Impact Of Tuberculosis Upon Patients' Quality Of Life Who Undergo Directly Observed Treatment Short Course(DOTS) In AL-Amarah City

تأثيرمرض التدرن على نوعية حياة المرضى الخاضعين لبرنامج المشاهدة المباشرة للعلاج قصير الامد في مدينة العمارة

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الخلاصه :

هدف الدراسه: لأيجاد تأثير مرض التدرن على نوعية حياة المرضى الخاضعين لبرنامج المشاهده المباشره للعلاج قصيرالامد.

منهجية البحث: أجريت الدرلسة الوصفية في العياده الاستشاريه الخارجيه للامراض الصدريه والتفسيه للفتره من العشرين من تشرين الثاني لعام ٢٠١٢ ولغاية الحادي عشرمن تموز لعام ٢٠١٣لأيجاد تأثير مرض التدرن على نوعية حياة المرضى الخاضعين لبرنامج المشاهده المباشره للعلاج قصير الامد. أختيرت عينة غيراحتماليه (غرضيه) مكونه من ٦٠ مريض مصاب بمرض التدرن ، حيث جمعت البيانات خلال الفتره من الثالث عشر من شباط ٢٠١٢ لغاية السادس من نيسان ٢٠١٢. تم تحليل البيانات من خلال تطبيق الإحصاء الوصفي الذي يتضمن (التكرارات والنسب المئوية والوسط الحسابي واختبار المقارنة)والاحصاء الاستدلالي(اختبـــار مربع كـــاي واختبار-ت).

النتائج:أظهرت نتائج الدرلسة أن مرض التدرن أثر بشكل سلبي على جوانب نوعية حياة المرضى.

الاستنتاج: استنتجت الدراسه بإن التأثير الأكبر ظهر من خلال الجانب الاجتماعي ، متبوعاً بالجانب النفسي ثم جانب مستوى الاستقلالية، يليه الجانب الجسمي. بينما التاثير الاقل ظهر من خلال الجانب الروحي متبوعا بالجانب البيئي.

التوصيات: أوصت الدرلسة بضرورة اجراء برنامج تثقيفي صحي لمرضى التدرن الذين يراجعون العيادات الخارجيه والمراكز الصحيه الخاصه يهدف الى زيادة الوعي الصحي لديهم فضلا عن استخدام وسائل الاعلام من قبـــل السلطات الصحية.

Abstract

Objective: To find the impact of Tuberculosis disease upon quality of life of patients who undergo Directly Observed Treatment Short Course (DOTS).

Methodology: A descriptive design is carried out at Respiratory and Chest Diseases out Patients' Clinic, from Nov 20th, 2012 to July 11th, 2013, in order to find out the impact of tuberculosis disease upon quality of life of patients who undergo Directly Observed Treatment Short Course (DOTS). A non-probability (Purposive) sample of (60) Tuberculosis patients. The data collection process has been performed from February 13th, 2012 to the April 6th, 2012. The data were described analyzed through the use of descriptive statistics such as (frequencies, percentage, mean of score and comparative significant) and inferential statistics such as (Chi-square, and T-test).

Results: The results of the study showed that Tuberculosis negatively influence upon patients quality of life domains.

Conclusion: The study concludes that the maximum effect of presented by the social domain, followed by the psychological, level of independency, then the physical domain. While the minimum impact, presented by spiritual domain, followed by the environmental domain.

Recommendation: The study recommended that necessary to do a health educational programs to increase health awareness among peoples who attendants the outpatient clinics and special health centers for tuberculosis disease, as well as the use of mass media by the health authorities.

Key words: Quality of life (QoL); Tuberculosis (TB); Directly Observed Treatment Short Course (DOTS).

INTRODUCTION

Tuberculosis (TB) is one of the oldest infectious diseases known to affect humankind. Robert Koch identified Mycobacterium tuberculosis (MTB) as the cause of infection during his research in 1882 and introduced it as an infectious disease. Almost one-third of the world population is infected with MTB and during the past decade even industrialized countries have faced resurgence of Tuberculosis [(1)].

Effective drugs for TB have been available since the 1940s, but the problem still abounds. People with TB need to take the drugs for at least six months, but many patients do not complete their course of treatment. For this reason, services for people

with Tuberculosis often use different approaches to encourage people to complete their course of treatment [2].

