

Quality of life of Asthmatic Adult Patient's in Kirkuk city

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ABSTRACT

Background and objectives: Asthma is a life-long chronic inflammatory disorder of the airways, associated with variable structural changes, that affects all ages. Health related quality of life (HRQoL) has joined morbidity and mortality as a health outcome of interest in recent years. The study objected to assess quality of life for asthmatic patients and to predict the correlations among the domains of quality of life.

Materials and method: A descriptive study was conducted in Kirkuk General Hospital in Kirkuk city to assess the Quality of Life (QoL) asthmatic patients , and to identify the association between some characteristics of asthmatic patients such as (Age, Gender, Martial status, Level of education, Occupation and Severity of asthma) and their quality of life. The study was initiated from 20 of June 2013 to 5th May 2014. Purposive sample consists of (70) patients with asthma were selected. For the purpose of data collection, a questionnaire was constructed instrument and literature reviews. It is composed of two parts, part one included (9) items that focused on the client demographic characteristics. Part two is composed of (5) items that contain of (98) items, data were collected through the use of interview. Of 3-likert scale option as: (1) for Always, (2) for Sometimes and (3) for Never. Content validity was determined by presenting the questionnaire to a panel of (8) experts.

Results: The findings of the study indicated that the sub-domain of sleep and rest as a part the physical domain, also the spiritual domain of the quality of life for patients had greatly affected.

Conclusion: The study concluded that found significant statistical of some of socio -demographics characteristic of asthma patients (Educational level and Severity of asthma) with domains of the quality of life. Also, associations between the physical and spiritual domains

Recommendations: The study recommends to increase the number of specialized health related agencies and asthma units and to enhancing the community and social support of patients.

Keywords: Quality of Life, Adult Asthmatic patients.

INTRODUCTION

Asthma is a chronic inflammatory lung disease characterized by recurrent breathing problems and symptoms such as breathlessness, wheezing, chest tightness, and coughing. Asthma symptoms vary over time, and also differ in severity from one individual to another. In the most extreme cases, the airways can become so inflamed and constricted that people are unable to breathe. When it is not effectively treated, asthma can lead to hospitalization, missed time from work and school, limitations on physical activity, sleepless nights, and in some cases death (GINA Global Initiative for Asthma, 2003). Asthma is a life-long chronic inflammatory disorder of the airways, associated with variable structural changes, that affects all ages. It is associated with airway hyper-responsiveness and airflow obstruction that is often reversible either spontaneously or with treatment (Ruby *et. al.*, 2011). Asthma had a major negative impact on the health related quality of life in the community and that its impact was similar to that of other chronic health conditions. It was found that persons with

asthma have worse health-related quality of life than respondents who previously had asthma or those who never had asthma (Chhabra *et. al.*, 2005). Asthma constitutes a major functional disability on its sufferers. It affects the psychological, physical and social well being of a patient. Sleep is disturbed and patients experience day or night sleep reversals associated with poor concentration, impaired daily activities and significant co- morbidities especially depression and anxiety (Mancuso *et. al.*, 2001). Health related quality of life (HRQoL) has joined morbidity and mortality as a health outcome of interest in recent years , much of the research on the HRQoL benefits of physical activity has focused on populations with specific disease states , e.g. coronary heart disease , osteoarthritis , kidney disease , and liver disease (Peterson *et. al.*, 2005). Quality of life (QoL), a conceptualization reflecting an individual's physical and mental well-being, has emerged as an important consideration in disease treatment and prevention. Research on QoL and physical activity has predominantly focused on elderly populations or populations with chronic diseases such as cardiovascular

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diseases, arthritis, pulmonary diseases, chronic kidney diseases and cancer . Although evidence consistently suggests a positive association between physical activity and QoL in these populations , the relation may not be reproducible in younger, disease-free individuals, in comparison to the physical activity domain (Chai *et. al.*, 2010). World Allergy Organization (WAO) is greatly concerned about the increasing global burden of allergic diseases. A major focus of the Organization is to create global awareness of allergy and asthma as a major public health problem (Ruby *et. al.*, 2011). The objectives of the study are to assess the quality of life among patients with asthma according to physical, social, psychological, independence and spiritual domains, and to identify the associations among some characteristics of asthma patient (Age, Gender, Residence, Marital status, Occupation, Level of education, , Severity of asthma,) with the quality of their life.

