Sci. J. Nursing/ Baghdad, Vol: 18,No.2, 2005.

Assessment of Asthmatic Patients' Quality Of Life in Jordan

Fadel Hazza' Ali al-Mahameed.*
Dr. Samira A. Gorgies / Assistant Professor**

الخلاصة:

دراسة وصفية أجريت في مستشفى البشير التعليمي في مدينة عمان ، للفترة الواقعة من الخامس عشر من ايار لعام ٢٠٠٤ ولغاية الخامس عشر من اب لعام ٢٠٠٤،

الهدف : تقييم نوعية حياة المرضى البالغين المصابين بالربو في الأردن، وتهدف ايضا للتعرف على المؤشرات والجوانب البيئية ، الجسمية، النشاطات اليومية، الأدوية والعلاجات، النفسية،و الاجتماعية.و علاقتها وأثرها ببعض المتغيرات الديموغرافية والاجتماعية الاقتصادية الخاصة بهؤلاء المرضى.

المنهجية : اختيرت عينة للدراسة غرضيه (غير احتمالية) من مائة (١٠٠) مريض بالغ مصاب بالربو ،و الذين يراجعون قسم الإسعاف والطوارئ،و العيادات الخارجية لقسم الصدرية في مستشفى البشير. تم بناء استمارة استبيانيه لغرض الدراسة والتي تكونت من جزأين واحتوت على (١٠٨) فقرة شملت ١-استمارة البيانات الديموغرافية، ٢- الاستمارة الخاصة بتقييم نوعيّة حياة المرضى البالغين المصابين بالربو. جمعت معلومات الدراسة بواسطة الباحث وبمقابلة مرضى الربو و ملئ الاستمارة الاستبانية. تم تحديد ثبات وصدق المحتوى الداخلي للاستمارة الاستبانية (الدراسة الاستطلاعية) من خلال الدراسة التجريبية،و أما المصداقية فحددت بواسطة مجموعة من الخبراء. تم تحليل البيانات من خلال تطبيق التحليل الإحصائي الوصفي (النسبة المئوية ، التكرارات ،و الوسط الحسابي للقيم) و التحليل الإحصائي الاستنتاجي (معامل الارتباط بيرسون ، والاختبار التائي ،و تحليل التباين الأحادي - ANOVA) .

النتائج : أشارت نتائج الدراسة الى ان نوعية الحياة لهؤلاء الاشخاص المرضى قد تأثرت بشكل بالغ ومن خلال فقرات الجهاز التنفسي والجهاز القلبي الدوراني كجزء من المؤشر الجسمي وأيضاً المؤشر النفسي والاجتماعي.

التوصيات :أوصت الدراسة بضرورة تعاون وزارة الصحة الأردنية بتجهيز أو بناء مركز في أقسام الصدرية أو في المستشفيات التابعة لها يعنى ويزود مرضى الربو بالمعلومات حول المرض ، وكذلك إعداد وتنفيذ برنامج تثقيفي لهؤلاء المرضى ، لغرض حصولهم على المعلومات اللازمة عن المرض وأعراضه ومضاعفاته وكيفية التعامل أثناء الحالات الطارئة ، مما ينمي ويقوي معتقداتهم وممارستهم الإيجابية ويرسخ المعلومات الصحيحة عن المرض .

Abstract

A descriptive study was conducted in Al-Bashir teaching hospital in Amman city from 15th May 2004 to 15th August 2004 , in order to "Assess the adult asthmatic patients' quality of life (QOL).

Objective: This study aimed at identifying the domains of (Environmental, Physical, Daily Living Activity, Drug and Medication, Psychological , and Social),

Methodology : A Purposive (Non-Probability) sample of (100) adult asthmatic patients visited the emergency department and outpatient clinic of chest department in Al-bashir hospital .A Questionnaire was constructed for the purpose of the study, and comprised of (2) parts, consist of (108) items, that include (1) demographic characteristics form,(2) the assessment of adult asthmatic patients' QOL domains. Reliability and validity of the questionnaire was determined through internal consistency through a pilot study, content validity of the questionnaire was determined through panel of experts .

Data was collected by the investigator who interviewed those patients and filled out the constructed questionnaire forms. Data analysis by using (Percentage, Frequencies, Mean of scores) and inferential statistical analysis [Pearson correlation, T-Test, One way analysis of variance (ANOVA)].

Results : The findings of the study indicated that the quality of life for patients had greatly effected during the items, respiratory system cardio vascular system as a part of physical domains, also psychology domains and social domains.