Directly Observed Treatment, Short Course (DOTS) is the internationally recommended strategy, to ensure cure of tuberculosis; it has become the standard for the diagnosis, treatment, and monitoring of tuberculosis worldwide and has been implemented in (187) out of (211) countries, covering more than (89%) of world's population[3]. In addition, there are numerous aspects of Tuberculosis that may lead to a reduction in quality of life (QOL). Treatment of TB requires prolonged therapy (at least 6 months) with multiple, potentially toxic drugs that can lead to adverse reactions in a significant number of patients, and there is considerable social stigma[4].

QOL, which can be defined as a person's perception of his or her physical and mental health, covers broad domains including physical, psychological, economic, spiritual and social wellbeing. QOL has become an accepted outcome measure in clinical research, and advances have been made in assessing the impact of many diseases on QOL [5].

OBJECTIVE:

To find the effect of Tuberculosis disease upon quality of life of patients who undergo Directly Observed Treatment Short Course (DOTS).

METHODOLOGY

Design of the study:

A descriptive design was carried out at Respiratory and Chest Diseases out Patients' Clinic, from Nov 20th, 2012 to July 11th, 2013, in order to find the impact of tuberculosis upon quality of life of patients who undergo directly observed treatment short course (DOTS). A non-probability (Purposive sample) of (60) tuberculosis patients. The data are collected through the use of constructed questionnaire, which consists of two parts. Part one; socio-demographic data form. Part two; main domains of the quality of life, which consist of six domains: physical, psychological, level of independence, social, environmental, and spiritual domain. Evaluation of the quality of life domain items by using grand mean of score (MS), through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively. The data collection process has been performed from February 13th, 2012 until the April 6th, 2012.

Statistical Analysis:

The data of present study were analyzed through the application of two statistical approaches. (1) Descriptive statistical approach that includes Frequency, Percentage Mean of Score, and Comparison Significant. (2) Inferential statistical approach that includes Chi-Square test , T. test. Results were determined as highly significant at ($P<0.01$) significant at ($P<0.05$) and non significant at ($P<0.05$).

RESULTS

Table (1): Distribution of the Tuberculosis Patients' Socio-Demographical Characteristics

Socio-Demographics	Groups	Frequencies	Percentage
Age Groups	20 -	12	20
	25 -	10	16.7
	30 -	11	18.3
	35 -	9	15
	40 - 45	18	30
Gender	Male	29	48.3
	Female	31	51.7
Residency	Urban	37	61.7
	Rural	23	38.3
Marital Status	Single	10	16.7
	Married	41	68.3
	Widowed	7	11.7
	Divorced	2	3.3
Level of education	Illiterate	34	56.7
	Reads and writes	11	18.3
	Primary school graduate	7	11.7
	Secondary school graduate	5	8.3
	Graduate study Prep	2	3.3
	College graduate &Higher Studies	1	1.7
Occupation	Government employee	4	6.7
	Free works	22	36.7
	Housewife	31	51.7
	Jobless	3	5
Socioeconomic Status	Low : 59 - & less	46	76.7
	Mod. :60 - 80	12	20
	High :81 – 100	2	3.3

Table (1) shows the observed frequencies, percentage, of the studied basic information and socio-demographical characteristics variables. Relative to subject of age groups, the majority of the sample were reported at age group (40-45 yrs), and they are accounted (30.0%). Female group are accounted (51.7%), while male group are recorded (48.3%). Most of them had urban residency (61.7%), while the rural residency (38.3%). Regarding to the marital status, the majority of the sample are married (68.3%). According to the level of education, the greater numbers of them (56.7%) are illiterate. Relative to subject of Occupation status, the results indicated that a highest percentage (51.7%) are housewife, regarding to the socioeconomic status the majority of the study sample were within Low category (76.7%).

Table (2): Frequencies, Percentages, Mean of Score, and comparison Significant Related to the Physical Domain Items

	Questions related to physical domain	Responses	Freq.	%	MS	CS
Physical domain						
1- Discomfort						
1	Discomfort due to pain	Never	33	55.0	1.52	HS
		Sometime	23	38.3		
		Always	4	6.7		
2	Discomfort during the transition from one place to another	Never	35	58.3	1.5	HS
		Sometime	20	33.3		
		Always	5	8.3		
2- Energy, Sleep						
1	Tiredness during the movement inside the house	Never	49	81.7	1.18	HS
		Sometime	11	18.3		
		Always	0	0.0		
2	Difficulty of sleeping	Never	39	65.0	1.35	HS
		Sometime	21	35.0		
		Always	0	0.0		
3- Signs and symptoms related to the disease						
1	Difficulty of breathing	Never	13	21.7	2.08	S
		Sometime	29	48.3		
		Always	18	30.0		
2	Cough	Never	22	36.7	1.75	S
		Sometime	31	51.7		
		Always	7	11.7		
3	Chest pain	Never	19	31.7	1.8	S
		Sometime	34	56.7		
		Always	7	11.7		
4	Fever	Never	1	1.7	2.08	S
		Sometime	53	88.3		
		Always	6	10.0		
5	Night sweats	Never	24	40.0	1.7	S
		Sometime	30	50.0		
		Always	6	10.0		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively.

