RESULTS:

Table (1) Distribution of the Study Sample by Their Socio-Demographic Characteristics.

Variable	Items	Frequency	Percent
Residence	Urban	155	77.1
	Rural	46	22.9
Gender	Male	131	65.2
	Female	70	34.8
Age	<= 33	98	48.8
	34 - 49	88	43.8
	50+	15	7.5
Fathers' education	Illiterate	19	9.5
	read and write	51	25.4
	Primary school	28	13.9
	Secondary	44	21.9
	Junior	55	27.4
	College	4	2.0
Mothers' education	Illiterate	22	10.9
	read and writer	58	28.9
	Primary school	44	21.9
	Secondary	39	19.4
	Junior	37	18.4
	College	1	0.5
Fathers' occupation	Employee	56	27.9
	free business	130	64.7
	Retired	7	3.5
	Unemployed	8	4.0
Mothers' occupation	Employee	21	10.4
	free business	3	1.5
	Retired	3	1.5
	Housewife	173	86.1
Number of family in a house	<= 2	34	16.9
	3 - 5	76	37.8
	6 - 7	64	31.8
	8+	27	13.4
Number of rooms in a house	<= 1	5	2.5
	2 - 3	137	68.2
	4 - 6	51	25.4
	7+	8	4.0
Ownership of residential unit	House rent	166	82.6
	Common House	27	13.4
	Other	8	4.0
Family income	Sufficient	90	44.8
	Barely sufficient	102	50.7
	Insufficient	9	4.5

Table (1) revealed that, majority of 201 parents were enrolled in this study, had age less or equal to 33 years, furthermore, males were the dominant represented 65.2% of the studied group compared to 70 female parents (34.8%). Majority of the participants (77.1%), were urban residents. Regarding the educational level of the fathers, the majority of the them ranged from secondary to Junior high school, while about a quarter of fathers were only reading and writing. However, for mothers, the level of education ranged from Primary to Secondary and Junior, but about a third of them (29%) were reading and writing, which is higher comparing to the fathers percentage that is (25%). Concerning the fathers' occupation, majority of them were practicing free businesses (64.7%), while (86.1%) of mothers' were housewives (without job). Approximately (51%) of the participants had a barely sufficient monthly income, while 90 (44.8%) had sufficient monthly income.

Table (2) Information related to the parents' knowledge regarding asthma.

No	1st Domain: general information about asthma.	Mean	Assessment
1.	Asthma considered as a non-curable disease	1.37	Poor
2.	Asthma is an inflammation that leads to a total or partial blockage in the airways	1.38	Poor
3.	Asthma is not considered as a contagious disease	1.56	Poor
4.	Asthma is a hereditary disease that occur in children and cannot happen in adults	1.13	Poor
5.	Occurrence of asthma during childhood does not mean that the it will continue through lifetime	1.04	Poor
6.	Asthma is not necessarily an allergic disease	1.21	Poor
	2nd Domain: the mechanism of asthma occurrence.	Mean	Assessment
7.	Inflammation causes severe stenosis in the trachea.	1.67	Fair
8.	Immune reactions in airways resulting from exposure to stimulants.	1.12	Poor
9.	An asthma attack does not cause difficulty in the airflow within the bronchi.	1.31	Poor
10	The mucous secretions in the chest are increasing during the asthma attack.	1.54	Poor
	3rd Domain: signs and symptoms of asthma	Mean	Assessment
11.	Wheezing occurs in asthma patients when breathing.	1.77	Fair
12	Most of the time, asthma patients suffering from the cough.	1.67	Fair
13.	The occurrence of asthma attacks at night is more common than day.	1.77	Fair
14.	The asthmatic child suffers from breathing difficulties during exercise only.	1.12	Poor
15.	Feeling of chest tightness considered a symptom for asthma.	1.39	Poor
16.	Occurrence of frequent coughs and wheezing during a day or week are a possible sign of asthma.	1.19	Poor
	4th Domain: factors that aggravate asthma.	Mean	Assessment
17.	Colds affect asthma patients.	1.75	Fair
18.	Weather change affects asthma patients.	1.82	Fair
19.	The odor of insecticides affects asthma patients.	1.78	Fair
20.	The dust increases the asthma attacks.	1.89	Fair
21.	Smoking is linked to asthma disease.	1.71	Fair
22	Exercise affects asthma patients.	1.36	Poor
23	Anxiety affects asthma patients.	1.13	Poor
24	Insects' bite is a potential cause for asthma.	0.85	Poor
	5th Domain: complications of asthma.	Mean	Assessment
25	Asthma causes sleep disorders.	1.72	Fair
26	An acute asthma attack leads to sudden death.	1.18	Poor
27	Acute asthma leads to the inability to work and walking.	1.46	Poor