Recommendations : The study recommended that the Jordan Ministry of Health would be helpful in providing, building or developing the places and centers of chest departments or it's hospitals that provide care, also an educational program to be developed, and implemented for adult asthmatic patients in order to increase their actual knowledge .

Key words : Adult Asthmatic, Quality of life

Introduction

* RN, MSN.
** University of Baghdad / College of Nursing .

Asthma is a disease with physical symptoms that can impair a patient's functioning to the point of interfering with school, work, and social activities, as well as causing frustration and anxiety (4,7) . The asthma is a major chronic disease affecting (155 million) people of all ages worldwide. Also reported in annals that asthma represents an increasing health burden for the countries of Mediterranean region, and in Egypt the number denotes that increasing in number(15) .

Quality Of Life (QOL) studies are an essential complement to medical evaluation. QOL is a multi-faceted concept, which encompasses crucial areas such as physical health, psychological well being, social relationships, economic circumstances, personal beliefs and their relationships to salient features of the environment (11,15)

Nurse who work with adult patients with asthma have an important role play to how dealing with, detect the problems, needs and how to improve their (QOL), through acknowledgment, through skills, attitude practicing and well understanding about life with asthma (13) .

There is a lack of accurate data on the epidemiology of asthma in Jordan, although is known to be a common cause of admission to hospital, in addition to lack of (QOL) instruments in Arabic. Also not found any study in Jordan about my subject denotes about the importance of the study. This study provides information about the problem itself, and discusses (QOL) of adult asthmatic patients in Jordan, to improve the Health status of those patients.

The objectives of the study to assess the adult QOL (Environmental, Physical, Daily Living Activity, Drug and Medication, Psychological, and Social) domains for adult asthmatic patients in Jordan. to find out the relationship between asthmatic patients' QOL and their demographically characteristics of (gender, Age, level of education).

Methodology

A descriptive study, using the assessment technique was conducted on chest and respiratory outpatient clinic and emergency department at Al– Bashir Hospital in Jordan.

Non- probability (purposive) sample of (100) adult patients, (57) females and (43) males with asthma, during the period from 15th May, 2004 to 15th August, 2004, this patients were chosen according to following criteria: a. Patient who is diagnosed well (definitely) as asthmatic patient.

b. Adult patients whose is ages ranged from (21 – 65) years old.

c. Adult patient who is not having any other chronic diseases.

d. Patients who were able to speak, read and write Arabic.

e. Patients who agreed to participate in this study.

Questionnaire was developed by the investigator for the purpose of the study. Items formulation was based upon the investigator experience and extensive review of related literature and studies.

The study instruments consist of total (108) items, which are distributed through the following: - The developed questionnaire consists of (2) parts : appendix (A)

Part I: Demographic data form:

Part II: Assessment of Adult Asthmatic Patients' Quality Of Life Domains which were developed from Holland quality of life : The second part is concerned with (6) of QOL domains, Which are measured on (3) levels of Likert rating scale,

always (3), sometimes (2), never (1) cut of point (2). Except the environmental domain, these is measured on (2) levels rating scale, Yes (2), No (1). cut of point was (1.5). Environmental domain form: This part of questionnaire consist of (2) sections: House environment and Occupational environment .

2 - Physical domains form: It consists of (4) sections. Which are:

Respiratory system, Cardiovascular system and Gastrointestinal system .

3-Daily activity living domains:

4-Drug and medication domains:

5- psychological domains: It consist of (3) sections which are:

Anxiety and Depression.

6- Social domains.

Validity of the questionnaire was determined through the use of panel of (18) experts. Internal consistency reliability was employed to determine the questionnaire reliability, Alpha-Chronbach correlation coefficient was computed, indicated that the correlation coefficient for QOL domains for adult asthmatic patients were (r = 0,87) for environmental domains,(r = 0.86) for physical domains scale, (r = 0.87) for Daily living activity domains, (r = 0.80) for Drug and medication domains, (r = 0.85) for psychological domains, and (r = 0.80) for Social domains, and (r = 0.89) for total (QOL)domains for adult asthmatic patients. Such estimation was statistically adequate.

Data was collected from May 15th, 2004 to August 15th, 2004, through the use of constructed questionnaire, and interview techniques as means of data collection process. Each interview with each patient took approximately (20-25) min. to respond to fill the questionnaire.

Two statistical analysis approaches application: descriptive statistical that include: frequencies, percentages, Mean of score, standard deviation and inferential data analysis include:

Pearson's Correlation Matrix (coefficient) (r-test). And One way analysis of variance (ANOVA).

