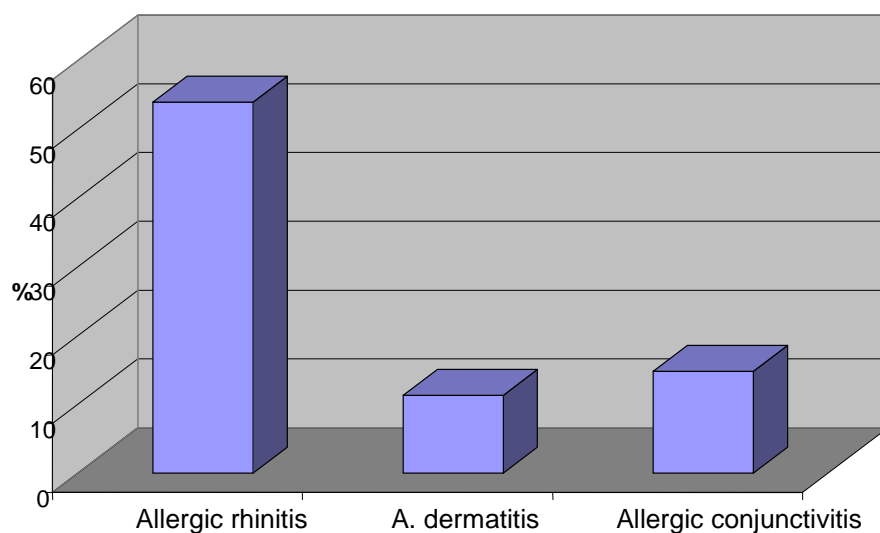**Figure (17):** prevalence of asthma according to other atopies.

Table (31): Comparison between residence of students and presence of allergic rhinitis

Residence	Allergic rhinitis N=189			
	Number	%	Z	P value
Urban **n=500**	103	20.6		
Rural **n=500**	86	17.2	1.24	>0.05

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

Table (32): Distribution of allergic rhinitis in relation to family history of atopy

Family history	Allergic rhinitis N=189			
	Number	%	Z	P value
Yes n=**171**	64	37.4		
No n=**829**	125	15.1	1.44	<0.001

There was high significant statistical difference between prevalence of allergic rhinitis in children with and without family history of atopy being more in children with family history.

Table (33): Comparison between residence of students and presence of atopic dermatitis

Residence	atopic dermatitis N=43			
	Number	%	Z	P value
Urban n=500	14	2.8		
Rural n=500	29	5.8	2.29	<0.05

There was a significant statistical difference between prevalence of atopic dermatitis in urban and rural areas.

Table (34): Distribution of atopic dermatitis in relation to family history of atopy

Family history	Atopic dermatitis N=43			
	Number	%	Z	P value
Yes n=171	15	8.8		
No n=829	28	3.4	3.1	<0.01

There was high significant statistical difference between prevalence of atopic dermatitis in children with and without family history of atopy being more in those with family history of atopy.

**Table (35):** Comparison between residence of students and presence of allergic conjunctivitis

Residence	Allergic conjunctivitis N=61			
	Number	%	Z	P value
Urban n=500	33	8.8	0.64	>0.05
Rural n=500	28	5.6		

There was no significant statistical difference in prevalence of allergic conjunctivitis as regard the residence.

Table (36): Distribution of allergic conjunctivitis in relation to family history of atopy

Family history of atopy	Allergic conjunctivitis N=61			
	Number	%	Z	P value
Yes n= 171	23	13.5	4.27	<0.001
No n= 829	38	4.6		

There was high significant statistical difference between prevalence of allergic conjunctivitis in children with and without family history of atopy being more in those with family history.
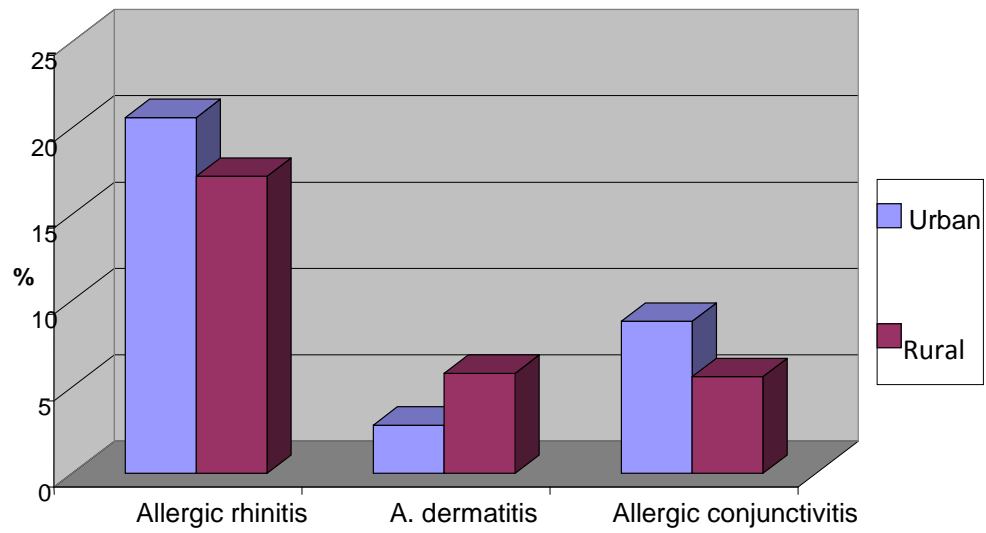
Figure(18): prevalence of other allergic diseases according to residence.
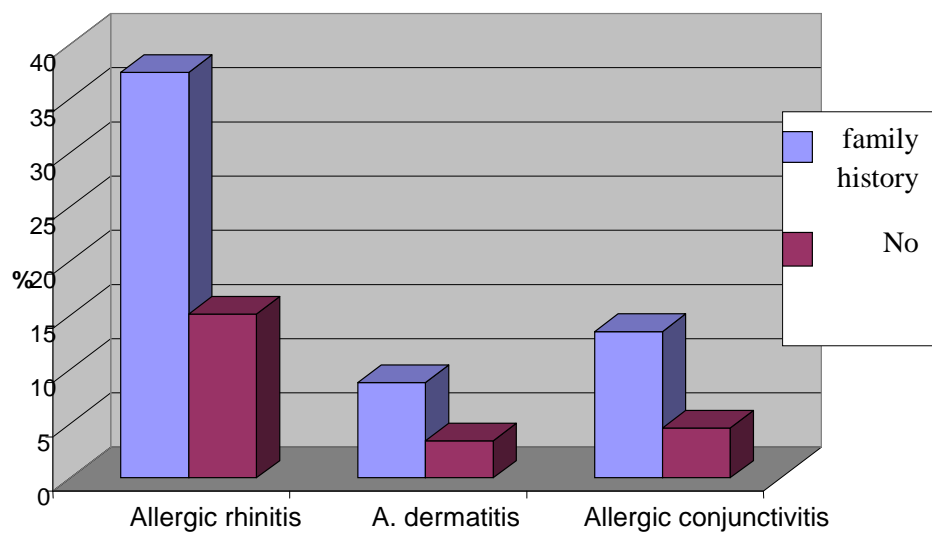

Figure (19): prevalence of other allergic diseases according to family history.