28	Asthma may leads to heart failure.	0.74	Poor
29	Asthma affects the growth and development of the child.	1.08	Poor
30	Asthma disease may leads to sinusitis.	1.24	Poor
31	Long-term use of asthma medication for children will cause a decline in their stature.	0.84	Poor
	6th Domain: treatment of asthma.	Mean	Assessment
32	Asthma treatments are divided into fast acting (short-term) and long-term drugs.	1.31	Poor
33	Bronchial heat treatment is a treating method for acute asthma.	0.97	Poor
34	Herbal remedy is an alternative to the use of asthma medications.	0.94	Poor
	7th Domain: first aid regarding asthma.	Mean	Assessment
35	Transferring asthma patient to the nearest health institution regardless severity of the condition.	1	Poor
36	Helping the child to take four puffs of his treatment sprayer with a 4-breath break for each puff.	1.34	Poor
37	Sitting straight will relieve an asthma attack.	1.62	Poor
38	Opening windows and ventilating the environment is useful for asthma.	1.80	Fair
39	Giving warm fluids positively affects asthma patients.	1.67	Fair
40	The slapping on the back helps to breathe during an asthma attack.	0.91	Poor

This table reveals that <=1.66 indicates poor knowledge, 1.67-2.33 indicates fair knowledge and <=2.34 indicates good knowledge.

TABLE (2) shows parents' responses to the questions about asthma, which categorized into seven domains. However, participants' responses ranged between poor and fair, while none of the questions had good response. Generally, mainstream of questions regarding asthma had poor assessment.

Table (3) Assessment of parents' overall knowledge about asthma.

Overall Assessment of Parents' Knowledge Regarding Asthma		
Assessment	Frequency	Percent
Good knowledge	0	0
Fair knowledge	14	7.0
Poor knowledge	187	93.0
Total	201	100.0

Mean ± SD 1.359 ± 0.239

This table revealed the overall responses of parents regarding asthma knowledge, which was poor with total mean score of (1.359), additionally, only (7%) of parents had fair knowledge , while (93%) of them had poor knowledge.

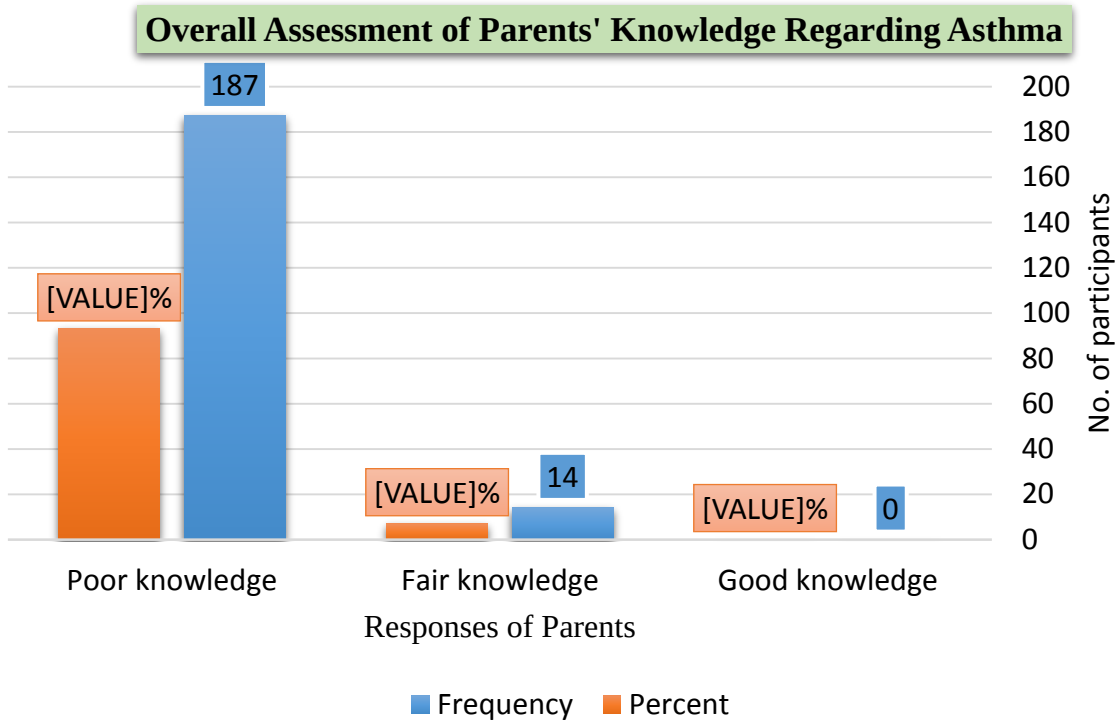

Figure (1): distribution of parents' knowledge according to their overall responses.