Results

Table (1) Distribution of Adult Asthmatic Patients Demographic Characteristics

Demographic Characteristics		Frequency & Percentage
Gender.	Male	43
	Female	57
	Total	100
Age.	21-25 Year	19
	26-30 Year	13
	31-35 Year	4
	36-40 Year	10
	41-45 Year	15
	46-50 Year	5
	51-55 Year	9
	56-60 Year	9
	61-65 Year	16
	Total.	100
Level of Education.	Read and Write.	4
	(Primery).	4
	Intermediate School.	31
	Secondary School.	18
	Institute / Diploma.	27
	University/ Bachelor.	11
	Higher education.	5
	Total.	100
Marital Status.	Single.	24
	Married.	٦١
	Divorced.	١٠
	Widowed.	٥
	Total.	١٠٠
Occupational status.	Govt. Employee.	٣٣
	private.	٢٤
	Un employed.	٢٣
	Retired.	٦
	House wife.	١٤
	Total.	١٠٠

This table indicated that the majority of the study sample were female (57%) while the remaining (43%) were male and indicated that (19%) of the patient were (21-25) years old, the mean of age was (44), related to their educational status, the greater number of them was intermediate graduates and they accounted for (31%) of the sample, in regard to the subject marital status, the majority of the sample were married and they accounted for (61%) of the whole sample. With respect to their occupational status which accounted for (33%), most of them were governmental employees.

Table (2) Global mean of scores for QOL domains

No	QOL	GM (global mean of score)
1	**Environment**	
	a. house environment	1.44*
	b. occupational environment	1.64*
2	**Physical**	
	a. Respiratory system	2.34
	b. Cardio vascular system	2.34
	c. Digestive system	2.44
3	**Daily living activity**	1.55**
4	**Drug and medication**	2.74**
5	**Psychological**	
	a. Anxiety	2.35**
	b. Depression	2.35**
6	**Social**	2.45**

* mean of score ≥ (1.5) bad work environment

* mean of score < (1.5) convenient environment

** mean of score ≥ (2) suffering or poor of QOL domain

** mean of score < (2) no suffering or good QOL domain

This table reported that the GM on all domains were highly suffering or poor QOL except were (house environment (1.44) and daily living activities (1.55)

Table (3) Statistical comparison between the gender of the sample and quality of life domains by the level of effect

Indicator	Sex	Mean	Std	T. value	C.S.
Environmental domain	Male Female	١,٢٧٩٢ 0.9474	0.2455 0.3280	5.786*	Sig
Physical domain	Male Female	٢,١٦٧٨ 2.2268	0.3372 0.3061	4.173*	Sig
Daily Activity Living domain	Male Female	٢,3٥٥٨ 2.0632	0.3246 0.4087	2.097*	Sig
Drug & medication domain	Male Female	٢,٧٤٩٤ 2.٢505	0.4664 0.4191	3.013*	Sig
Psychological domain	Male Female	٢,١٢٤٣ 2.4495	0.4026 0.3420	4.679*	Sig
Social domain	Male Female	٢,٣٨٠٨ 2.4759	0.5767 0.5759	0.817	Not Sig
* Significant at the level P≤ 0.05			T. Critical = 1.671		

This table reveals that there was significant differences in (5) domains (Environmental, Physical, Daily Living Activity, Drug & medication and Psychological), in relative to their gender, except that of social domains which was not significant.

Table (4) One way analysis of variance for the comparative differences between the age of the sample and the quality of life domains by the level of effect.