This table reveals in light of mean of scores that the subjects responses in regarding to the (discomfort, energy and sleep) sub-domain were through interval (1-1.66) of the mean of score (good) at all items. In addition to that the study subjects responses to the (signs and symptoms) sub-domain, were through interval (1.67-2.33) of the mean of scores (moderate) at all items.

Table (3): Frequencies, Percentages, Mean of Score, and comparison Significant Related to the Psychological Domain Items

Questions related to psychological domain		Responses	Freq.	%	MS	CS
Psychological Domain						
1- Negative Emotions						
1	Feel anxiety	Never	7	11.7	2.15	S
		Sometime	37	61.7		
		Always	16	26.7		
2	Feel depression	Never	19	31.7	1.75	S
		Sometime	37	61.7		
		Always	4	6.7		
3	Feel despair	Never	24	40.0	1.67	S
		Sometime	32	53.3		
		Always	4	6.7		
4	Think of suicide attempt	Never	59	98.3	1.02	HS
		Sometime	1	1.7		
		Always	0	0.0		
2- Self Esteem						
1	I am a burden on others	Never	26	43.3	1.69	S
		Sometime	32	53.3		
		Always	2	3.3		
2	They pity me	Never	22	36.7	1.67	S
		Sometime	36	60.0		
		Always	2	3.3		
3- Thinking						
1	Thinking about the fate of disease	Never	2	3.3	2.73	NS
		Sometime	12	20.0		
		Always	46	76.7		
2	Thinking about inability to achieve business as I was previously	Never	40	66.7	1.43	HS
		Sometime	14	23.3		
		Always	6	10.0		
3	Thinking about my family's future	Never	9	15.0	2.53	NS
		Sometime	10	16.7		
		Always	41	68.3		
4	Thinking about fate of my work	Never	44	73.3	1.4	HS
		Sometime	8	13.3		
		Always	8	13.3		
5	Thinking about death	Never	5	8.3	2.7	NS
		Sometime	8	13.3		
		Always	47	78.3		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively.

This table reveals in light of mean of scores that the study subjects responses in regarding to the (negative emotions) sub-domain was through interval (1.67-2.33) of the mean of scores (moderate) at the items that their numbers (1, 2, 3), while at item number (4) the responding was through interval (1-1.66) of the mean of scores (good). In addition to that the study subjects responses to the (self-esteem) sub-domain was through interval(1.67-2.33) of the mean of scores (moderate) at all items. In addition to that the subjects responses to the (thinking) sub-domain was through interval (1-

1.66) of the mean of scores (good) at items numbers (2,4), while at items numbers (1,3,5) the responding was through interval (2.34-3) of the mean of scores (poor).

Table (4): Frequencies, Percentages, Mean of Score, and Comparison Significant Related to the Level of Independency Domain Items

Items of the studied questionnaire		Responses	Freq.	%	MS	CS
Level of Independency Domain						
Mobility and Travel						
1	Go to the health center for treatment	Never	24	40.0	1.65	HS
		Sometime	33	55.0		
		Always	3	5.0		
2	Travel independently without accompanying by anyone	Never	24	40.0	2.07	S
		Sometime	8	13.3		
		Always	28	46.7		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively

This table show in light of mean of scores that the study subjects responses to the (mobility and travel) sub-domain were through interval (1-1.66) of the mean of scores (good) at item number (1), while at item number (2) the responding was through interval (1.67-2.33) of the mean of scores (moderate).