MATERIALS AND METHOD

To achieve the objectives of the study, a descriptive design was applied in the present study from 15th June 2013 to the 5th May 2014. The study was conducted in Kirkuk General Hospital in Kirkuk City (professorial center of allergic and asthma, Medical and Surgical word). Kirkuk General Hospital stated and started work at 1945 situated in center of Kirkuk city. The hospital has two floors and several accessories around the hospital; total 400 beds. A purposive sample that consist of (70)

adult patients, (36) males and (34) females with asthma chosen according to the following criteria: Their age ranges from (20 -↑ 60), patients who is diagnosed (definitely) as asthmatic patient. In order to collect study information, a questionnaire was constructed depending on (format adopted and modified by researcher) and related literature. It is composed of two parts: part includes (6) items which focus on the patients socio-demographic characteristics such as (Age, Gender, Marital status, Occupation, Educational level, Severity of asthma). Part two consists of (5) domains and (15) sub-domains. They are: Physical domains, Social domains, Psychological domains, Level of independence domains, Spiritual domain. The overall items were (98) items, 3-likert scale option was used in the rating: (1) for Always, (2) for Sometimes and (3) for Never. Data were collected through the use of the constructed questionnaire and the interview technique as a means of data collection process. Each patient spends approximately (25 – 30 min) to respond to the interview. The data were collected throughout the period of 2nd July 2013 to the 15th September 2013. Data were organized and coded into the computer files; Statistical Package for Social Science (SPSS) version (20) that was used for data analysis while the significance level depended was (P. value < 0.05). Descriptive statistical methods (Frequency, Mean, Standard deviation) and Inferential statistical methods (Paired t-test, and ANOVA were used to analyzed the data.

RESULTS

Table (1): Distribution of the Socio-Demographic Characteristic of the Study Sample (No=70).

Variables		frequency	percentage
Age	20-30	19	27.1
	30-40	7	10.0
	40-50	11	15.7
	50-60	15	21.4
	60 and move	18	25.7
Gender	Male	36	51.4
	Female	34	48.6
Marital status	Single	13	18.6
	Married	44	62.9
	Divorced	7	10.0
	Widow	6	8.6
Level of education	Illiterate	17	24.3
	read and write	11	15.7
	primary school graduate	8	11.4
	intermediate school graduate	8	11.4
	secondary school graduate	9	12.9
	institution graduate	9	12.9

Occupation	College graduate	8	11.4
	Retired	11	15.7
	civil work	12	17.1
	Functionless	8	11.4
	house wife	22	31.4
	Employed	17	24.3
Severity of asthma	mild persistent	16	22.9
	moderate persistent	25	35.7
	sever persistent	29	41.4

Table (1) indicates the socio-demographic characteristics of the whole study sample. The it shows that the highest percentage of age groups is between(20-30) and constituted (27.1%), and according to gender, the high percent was of males and constituted (51.4%). most of the patients were married and constituted (62.9%). (24.3 %) of the sample were illiterate, As regard to occupation, (31.4 %) patients were housewife. and according to severity of asthma, the high percent was of sever persistent and constituted (41.4%).

Table (2) One-way Analysis of Variance for the Differences among asthmatic Patient's QoL Domains, Sub-Domains in respect to their Age.

Domains	S.O.V	Sum of Squares	D.F	Mean Square	F	Sig.
Physical domain	Between Groups	459.578	4	114.894	5.291	.001
	Within Groups	1411.508	65	21.716		
	Total	1871.086	69			
Social domain	Between Groups	24.823	4	6.206	1.724	.155
	Within Groups	233.977	65	3.600		
	Total	258.800	69			
Psychological domain	Between Groups	2557.535	4	639.384	9.388	.000
	Within Groups	4427.108	65	68.109		
	Total	6984.643	69			
Independence domain	Between Groups	6288.538	4	1572.134	15.344	.000
	Within Groups	6659.762	65	102.458		
	Total	12948.300	69			
Spiritual domain	Between Groups	18.344	4	4.586	.868	.488
	Within Groups	343.427	65	5.283		
	Total	361.771	69			

Table (2) demonstrates that there is significant difference in physical ,psychological and Independence domain in respect to the patient's age.

Table (3): Association of QoL Domains, Sub-Domains of asthmatic Patients in regard to their Gender .

Domains	Mean Difference	t-value	df	Sig.	95% of C.I.	
					Lower	Upper
Physical domain	2.09804	1.708	68	.327	.35314-	4.54921
Social domain	.26307	.565	68	.773	.66571-	1.19185
Psychological domain	.83333	.344	68	.337	3.99885-	5.66551
Independence domain	.77778	.236	68	.324	5.80452-	7.36008
Spiritual domain	1.02614	.236	68	.724	.04617-	2.09846

Table (3) indicates that there are no significant differences in all domains in respect to the patient's gender.