Indicator	Age	Mean	Std	F. value	C.S
Environmental domain	21-25 Year	١,٤٢٧٢	.١٥٤٢	3.195*	Sig
	26-30 Year	1.3982	0.93		
	31-35 Year	1.3824	.1019		
	36-40 Year	1.4941	.1150		
	41-45 Year	1.4353	.1734		
	46-50 Year	1.4235	.1465		
	51-55 Year	1.4052	.1156		
	56-60 Year	1.4641	.1297		
	61-65 Year	1.4338	0.910		
Physical domain	21-25 Year	٢,٢٠٠٩	.٣٧١٤	2. 281	Not Sig
	26-30 Year	2.2383	.3777		
	31-35 Year	2.4114	0.098		
	36-40 Year	2.0865	.3313		
	41-45 Year	2.2204	.2968		
	46-50 Year	2.3379	.1703		
	51-55 Year	2.3152	.2749		
	56-60 Year	2.2110	.2442		
	61-65 Year	2.3429	.2894		
Daily Activity Living domain	21-25 Year	٢,١٣٦٨	.٣٧٣٠	0.859	Not Sig
	26-30 Year	1.9231	.4003		
	31-35 Year	2.1500	.3873		
	36-40 Year	1.8600	.4812		
	41-45 Year	2.0867	.4015		
	46-50 Year	2.0800	.3701		
	51-55 Year	2.1444	.2744		
	56-60 Year	2.0111	.1537		
	61-65 Year	2.1313	.3877		
Drug & medication domain	21-25 Year	٢,٦٦٠٨	.٤٩٤٨	2.886*	Sig
	26-30 Year	2.4103	.7623		
	31-35 Year	2.9167	.1667		
	36-40 Year	2.7556	.3696		
	41-45 Year	2.7630	.3914		
	46-50 Year	2.7111	.3296		
	51-55 Year	2.9630	.1111		
	56-60 Year	2.8395	.2491		
	61-65 Year	2.9167	.1648		
Psychological domain	21-25 Year	٢,٤٣٦٥	.٣٢٤٠	3..352*	Sig
	26-30 Year	2.3264	.4751		
	31-35 Year	2.5646	.1668		
	36-40 Year	2.2030	.4120		
	41-45 Year	2.5353	.2395		
	46-50 Year	2.0779	.2884		
	51-55 Year	2.5886	.1954		
	56-60 Year	2.0472	.4613		
	61-65 Year	2.5378	.2902		
Social domain	21-25 Year	٢,٤٤٧٤	.٥٣٥٧	1.799	Not Sig
	26-30 Year	2.2212	.6811		
	31-35 Year	2.6250	.4449		
	36-40 Year	2.3500	.6368		

	41-45 Year	2.6583	.3764		
	46-50 Year	1.9250	.6650		
	51-55 Year	2.5139	.5878		
	56-60 Year	2.1528	.7202		
	61-65 Year	2.6641	.4201		
* significant at the level P≤ 0.05				F. Critical Value = 2.37 .	

This table indicated that there was significant differences in (3) domains (Environmental, Drug & medication and Psychological). Except the (physical, daily living activity and social domains) .

Table (5) One way analysis of variance for the comparative differences between the level of education of the sample and the quality of life domains by the level of effect.

Indicator	Level of Education	Mean	Std	F. value	C.S
Environmental domain	Read and Write	١,٣٥٢	0.0831		
	Primary	٩	.1547		
	Intermediate	1.4265	.1644	٢,٩٥٤*	Sig
	Secondary	1.4535	.1053		
	Institute	1.4379	.1023		
	University	1.4248	.1160		
	High education	1.4652	0.026		
		1.3059			
Physical domain	Read and Write	٢,٥٦٠	.١٣٧٦		
	Primary	٥	.3071		
	Intermediate	2.2027	.3208	٢,٥٤٠*	Sig
	Secondary	2.2856	.3302		
	Institute	2.1125	.2954		
	University	2.2704	.3228		
	High education	2.2203	.2000		
		2.1979			
Daily Activity Living domain	Read and Write	٢,٣٢٥	.٣٤٠٣		
	Primary	٠	.3416		
	Intermediate	1.5500	.3513	٢,١٤٧	Not Sig
	Secondary	2.0839	.2890		
	Institute	2.0667	.4371		
	University	2.0889	.3177		
	High education	2.1091	.2775		
		1.8200			
Drug & medication domain	Read and Write	٢,٨٦١	.٢١٠٣		
	Primary	١	.4255		
	Intermediate	2.6667	.3874		
	Secondary	2.7670	.4033	١,٤٠٦	Not Sig
	Institute	2.8148	.4126		
	University	2.7325	.2726		
	High education	2.8586	1.0346		
		2.2444			
Psychological domain	Read and Write	1.9502	.١٥٤٣		
	Primary	2.3935	.3195		

	Intermediate	2.4597	.4224	٢,٧٢٧*	Sig
	Secondary	2.4079	.3374		
	Institute	2.4812	.3241		
	University	٢,٧١٦	.2424		
	High education	٩	.4188		
		2.0239			
Social domain	Read and Write	1.8125	٠,٠٦٢٥		
	Primary	2.3710	.4146		
	Intermediate	2.5625	.6042	٢,٨٨٨*	Sig
	Secondary	2.4815	.5308		
	Institute	2.5909	.5311		
	University	٢,٩٦٨	.5537		
	High education	٨	.4873		
		1.8500			
* significant at the level P≤ 0.05				F. Critical Value = 2.37 .	

