Quality of life of outpatients with schizophrenia from Urban and Rural areas in Baghdad

Mohammed Dawood Jassam* Ali Hussain Al-Aamry** Ali Ibrahim Hamdan*** Gazi abod Al-mishhadani****
*,**,****Al Rashaad Mental Hospital,*** Almosul General Hospital
E-mails': mohammedga@yahoo.com, alipsych1957@yahoo.com, alihm73@yahoo.com, ghazi957@yahoo.com
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الخلاصة:

إن ازدياد الاهتمام بدراسة نوعية الحياة يعتبر من التوجهات الحديثة لفهم وتحسين طبيعة الرعاية الصحية .ورغم أن هناك دراسات متعددة حول طبيعة حياة المريض المصاب بالاضطراب الفصامي ألا انه لا يزال هناك شحه في المعلومات عن طبيعة حياة المرضى الفصاميين الذين يعيشون في المناطق الحضرية والريفية بشكل مفصل .

الأهداف:

1-دراسة طبيعة الحياة للمرضى الفصاميين الذين يعيشون في كل من المدينة والريف .

2-لاستنباط أي عوامل جديدة محتملة والتي قد ينبغي الانتباه إليها عند وضع برامج الخطط العلاجية .

العينة وطريقة البحث :

تمت هذه الدراسة في الفترة ما بين تشرين الثاني لعام 2010 وشهر مايس لعام 2011 .تكونت العينة من 126 مريض مصاب بالفصام (66 من الذكور ، 60 من الإناث)والذين يراجعون العيادة الخارجية في مستشفى الرشاد التدريبي للطب النفسي .تم إفهام المرضى الهدف من الدراسة وتم اخذ موافقتهم على ذلك .تم انتقاء المرضى الذين كانت حالتهم العقلية مستقرة (والذين هم مواظبون على علاج منتظم ولمدة ستة أشهر على الأقل ولم يكونوا في حالة اهتياج أو تشويش)

تم استخدام قائمة التشخيص العالمية النسخة العاشرة (ICD-10) واستبيان نوعية الحياة لمنظمة الصحة العالمية/النسخة العربية .

النتائج :

أشارت النتائج إن المرضى الذين يقطنون المناطق الريفية سجلوا نتائج ذات مدلول إحصائي عالي في مقياس نوعية الحياة للحقول التالية(الصحة البدنية،الصحة النفسية ،مستوى الاستقلالية ،العلاقات الاجتماعية، الظروف البيئية ،والقيم الروحية)

وعند دراسة المتغيرات الاجتماعية السكانية وربطها بنوعية الحياة أظهرت الدراسة نفس النمط والنتائج .

الاستنتاج :

أظهرت هذه الدراسة إن المرضى الفصاميين الذين يعيشون في الريف يعيشون بنوعية حياة نسبيا أفضل من الذين يعيشون في المدن .

Abstract:

Background:

Increasing interest in quality of life is the new approach for understanding and improvement of healthcare. Although there are many studies about quality of life in schizophrenic disorder, there is deficiency of data about quality of life of schizophrenic patients in urban and rural areas.

Objectives:

1-To study the quality of life of schizophrenic patients who are living in both rural and urban areas.

2-To identify any possible factors that might need further attention for treatment planning programs.

Methods:
This study was prospectively conducted between October 2010 and May 2011, on 126 schizophrenic patients attending the outpatient clinic in Al-Rashaad training Hospital.we explain the purpose of the study to patients and take their consent; patients should have stable clinical condition (on regular treatment for at least 6 months, continuous course, not agitated or confused). International Diagnostic check list of (ICD 10)[9] andWorld Health Organization(WHO)Quality of life (QoL)-100 Arabic version[10] were used.

Results:
Patients from rural areas scored significantly higher than urban patients in all six domains (Physical health, Psychological health, Level of independence, Social relationships Environmental, and Spiritual domain) . Studying different demographic variables in correlation with quality of life ,showed the same manner .

Conclusion:
This study showed that schizophrenic patients living in rural areas, had relatively better quality of life than those living in urban areas.

Introduction:

Interest in quality of life increase in the last decade as an approach for understanding and improvement healthcare; WHO define quality of life as individuals' perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectation, standards and concerns.[1]

Quality of life (QOL) is now seen as a key outcome variable in schizophrenia and therefore it should serve as a criterion for treatment planning and measuring the outcome of the treatment. The study of quality of life (QoL) and the focus on patients' subjective sense of well-being is a fairly new phenomenon that has attracted professional attention only within the past two decades. The initial interest was aimed at assessing the impact of moving patients into the community on health related Q.o.L , but the development of antipsychotic drugs resulted in the adoption of more wide-reaching measures of Q.o.L as a key therapeutic outcome in schizophrenia[2] .