This figure expresses parents' responses that fluctuated between poor and fair, while no one of them had good knowledge about asthma. Which total mean score of poor knowledge was (1.359), additionally, only (7%) of parents had fair knowledge , while (93%) of them had poor knowledge

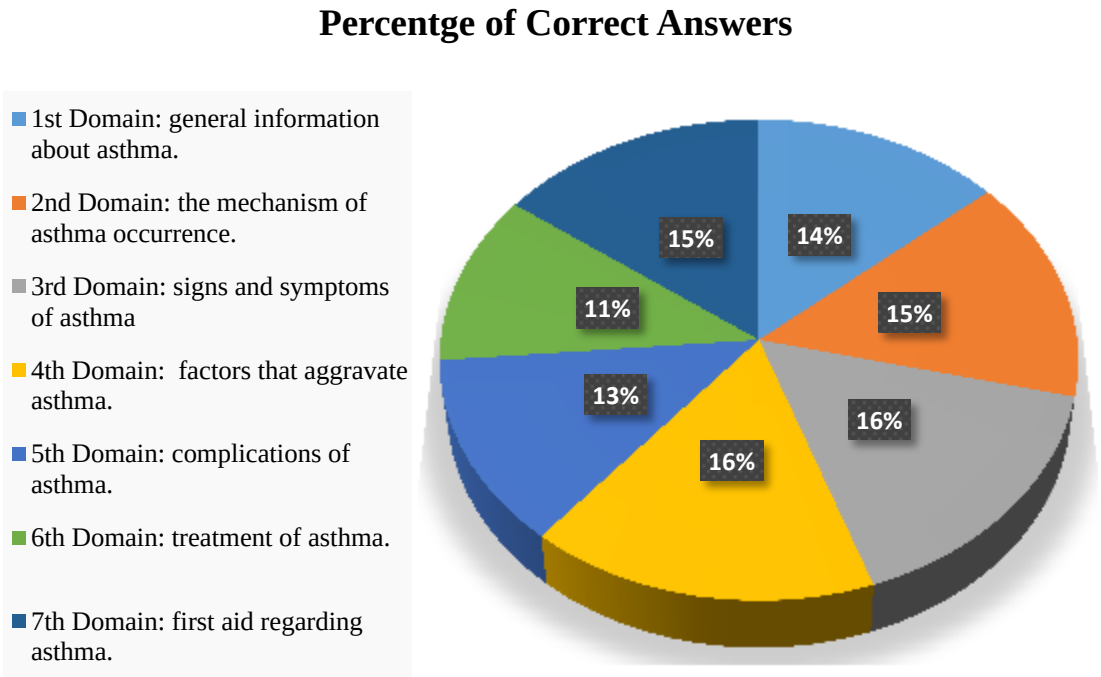

Figure (2): distribution of correct answers according to domains regarding asthma.

Figure (2) revealed that the highest percentage for correct answers were in the 3rd and 4th domains about (16%) for each, and followed by 2nd and 5th domains approximately (15%) for each, while the lowest response was in sixth domain.

Table (4) Relationship between Socio-Demographic characteristic of parents and Overall knowledge concerning Asthma.

Socio-Demographic Characteristics	Items	Asthma knowledge		Sig.
		Fair	Poor	
Residence	Urban	9	146	p-value (0.236) d.f = 1 NS
	Rural	5	41	
Gander	Male	7	124	p-value (0.217) d.f = 1 NS
	Female	7	63	
Age	<= 33	8	90	p-value (0.511) d.f = 2 NS
	34 - 49	6	82	
	50+	0	15	
Father's education	Illiterate	0	19	p-value (0.792) d.f = 5 NS
	read and writer	4	47	
	Primary school	3	25	
	Secondary	3	41	
	Junior	4	51	
	College	0	4	
Mothers education	Illiterate	1	21	p-value (0.896) d.f = 5 NS
	read and writer	6	52	
	Primary school	3	41	
	Secondary	2	37	
	Junior	2	35	
	College	0	1	
Family income	Sufficient	4	86	p-value (0.244) d.f = 2 NS
	Barely sufficient	10	92	
	Insufficient	0	9	

Table (4) revealed that there was no significant relationship between parents' knowledge regarding asthma and their socio-demographic characteristics.