This table revealed that there was a significant difference between the (Environmental, Physical, Psychological and social). Except the (Daily Living Activity, Drug & medication) which were not significant in relation to their level of education

Discussion

The findings of the present study showed that the majority of the sample were female (57%) while male were (43%) table (1) Our findings were similar to those of other studies who stated that women are almost twice as likely as men to suffer from acute asthma (3) . Regarding their age, the study indicated that the higher presented (21-25) years was (19%), table (1) with mean of age (44) years.The study report that people of all ages suffer from asthma but most commonly begins in childhood experiences less severe symptoms as they grow older (8,16) .Table (2) reported that all domains were highly suffering or poor QOL except were (house environment 1.44 and daily living activities 1.55)The study showed that (20.000) people believed they suffered from asthma caused by work , and a further (50.000) had asthma that they felt made worse by work (6) another study stated that environmental factors may be at work that effect all these condition (12,10) .The study stated that (40 % to 90 %) of asthma cases are exercise- induced asthma, in which exercise triggers coughing, wheezing or shortness breath.(1) .The study reported that the pharmacological treatment depends on the severity of symptoms and functional abnormality, a patient who has recovered from newly detected asthma (2) . The study mentioned that psychiatric disorders especially depression, but also severe anxiety states and post-traumatic disorders with severe asthma and have been defined (5) .The study stated that the asthmatic patient loses health membership in social group, independence financial stability, employment and hopes for the future (9) . The present study showed that there was significant relationship between gender and five quality of life domains p≤0.05 where as no significant difference between social domains and the subject gender.(table 3) This result agree with the study that reported that women have lower scores on different QOL than men, also found differences in the perception of illness effects and social support between men and women (14) .In relationship between quality of life domains and age was found to be statistically significant at level ($p \leq 0.05$) (environmental , physical , drug, and medication and psychological)and no significant (D.L.A., and social domains) table (4)The study mentioned that chronic

asthma in elderly persons is associated with a lower QOL and considerable morbidity when compared with those who do not have asthma symptoms (3) .Regarding the relationship between QOL domains and level of education table (5) show that their was statistical significant at level ($p \leq 0.05$) between QOL domains and level of education but no significance between (D.L.A., drug and medication) with level of education.

Recommendations

Based on the study conclusion, it can be recommended that:

1. The study recommended that the Jordan Ministry of Health would be helpful in providing, building or developing the places and centers in chest departments or its hospitals that provide care, information about asthma disease, health education, control of symptoms, and environmental domains that affect disease, and material that trigger the disease, also an educational program should be developed and implemented for adult asthmatic patients.
2. The importance of QOL must be objective of asthmatic management team by MOH .
3. Farther study is necessary in order to demonstrate more clearly the differences.
4. For house, occupation environmental domains, to be attention be government and private organization to promote health sanitation and designation of building. Also panflet to be distributed to patients.

References

1. Andrew, D., and Middleton, M.: Managing Asthma It Takes Teamwork. **AJN,** 1997, January, 97,1, :39-43.
2. Dahl, R., and Bjermar, L., Nordic consensus reporet on asthma management, **Respiratory medicine**, , 2000 , 94, :.299- 327.
3. Enright, P., McClelland,R., Newman, A., Gottlieb, D., and Lebowit,M.: Underdiagnosis and Undertreatment of Asthma in the Elderly**. CHEST**, 1999, Sept, 116 (3), : 603 – 613.
4. Erickson, S., Christianm,R., Kirking,D,. and Halman, L.: Relationship between patient and disease characteristics, and health – related quality of life in adults with asthma. **Respiratory Medicine**, 2002, 96, : 450 – 460.
5. Espie, C. : Sleep disorders in adults**, the practitioner**, 1994, February,. 238, : 137 – 140.
6. Hodgson, L., Neuhauser, D., and Melnikow, J.: Asthma Health status. Ongoing measurement in the context of continuous quality in improvement**. Med Care**, 1993,. 31, : MS 97 – MS 106.
7. Juniper, E., Guyatt, G., Epstein, R., Ferrie, P., Jaeschke, R., and Hiller, T.: Evaluation of impairment of health – related quality of life in asthma: Development of a questionnaire for use in clinical trials. **Thorax** 1992, ,. 47, : 76 – 83.
8. Khoja, T.,and Farid, S.: **Saudi Family Health Survey 1996. Principal Report. Riyadh: Ministry of Health,** 2000, : 61.
9. Los, H., Koppelman , G., and Postman, D.: the importance of genetic in influences in asthma, **Eurrespire J** , 1999, 14 , : 1210-1227
10. Mapp, C.: "Occupational Asthma: A matter of concern**", Eur Respir J**, 1994, 7 , :1.