Table (5): Frequencies, Percentages, Mean of Score, and Comparison Significant Related to the Social Domain Items

	Questions related to social domain	Responses	Freq.	%	MS	CS
Social Domain						
1- Entertainment (recreation)						
1	Participate with my family members in festivals and holidays	Never	13	21.7	2.32	S
		Sometime	15	25.0		
		Always	32	53.3		
2	Go to the tourist trips	Never	7	11.7	2.63	NS
		Sometime	8	13.3		
		Always	45	75.0		
3	Go to public parks	Never	7	11.7	2.63	NS
		Sometime	8	13.3		
		Always	45	75.0		
2- Social Relations						
1	Participate conversations with my family members	Never	27	45.0	1.6	HS
		Sometime	30	50.0		
		Always	3	5.0		
2	Visit relatives	Never	9	15.0	2.6	NS
		Sometime	6	10.0		
		Always	45	75.0		
3	Visit friends	Never	9	15.0	2.6	NS
		Sometime	6	10.0		
		Always	45	75.0		
4	Participate in the reception of guests and talk with ….	Never	9	15.0	2.45	NS
		Sometime	15	25.0		
		Always	36	60.0		
6	The presence with my family at mealtime	Never	35	58.3	1.43	HS
		Sometime	24	40.0		
		Always	1	1.7		
3- Sexual Relationship						
	I do not want to practice of sexual relationship	Never	19	31.7	2.32	S
		Sometime	3	5.0		
		Always	38	63.3		
4- Social Support						
1	Unable to present support for my family	Never	35	58.3	1.45	HS
		Sometime	23	38.3		
		Always	2	3.3		
2	Unable to present support for my friends	Never	36	60.0	1.43	HS
		Sometime	22	36.7		
		Always	2	3.3		
3	I do not get enough support from my family	Never	53	88.3	1.12	HS
		Sometime	7	11.7		
		Always	0	0.0		
4	I do not get enough support from my friend	Never	53	88.3	1.12	HS
		Sometime	7	11.7		
		Always	0	0.0		
5- Financial Status						
	The disease will adversely affect on financial level for my family	Never	37	61.7	1.63	HS
		Sometime	8	13.3		
		Always	15	25.0		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively.

This table reveals in the light of mean of scores, that the study responses to the (recreation) sub-domain was through interval (2.34-3) of the mean of scores (poor) at the items numbers (2, 3), while at item number (1) the responding was through interval (1.67-2.33) of the mean of scores (moderate). Also the subject's responses to the (social relationships) sub-domain was through interval (2.34-3) of the mean of scores (poor) at the items that their numbers (2,3, 4), while at items numbers (1,5) the responding was through interval (1-1.66) of the mean of scores (good). The study subjects responses to the (sexual relationships) sub-domain were through interval (1.67-2.33) of the mean of scores (moderate). Concerning the subjects responses to the (social support) sub-domain was through interval (1-1.66) of the mean of scores (good) at all items. Finally, in this table the study subjects responses to the financial status sub-domain were through interval (1-1.66) of the mean of scores (good).

Table (6): Frequencies, Percentages, Mean of Score, and Comparison Significant Related to the Environment Domain Items

	Questions related to environmental domain	Responses	Freq.	%	MS	CS
Environment Domain						
1- House Environment						
1	The disease will affect on my family health	Never	21	35.0	2.28	S
		Sometime	1	1.7		
		Always	38	63.3		
2	House area is not enough	Never	23	38.3	2.1	S
		Sometime	8	13.3		
		Always	29	48.3		
3	House ventilation is bad	Never	52	86.7	1.23	HS
		Sometime	2	3.3		
		Always	6	10.0		
4	House humidity level is not suitable	Never	53	88.3	1.2	HS
		Sometime	2	3.3		
		Always	5	8.3		
2- physical Environment						
1	Deterioration of my health status as a result of environmental pollution	Never	39	65.0	1.38	HS
		Sometime	19	31.7		
		Always	2	3.3		
2	Occurrence of disease complications as a result of environmental pollution	Never	39	65.0	1.35	HS
		Sometime	21	35.0		
		Always	0	0.0		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively.

The table shows, in light of mean of score that the study subjects responses to the (house environment) sub-domain were through interval (1.67-2.33) of the mean of score (moderate), at the items numbers (1,2), while at items numbers (3,4) the responding was through interval (1-1.66) of the mean of scores (good). In addition, regarding to the (physical environment) sub-domain the responses were through interval (1-1.66) of the mean of scores (good) at all items.