Table (4): One-way Analysis of Variance for the Differences among asthmatic Patients QoL Domains, Sub-Domains in respect to Level of education.

Domains	S.O.V	Sum of Squares	D.F	Mean Square	F	Sig.
Physical domain	Between Groups	417.980	6	69.663	3.020	.012
	Within Groups	1453.105	63	23.065		
	Total	1871.086	69			
Social domain	Between Groups	48.583	6	8.097	2.427	.036
	Within Groups	210.217	63	3.337		
	Total	258.800	69			
Psychological domain	Between Groups	1248.589	6	208.098	2.286	.046
	Within Groups	5736.054	63	91.048		
	Total	6984.643	69			
Independence domain	Between Groups	3271.764	6	545.294	3.550	.004
	Within Groups	9676.536	63	153.596		
	Total	12948.300	69			
Spiritual domain	Between Groups	18.503	6	3.084	.566	.756
	Within Groups	343.268	63	5.449		
	Total	361.771	69			

Table (4) depicts that there are significant differences in physical, social, psychological and Independence domains in regard to the patient's level of education.

Table (5): One-way Analysis of Variance for the Differences among Asthmatic Patients QoL Domains, Sub- Domains in respect to Patients Occupation .

Domains	S.O.V	Sum of Squares	D.F	Mean Square	F	Sig.
Physical domain	Between Groups	356.226	5	71.245	3.010	.017
	Within Groups	1514.860	64	23.670		
	Total	1871.086	69			
Social domain	Between Groups	10.834	5	2.167	.559	.731
	Within Groups	247.966	64	3.874		
	Total	258.800	69			
Psychological domain	Between Groups	860.654	5	172.131	1.799	.126
	Within Groups	6123.989	64	95.687		
	Total	6984.643	69			
Level of independence domain	Between Groups	2476.569	5	495.314	3.027	.016
	Within Groups	10471.731	64	163.621		
	Total	12948.300	69			
Spiritual domain	Between Groups	41.919	5	8.384	1.678	.153
	Within Groups	319.852	64	4.998		
	Total	361.771	69			

Table (5) reveals that there is significant difference in physical and independence regard to the patient's occupation.

Table (6) One-way Analysis of Variance for the Differences among asthmatic Patients QoL Domains, Sub-Domains of asthmatic patient's in respect to Severity of asthma .

Domains	S.O.V	Sum of Squares	D.F	Mean Square	F	Sig.
Physical domain	Between Groups	624.577	2	312.289	16.786	.000
	Within Groups	1246.509	67	18.605		
	Total	1871.086	69			
Social domain	Between Groups	41.412	2	20.706	6.382	.003
	Within Groups	217.388	67	3.245		

Domains	S.O.V	Sum of Squares	D.F	Mean Square	F	Sig.
	Total	258.800	69			
Psychological domain	Between Groups	1842.800	2	921.400	12.006	.000
	Within Groups	5141.843	67	76.744		
	Total	6984.643	69			
Independence domain	Between Groups	4326.970	2	2163.485	16.813	.000
	Within Groups	8621.330	67	128.677		
	Total	12948.300	69			
Spiritual domain	Between Groups	4.464	2	2.232	.418	.660
	Within Groups	357.308	67	5.333		
	Total	361.771	69			

Table (6) indicates that there is a significant difference in Physical, social, psychological and Independence domains in respect to the patient's severity of asthma .

DISCUSSION

The Socio-demographic data which presented in table (1) show that the age group of (20 -30) constitutes the highest percentage as (27.1%) of the total sample. Our finding agrees with Anees (2008) in the younger age group of 20–34 years the severity of asthma was not associated with the quality of life. (51.4%) of asthmatic patients were males. Whereas Lavoie *et. al.* (2008) disagrees with because the men (36.8%) and women (63.2%). More than sixty percent (62.9%) of the total sample were married. Disagreement with Ford *et. al.* (2001). was significantly more prevalent among respondents with asthma who were previously married or never married than those who were currently married. (Previously married (23.8%) (Ford This was supported by Lavoie *et. al.* (2008) finding that 61.2% of asthmatic patients in were married. The results of the present study shows that the highest percentage of asthma patients in level of educational were Illiterate who constituted (24.3%). It disagrees with Tara et al. (2001) patients had Less than high school (29.3%). Other result were agreed with Suda et. al. (2009) in asthma group (57.1%) were found illiterates in asthma group. She mentioned that 31.4% of asthmatic patients were house wife. Other result were disagrees with Ford due to high percentage (47.5) unable to work in job (Ford *et. al.*, 2009). This was supported by Lavoie *et. al.* (2008) agreed with our finding, for she found that housewives constituted (48%). The results of the present study shows that the highest percentage of asthma patients Severity of asthma were sever persistent who constituted (41.4%). The current study agrees Sunil *et. al.* (2005) who found that the sever persistent who constituted (15%)(12). disagree with Tomoaki *et. al.* (2006) (Japan) who found