11. Reviriego, J., and Millan, M.: Evaluation of the diabetes quality of life questionnaire in a Spanish population. **Pharmaconomics,**. 1996 ,10, : 614-622.
12. Vandenplas, O.,and Malo, J.: Definitions and types of work-related asthma: a nosological approach, **Eur. Respir J,** , 2003, 21: 706-712.
13. Whedon, M., Stearns, D., and Mills, L.: Quality of life of long-term adult survivors of autologus bone marrow transplantation. **Oncology nursing Forum,** 1995, 22(10), :1527-1535.
14. Wijnhoven, H., Kriegsman, D., Snoek, F., Hesselink, A.,and de Haan,M.: Gender differences in health – related quality of life among asthma patients, **J Asthma,** 2003,April, 40 (2) :189 – 199.
15. WHO (World Health Organization): Analysis of National Reports on the Third Evaluation of the Strategy for HFA *(*Health for All)**.** Country Lebanon, WHO, 1997, : 80.
16. Young, T., Evans, L., and Finn, L.: Estimation of the clinically diagnosed proportion of sleep apnea syndrome in middle aged men and women. **Sleep**, 1997, 20, : 705-706.

Appendix (A)

Mean scores for items of environmental domains concerning house environment

No.	Items	Yes(2) F &%	No(1) F & %	Mean of score
١	Is the condition of the house is bad.	٨٣	١٧	1.83
٢	Is the house in bad cleaning situation?	٩٦	٤	1.96
٣	Are the swage systems of the house not connected with public system?	٩٤	٦	1.94
٤	Do you use cleaners (liquids, powders) or perfumes in the house?	٦٨	٣٢	1.68
٥	Do you avoid chemical cleaning?	٦٤	٣٦	1.64
٦	Is the flour of the house sandy?	٣٠	٧٠	1.30
٧	Is the house has library with old books?	٢٦	٧٤	1.26
٨	Are there flowers or plants in the house?	٤٢	٤٨	1.32
٩	Are there more than five members in one room?	٣٦	٦٤	1.36
١٠	Are there another smokers in the house?	٥٧	٤٣	1.57
١١	Are there domestic animals in the house?	٣٤	٦٦	1.34
١٢	Are you annoyed by air pollution such as smoke and dust in the house?	٧٨	٢٢	1.78
١٣	Are you use carpets or covers of wool and hair in the house?	٦٧	٣٣	1.67
١٤	Do you feel the stress during use wool covers?	٦٤	٣٦	1.64
١٥	Are there moisture or rottenness in the house?	٣٥	٦٥	1.35
١٦	Is there a garden surround the house?	٤٨	٥٢	1.48
١٧	Is there plantation around the house?	٤٤	٥٦	1.44

Mean of scores for items of environmental domains concerning occupational environment (n = 57)

No	Items	Yes (2) F & %		No(1) F & %		Mean of score
١	Is ventilation of work is bad?	٤٢	%٧٣,٦٨	١٥	%٢٦,٣٢	1.74
2	Is the work cleanness is bad?	٣٦	%٦٣,١٦	٢١	%٣٦,٨٤	1.63
3	Is the light of the place is bad?	٤٤	%٧٧,١٩	١٣	%٢٢,٨١	1.77

4	Do you use chemical in work?	٢٤	%٤٢,١١	٣٣	%٥٧,٨٩	1.42
5	Do you think to change the place of work?	٣٤	%٥٩,٦٥	٢٣	%٤٠,٣٥	1.60
6	Do you think to change type of work?	٣٦	%٦٣,١٦	٢١	%٣٦,٨٤	1.63
7	Do you absent from work due to asthma?	٣٧	%٦٤,٩١	٢٠	%٣٥,٠٩	1.65
8	Do you have difficulty in concentration due to asthma?	٣٩	%٦٨,٤٢	١٨	%٣١,٥٨	1.68
9	Do you feel the stress from air pollution in street such as smoking and smoke of cars?	٥٣	%٩٢,٩٨	٤	%٧,٠٢	1.93
10	Do you distress of air pollution in street such as factories smoke?	٥١	%٨٩,٤٧	٦	%١٠,٥٣	1.90
11	Do you expose to smoke and dust in place of work?	٤٤	%٧٧,١٩	١٣	%٢٢,٨١	1.77
12	Do you expose to dust or soil during the work?	٤٢	%٧٣,٦٨	١٥	%٢٦,٣٢	1.74
13	Do you deal with old furniture in place of your work?	٢٧	%٤٧,٣٧	٣٠	%٥٢,٦٣	1.47