The importance of our study, is to describe quality of life of schizophrenic patients in tow setting: living in urban and rural areas which will help in understanding the effect of culture and place of living on the outcome of schizophrenic disorder .

Previous studies take other settings or variables: Carl I. Cohen and coworkers,[3] found that there are many significant differences in quality of life between the older schizophrenic persons and community- comparison group with respect to the predictor variables, schizophrenic persons were significantly more likely to have functional impairment, higher levels of acute stressor, higher scores on lifetime trauma, more financial strain and more depressive symptoms.

In a community study of health-related quality of life of schizophrenia and general practice outpatients in Singapore[4] , to examine determinants of schizophrenia, 90% of schizophrenia outpatients still lived with their immediate families, but the majority were single, unemployed, and rarely engaged in social activities. They had poorer satisfaction with overall Q health related QoL compared to general practice outpatients.

Chan et al[5], in a study of QoL of clients with schizophrenia found that many of them are cared for in the community after the trend of deinstitutionalization in Hong Kong since 1980s. Most of them were single and unemployed. They were least satisfied with their psychological health, financial situation, life enjoyment and sexual activity and from stigma and discrimination.

Schmidt, et al[6] , in their study to evaluate the QOL of 164 schizophrenic outpatients found the majority of patients were moderately happy with their general QOL. They were least satisfied in the domains of job and financial situation, mental health and sexuality. Psychopathology and especially the quality of individual care had a significant influence on the evaluation of QOL.

Kurs et al[7] , in a comparative study of 47 schizophrenia outpatients, 47 non-affected siblings .As expected, schizophrenia patients reported significantly poorer QoL in most specific domains than both their siblings and controls.

Schmidth K. and colleagues[8] studied the quality of life of schizophrenic patients for the treatment planning in psychiatric institution, they found majority of patients were moderately happy with their general quality of life; least satisfied in the domains of job, financial situation, mental health and sexuality.

Patient and methods :

This study was prospectively conducted between October 2010 and May 2011, on 126 schizophrenic patients attending the outpatient clinic in Al-Rashaad training Hospital.we explain the purpose of the study to patients and take their consent; patients should have stable clinical condition (on regular treatment for at least 6 months, continuous course, not agitated or confused). International Diagnostic check list of (ICD 10)[9] andWHOQoL-100 Arabic version[10] were used. The WHOQoL is now available in over 20 differentlanguages,translation and back translation to Arabic language and implementation of the WHOQoL-100 took place in 2000[11],

Data analysis:

Descriptive statistical methods, like mean and standard deviation, also T-test of significance, were used for data analysis, P-value< 0.05 regarded statistically significant difference.

Results:The results are shown in the following tables .

Table (1) Demographic characteristics of schizophrenic groups.

Demographic Factors		Schizophrenic patients urban areas group n=72		Schizophrenic patients rural areas group n=54	
Gender	Males	40	55.5%	26	48.1%
	Females	32	44.5%	28	51.9%
Age	15-34	9	12.55	16	29.6%
	35-54	38	52.8%	24	44.4%
	>54	25	34.7%	14	25.9%
Marital Status	Married	14	19.4%	20	37%
	Single	35	48.6%	22	40.7%
	Widowed, Divorced, Separated	23	31.9%	12	22.2%
Educational level	none	21	29.2%	14	25.9%
	Primary school	21	29.2%	27	50%
	Secondary school and more	30	41.7%	13	24.1%
Occupation	Workers	22	30.6%	25	46.3%
	Unemployed	25	34.7%	19	35.2%
	Unable to work	25	34.7%	10	18.5%
Financial resources	Satisfactory	28	38.9%	34	63%
	Unsatisfactory	44	61.1%	20	37%

<u>Sample description:</u> (72) schizophrenic patients from urban area and (54) from rural area were selected to conduct this study .

Sociodemographic characteristics: in table (1)

1-Gender:55.5% of urban schizophrenic patients were male while 51.9% of rural schizophrenic patient were female

2-Age group: the prominent age group was of 35-54 years in both sample groups (52.8% of the urban and 44.4%of rural)

3-Marital status: although being single is prominent in both group (48.6% and 40.7%for urban and rural successively) but the married patients in rural areas are relatively higher than in urban area (37% and19.4%successivly)

4-Educational level: 41.7% of urban group in secondary school and more, while 24.1% of rural group had reached this level of education .