DISSCUSSION:

The current study included (201) Iraqi parents, majority of them were in age below (50) years of age, whereas, the males constituted about two third of study sample and female constituted approximately one third of parents participated in the study. These findings is consistent with Indian study done in 2016 by Gajanan and others, and found that the proportion of male parents were slightly higher than female parents which is almost similar to the present study (Gajanan et al., 2016). Regarding the residency about four fifth of respondents were urban residence which is obviously can be attributed to applying the study inside the Al-Najaf City not in its country. Likewise, concerning mothers and fathers educational level, majority of them had an educational level that ranged from primary school reaching to Junior high school. This outcome closely approved with another Indian research done in 2005 by Shivba-

lan and others, and found that the educational level of highest proportion of parents varied from just reading and writing until reaching high school while small proportion of them were illiterate as the findings of the current study (Shivbalan et al., 2005).

With regard to the fathers and mothers occupation, the result revealed that majority of fathers worked in free businesses and overwhelming number of mother were housewives. Saudi Arabian study conducted in 2014 by BinSaeed disagreed with existing work, which found that around sixty percent of mothers were employed (A. A. BinSaeed, 2014).

With respect to the monthly income, the present work revealed that more than half of parents enrolled in the study had barely sufficient monthly income that is steady with findings of BinSaeed et al., in 2014 which found that more than half of parents had insufficient to barely sufficient monthly income (A. a BinSaeed et al., 2014).

Concerning parents' knowledge about asthma, it found very unsatisfactory which triggers the alarm and draws attention. Parents had overall poor knowledge regarding asthma with Mean ± SD of (1.359 ± 0.239), whereas the percentage for poor knowledge among parents was (93%) and for fair knowledge was (7%), with taking into consideration that there was no good assessment for responses to any question or domains of asthma knowledge. However, Zhao et al., the Chinese researchers in 2013 had similar findings where parents exhibited a low level of asthma-related knowledge, which almost (18.31%) of them succeeded in responding correctly to (≥ 60%) of the asthma knowledge questions (J. Zhao et al., 2013). Conversely, Ramesh et al., in 2014 had different results, where approximately three fifths of study sample possessed moderate knowledge, while about 30% had poor knowledge, and little minority gained good assessment regarding asthma knowledge (Ramesh et al., 2014).

Totally, from current study researchers point of view the included Iraqi parent in the study had poor knowledge due to noticed paucity in studies regarding such subjects in Iraq, as well as, due to absence of adopting official programs by in relation to asthma or other serious chronic conditions that helps in educating parents and community in front of uprising health problems in our today world.

Regarding Relationship between Parents' Knowledge about Asthma and Their Socio-Demographic Characteristics: The outcome of current study showed that the socio-demographic characteristic of parents had no significant relationship with their level of knowledge about asthma. However, these results are similar to the findings of Amin et al., and Ramesh et al., studies that done in 2014, which they revealed that there was no statistically significant association between levels of parents' knowledge about asthma and their socio demographic characteristics (Amin et al., 2014; Ramesh et al., 2014).

Another study done in 2007 by Prapphal et al., revealed that the duration of parents caring for their asthmatic child was the only significant factor associated with adequate knowledge about asthma (Prapphal et al., 2007). From current study researchers' point of view, this might be related to the fact that parents due to long duration of dealing with their asthmatic child would gain more knowledge and expertise which raising their level of awareness and knowledge about asthma more than parents with recently child diagnosed with asthma.

Conclusions and recommendations:

The vast majority of parents had overall poor knowledge regarding asthma (93%) which is very unsatisfactory, while no one had good knowledge about asthma. In addition, no significant association was found between parents knowledge about asthma and their socio demographic characteristics. Researcher recommended that further studies should be applied with larger samples, in order to get data that are more reliable concerning current subject and the establishment of educational meetings or training courses regarding asthma and other chronic diseases first aid for parents would be helpful. Besides educating parents, the effort must be directed toward educating children who are eligible for learning (at proper age). Likewise, using Mass Media and TV or at least educational posters and leaflets, for purpose of health education and raising awareness of individuals, families and community toward health issues.

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