Mean of scores for items of physical domains concerning respiratory system

Asthmatic patient/ Quality of life

No.	Items	Always (3) F & %	Sometime (2) F & %	Never(1) F & %	Mean of score
1	I suffer from chest wheezing while breathing.	٤٩	١٥	٣٦	2.13
2	I suffer from difficulty of breathing during rest.	٤٧	٣٦	١٧	٢,٣٠
3	I suffer from dry cough.	٤٥	%٣٩	١٦	٢,٢٩
4	I suffer from productive cough.	٥١	٣٩	١٠	٢,٤١
5	I suffer from sneezing problems.	٤٨	٤٣	٩	٢,٣٩
6	I suffer from running nose.	٣٧	٤٩	١٤	٢,٢٣
7	I suffer from short of breathing when I complain of influenza and common cold.	٤٨	٣٨	١٤	٢,٣٤
8	I feel of chest pain during breathing shortage.	٦٧	٢٢	١١	٢,٥٦
9	I suffer from recurrence of fever and inflammation due to Asthma.	٦٢	٣٢	٦	٢,٥٦
10	I feel chest tightness after wake up.	٥٣	٣٠	١٧	٢,٣٦
11	I wake up suddenly due to short of breathing (dyspnea).	٥٩	٣٠	١١	٢,٤٨
12	I wake up due to intensive coughing.	٥٢	٣٨	١٠	٢,٤٢
13	I suffer from difficult of breathing during sleeping.	٤٧	٤٣	١٠	٢,٣٧
14	I suffer from sleeplessness (Insomnia).	٥١	٤٤	٥	٢,١٣

Mean of scores for items of physical domains concerning cardio vascular system

No.	Items	Always F & %	Sometimes F & %	Never F & %	Mean of score
1	I have palpitation during asthma attack.	٦٠	٣٠	١٠	٢,٥٠
2	I notice peripheral cyanosis during asthma attack.	٦٨	٢٢	١٠	٢,٥٨
3	I notice Lip cyanosis during asthma attack.	٥٥	٢٤	٢١	٢,٣٤
4	I have Fatigue and exhausted during asthma attack.	٤٤	٢٧	٢٩	٢,١٥
5	I feel peripheral numbness during asthma attack.	٤٨	٢٣	٢٩	٢,١٩

Mean of scores for items of physical domains concerning digestive system

No.	Items	Always F & %	Sometimes F & %	Never F & %	Mean of score
1	I suffer from Nausea and vomiting.	٦٩	١٢	١٩	٢,٥٠
2	I suffer from Loss of appetite.	٦٠	٢٧	١٣	٢,٤٧
3	I suffer from Heart burn.	٤٩	٢٨	٢٣	٢,٢٦
4	I suffer from Constipation.	٣٦	٣٥	٢٩	٢,٠٧
5	I suffer from Diarrhea.	٣٣	٤٨	١٩	٢,١٤
6	I suffer from Loss of weight.	٣١	٤٩	٢٠	٢,١١
7	Suffer from Heart burn when laying down.	٣٣	٤٤	٢٣	٢,١٠
8	I suffer from dizziness and vertigo.	٣١	٣٦	٣٣	١,٩٨

Mean of scores for items of daily living activity domains

No.	Items	Always (3) F & %	Sometimes(2) F & %	Never (1) F & %	Mean of score
1	I need a help of others to do daily activities such as going to work, driving a car and Shopping……	٢٥	٣٧	٣٨	١,٨٧
2	My disease inhibit me to do physical daily activities (homework) such as washing clothes and dishes and making bedding.	١٥	٢٤	٦١	١,٥٤
3	My disease inhibit (Limit) me to do sporting exercise and doing my hobbies.	٣٦	٢٣	٤١	١,٩٥
4	I Feel fatigue and exhausted from any little effort.	٥٥	١٦	٢٩	٢,٢٦
5	I found difficulty of physical activity (personal hygiene) such as bathing, dressing and shaving.	٣٠	٢٦	٤٤	١,٨٦
6	I suffer from difficulty of breathing during eating.	٢٧	٣٤	٣٩	١,٨٨
7	I have severe asthma attack after eating special food which associated with spices or vinegar.	٣٣	٢٣	٤٤	١,٨٩
8	I feel difficulty in breathing through walking.	٥٧	١٤	٢٩	٢,٢٨
9	I feel difficulty in breathing while I am walking on upstairs.	٥٩	١٦	٢٥	٢,٣٤
10	I stop walking due to difficulty in breathing while asthma attack.	٧٨	١٧	٥	٢,٧٣