that the moderate persistent was high percent. To ascertain the absence or presence of association between socio-demographic characteristics of asthmatic patients and the quality of life among them, the tables (2-6) demonstrates many significant statistical differences in some domains of the quality of life among asthmatic patients in regard to some attributes of the patients. Kauppinen *et. al.* (1999) who assessed 162 diagnosed asthma patients (aged 18-76), reported that after intensive patient education their patients showed the same improvement at the three-year follow-up, but that other lung functions and HRQoL. Hommel *et. al.* (2002) found that QoL scores had a statistical significant decreasing trend with increasing age ($p=0.001$). Unemployed and illiterate patients had lower QoL scores ($p=0.03$ and $p=0.001$), and no statistical significant relationship could be revealed between QoL score and the duration of asthmatic. Wijnhoven *et. al.* (2003) concluded that women with asthma report poorer HRQoL than men, but this is not due to a more severe disease state in terms of pulmonary obstruction, instead seeming to be related to a more severe subjective disease state in women than in men. Problems falling asleep or staying asleep, frequent awakenings, daytime fatigue, and unplanned naps are frequently reported by asthmatic patients. Problems falling asleep *or staying asleep, frequent awakenings, daytime fatigue, and unplanned naps are freque*ntly reported by asthma patients (Camhi *et. al.*, 2000). In our study, female asthmatics were much more likely to have problems with insomnia and excessive daytime sleepiness. Asthma is a chronic inflammatory disease that can significantly affect the individual's physical and psychosocial functioning, for example in terms of daytime wakefulness and sleep quality

(Krouse *et. al.*, 2008). The increased insomnia seen in adult may begin to manifest in early adolescence as excessive daytime sleepiness (Camhi *et. al.*, 2000). Taylor *et. al.* (2006) hypothesized that psychosocial factors correlated with QoL and compensated for adverse effects of disease-related variables on QoL. They found that psychosocial factors, including perceived control and social support, were positively significantly correlated with QoL. The reason for this belief is that the family is a social system, and disruption in the life of one family member invariably affects the lives of others. On the other hand, Physical domain affected positively in Independence domain as (2%). One of the chief changes brought about by chronic illness is an increased dependency of the chronically ill individual on other family members (Tovbin *et. al.*, 2005). Another explanation could be that this reflects biological, psychological or cultural distinctions between men and women. Mancuso *et al.* found that asthma patients with more depressive symptoms reported worse quality of life than asthma patients with similar disease activity but fewer depressive symptoms (Mancuso *et. al.*, 2000). Hommel *et al.* found in a study of older adolescents and young adults that depression and anxiety play a significant role in subjective assessment of asthma-specific quality of life. Anxiety had an independent main effect on asthma-specific quality of life after the influence of depression had been statistically controlled (Hommel *et. al.*, 2005). Asthma control remains as a strong predictor of HRQoL, even when underlying differences in severity classification are taken into account (Chen *et. al.*, 2007). In our study the HRQoL differently depending on the level of asthma severity, and these traditional measures of asthma severity and asthma control explain only half of the variance of HRQoL (Moy *et. al.*, 2001).

CONCLUSION

The study concluded that most patients infected are asthma of sever persistent. Educational level, and severity of asthma are the most socio-demographic variables that were associated with many aspects of life among asthma patients. Finally, there are significant statistical associations between Psychological and Physical domains, as well as between independent and social domains.

RECOMMENDATIONS

The study recommends that increasing the awareness of community regarding chronic

diseases, i.e. how to prevent, treat, and rehabilitate. Increase the number of specialized health-related agencies and dialysis unit. Enhance the community and social support and acceptance of patients. Emphasis on health related agencies to provide extreme level of services. Finally, the study recommends concentrate on any amusement or entertainment mean to enhance sleep, reduce pain, ameliorate physical health status, and improve the psychological health status.

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