Table (7): Frequencies, Percentages, Mean of Score, and Comparison Significant Related to the Spiritual Domain Items

	Questions related to spiritual domain	Responses	Freq.	%	MS	CS
Spiritual Domain						
1- Negative Thinking						
1	The disease is a punishment from God	Never	38	63.3	1.38	HS
		Sometime	21	35.0		
		Always	1	1.7		
2	The disease has affected on my religious activities	Never	37	61.7	1.4	HS
		Sometime	22	36.7		
		Always	1	1.7		
3	The disease has affected on my faith	Never	48	80.0	1.22	HS
		Sometime	11	18.3		
		Always	1	1.7		
4	We must not forgive others	Never	59	98.3	1.02	HS
		Sometime	1	1.7		
		Always	0	0.0		
2- Positive Thinking						
1	The disease is a test from Allah	Never	1	1.7	1.52	HS
		Sometime	29	48.3		
		Always	30	50.0		
2	Disease will reduce of my sins	Never	1	1.7	1.55	HS
		Sometime	31	51.7		
		Always	28	46.7		
3	I must be patience	Never	0	0.0	1.37	HS
		Sometime	22	36.7		
		Always	38	63.3		

F= frequency, %= percentage, M.S. = mean of scores, CS= Comparison Significant, evaluation of scores through intervals (1-1.66) good, (1.67-2.33) moderate, and (2.34-3) poor, as well as (HS), (S), and (NS) respectively.

The table shows in light of mean of scores that the study subjects respondents to both (negative and positive thinking) sub-domains were through interval (1-1.66) of the mean of scores (good) at the all items.

DISCUSSION

The findings of the present study indicated that the majority of the sample (51.7%) were females. This result comes along with Othman et. al., reported that the majority of the study sample were female (57.4%)[6]. We know that the most of TB patients living in the community rather than in hospital or their own center (isolated), and because female (Mother, wife, sister, etc) are more contact with the patient in terms of caring, treatment, catering. The majority of the study sample (61.7%) living at urban residential area. This result agree with Amare et. al., reported that the result of this study indicated that the majority of study sample (61.8%) living in urban[7]. Because urban area characterized by abundance crowded and environmental pollution such as (smolder of factories and cars, etc.) All of these factors help to prevalence of TB.

Relative to marital status, the majority of study sample (68.3%) were married. This result agree with Masood et. al., reported that study findings indicated that the majority of the study sample are married (78.3%)[8]. The high casualty rate among married couples means that the disease is the result of transmission between spouses.

The majority of the study sample was illiterate (56.7%). This result is agrees with Dhuria et. al., reported that the majority of the study subjects are illiterate (48%)[9] . People who are not educated they have not health awareness, which leads to a lack of compliance to vaccination, health advices, and health programs.

Regarding occupational status, the majority of study sample (51.7%) are housewife. this result agree with Hussain et. al., which reported that the majority of sample were house wife (41%)[10]. most patients with TB treated at home that is means the housewife is more susceptible to infection than others.

Relative to socio-economic status, the majority of the study sample is within Low category (76.7%). this result agree with Jethani et. al., the findings of this study indicate that the majority of the study sample (90.3%) were belonged to low socio-economic status[11]. So-called TB (poor people disease).

The result of the present study show that the response of sample regarding to the physical domain were good evaluation. Many studies results such Guo, et. al., indicated that the first positive effect during treatment appears on the physical domain[12]. In addition moderate evaluation for social, psychological and level of independency domains in light of study subject responses having moderate evaluation. Moreover the environment and spiritual domains, having good evaluation. In fact when we examine something among the Iraqis people, we must stand with respect for those people who are being patience against all of wars and conflicts, and the specific reason for this, we think that because they are still characterized by some morals and believe which direct their feelings and behavior. Present study agrees with Guo, et. al. (2009), that the tuberculosis had a substantial and encompassing impact on patients' quality of life [12]. Overall, the anti-tuberculosis treatment had a positive effect of improving patients' quality of life; their physical health tended to recover more quickly than the mental well-being. However, after the patients successfully completed treatment and were microbiologically cured, their quality of life remained significantly worse than the general population.

Aggarwal (2010), the impact of any disease, especially a chronic illness like tuberculosis, on an individual patient is therefore often all-encompassing, affecting not only his physical health but also his psychological, economic, and social well-being. Our findings suggest that HRQoL is markedly impaired across all domains in patients of pulmonary tuberculosis and improves rapidly and substantially with anti-tubercular therapy[13].

CONCLUSION:

The present study concludes that tuberculosis affect on the patients quality of life domains, the maximum effect presented by the social domain, followed by the psychological domain, level of independence domain, then the physical domain. Tuberculosis most common occurs among persons in urban residential area than in those in rural, females more than males. Tuberculosis most common occur among persons low level of socio-economic status, and education.

RECOMMENDATION:

The study recommended that necessary to do health educational programs to increase health awareness among peoples who attendants the outpatient clinics and special health centers for tuberculosis disease, As well as the use of mass media by the health authorities.

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