Table (8) Mean of scores for items of physical domains concerning Drug and medication domains

Asthmatic patient/ Quality of life

No.	Items	Always (3) F & %	Sometimes (2) F & %	Never (1) F & %	Mean of score
1	I suffer from my total dependence on medication to get a comfortable feeling of breathing.	٧٦	١٩	٥	٢,٧١
2	I suffer from multi medications due to my asthma involved (puffs, inhaler and tablets).	٨٣	١٠	٧	٢,٧٦
3	I suffer from difficulty of getting medication.	٨٥	٨	٧	٢,٧٨
4	I suffer from the cost of medication.	٧٧	٩	١٤	٢,٦٣
5	I suffer from side effects of some medication.	٨٠	١٣	٧	٢,٧٣
6	I suffer from irregularity in taking my medication.	٨٤	١٠	٦	٢,٧٨
7	I suffer from lack of knowledge about how to take medication.	٨٢	٧	١١	٢,٧١
8	I suffer from lack of knowledge about my disease and complication.	٨٧	٧	٦	٢,٨١
9	I suffer from disability how to deal with emergency situation such as acute difficulty in breathing (dyspnea).	٦٩	٦	٥	٢,٨٤

Mean of scores for items of psychological domains concerning Anxiety measure

No.	Items	Always (3) F&%	Sometimes (2) F&%	Never (1) F&%	Mean of score
1	I feel embracing when I use inhaler in front of others.	٦٩	١٨	١٣	٢,٥٦
2	I feel discomfort of continuously carrying the inhaler.	٧٠	٢١	٩	٢,٦١
3	I feel boredom in doing laboratory tests.	٥٤	٢٩	١٧	٢,٣٧
4	I feel fatigue and discomfort while admission to hospital.	٥٨	٢٧	١٥	٢,٤٣
5	I feel anxious and nervous when I ought to be in crowded places.	٥٠	٢٤	٢٦	٢,٢٤
6	I have nightmares.	٥٦	٢١	٢٣	٢,٣٣
7	I feel suffocation.	51	29	20	2.31
8	I feel uncomfortable.	٤٤	٣٤	٢٢	٢,٢٢
9	I feel worried when my friends know about my disease.	44	31	25	2.19
10	I feel confused and disturbed.	٤٩	٣٠	٢١	2.28
11	I feel anxious, tense (short tempered).	٤٩	٣٦	١٥	2.34

12	I feel restlessness when I think that my life is in danger.	٥٥	٣٠	١٥	2.40
13	I feel tight – chested.	٥٠	٣٣	١٧	2.33

.

Mean of scores for items of psychological domains concerning depression measure

No.	Items	Always (3) F& %	Sometimes (2) F&%	Never (1) F& %	Mean of score
1	I feel upset from everything.	٧١	١٩	١٠	٢,٦١
2	I feel I hate my self.	٦٧	٢١	١٢	٢,٥٥
3	I feel pessimist about future.	٦٢	٢٤	١٤	٢,٤٨
4	I feel my life is boring.	٥٧	٢٥	١٨	٢,٣٩
5	I feel my life is very tiresome.	٥٦	٢٦	١٨	٢,٣٨
6	I feel desire to cry.	٣٤	٤٠	٢٦	٢,٠٨
7	I feel sad.	٦٣	٢٧	١٠	٢,٥٩

.

Mean of scores for items of social domains

No.	Items	Always (3) F& %	Sometimes (2) F& %	Never (1) F&%	Mean of score
1	I tend to keep away social Isolation from others.	٦٢	٢٣	١٥	٢,٤٧
2	I suffer from change in the relations with others.	٥٥	٢٨	١٧	٢,٣٨
3	I suffer from loss of friend support and co–operation.	٦٣	٢٦	١١	٢,٥٢
4	I'm nervous in dealing with people.	٥٧	٢٣	٢٠	٢,٣٧
5	My relation with friends became worst after having asthma disease.	٦٥	١٩	١٦	٢,٤٩
6	I suffer from disability to make decisions and solve my problems.	٦١	٢٢	١٧	٢,٤٤
7	I suffer from my family carelessness for me.	٥٨	٢٢	٢٠	٢,٤٤
8	I suffer from change in the family relations.	٥٥	٢٧	١٨	٢,٣٧

.