5-Occupation: the rural patients scored higher than urban patients in being workers 46.3% and30.6% successively . The important feature is that the urban patients also scored higher than that of rural area in expressing their usability to work if the chance to work is available (34.7% and 18.5% successively)

6- Financial resources: the urban group with unsatisfactory financial resources were higher than rural group (61.1% and 37% successively)

Table (2) the distribution of the domain mean sores and standard deviation(SD) of the WHOQOL-100 in urban and rural areas groups.

Domains	Urban areas group **N=72** Means (SD)	Rural areas group **N=54** Means (SD)	**T test**	**P value**
I- Physical health	11.7 (2.9)	12.7 (2.2)	2.117	0.0362
II- Psychological health	11.4 (2.4)	12.2 (2.0)	1.986	0.0493
III-Level of independence	11.3 (2.1)	12.1 (2.4)	1.990	0.0488
IV- Social relationships	10.7 (2.7)	11.7 (2.9)	1.993	0.0485
V- Environment	10.2 (2.4)	11.1 (2.1)	2.196	0.0300
VI- Spiritual domain	9.9 (4.8)	11.9 (3.1)	2.671	0.0086

D F=124

<u>Regarding the domains difference between the tow study groups :</u>

As shown by table (2),patients from rural areas scored significantly higher that of urban patients scores in all six domains (Physical health, Psychological health, Level of independence , Social relationships, Environmental ,and Spiritual domain)

Table (3): The distribution of the domains mean scores and standard deviation according to gender in urban and rural areas groups.

DOMAINS	Males			Females		
	Urban N=40 Mean (SD)	Rural N=26 Mean (SD)	P value	Urban N=32 Mean (SD	Rural N=28 Mean (SD)	P value
I- Physical health	11.5(3.0)	11.5(2.3)	**1.000**	11.9(2.8)	12.8(2.1)	**0.169**
II- Psychological health	10.7(2.6)	11.9(1.9)	**0.047**	11.7(2.2)	12.4(2.4)	**0.243**
III-Level of independence	11.8(2.2)	12.3(2.6)	**0.404**	12.5(1.9)	11.1(2.2)	**0.011**
IV- Social relationships	10.7(2.9)	9.9(3.1)	**0.290**	10.7(2.5)	12(2.6)	**0.053**
V- Environment	10.6(2.4)	10.4(1.9)	**0.721**	9.6(2.4)	9.8(2.4)	**0.749**
VI- Spiritual domain	9.6(4.7)	11.7(3.4)	**0.054**	10.1(4.7)	11.9(2.9)	**0.016**

Regarding domains difference according to gender **:** As shown by table (3), the male rural schizophrenic patients scored significantly higher than that of urban ones in psychological health and spiritual domains. While the rural female schizophrenic patients scored significantly higher than urban female in level of independence, social relationships and spiritual domains,

Table (4): The distribution of the domains mean scores and standard deviation according to age group in urban and rural areas groups.

DOMAINS	15 -34 years			35-54 years			> 54 years		
	Urban N=9 Mean (SD)	Rural N=16 Mean (SD)	P value	Urban N=38 Mean (SD	Rural N=24 Mean (SD)	Significance Of difference at p= 0.05	Urban N=25 Mean (SD)	Rural N=14 Mean (SD)	P value
I- Physical health	**11 (2.0)**	**13.7 (3)**	**0.025**	**11 (1.9)**	**12.9 (1.5)**	**0.0001**	**11.6 (1.8)**	**12 (1.8)**	**0.510**
II- Psychological	**11.8**	**12**	**0.815**	**11.3**	**12.4**	**0.0710**	**11**	**11.5**	**0.460**

health	(2.4)	(1.8)		(2.6)	(1.7)		(2.3)	(1.3)	
III-Level of independence	12.4 (1.4)	11.9 (1.2)	0.355	12 (1.8)	11.7 (1.2)	0.4740	12.2 (1.7)	11.5 (1.7)	0.225
IV- Social relationships	9.5 (1.5)	11 (1.7)	0.038	11 (2.0)	11 (1.6)	1.0000	10.7 (1.6)	10.5 (2.2)	0.199
V- Environment	9.6 (1.8)	10.7 (2.1)	0.200	10.6 (1.3)	10 (2.2)	0.1820	10.4 (1.1)	9.6 (1.6)	0.073
VI- Spiritual domain	10 (2.2)	12.2 (1.1)	0.011	9.6 (2.7)	11.7 (1.7)	0.0004	9.2 (1.9)	11.8 (1.4)	0.000

Regarding domains difference according to age groups: As shown in table (4), it is found that the rural age group between (15-34 year old) scored significantly higher than of urban group in physical health, Social relationships and Spiritual domain. While the rural age group (35-54 years old) scored only higher in the spiritual domain than that of urban schizophrenic patients of the same age group. Also the rural age group> 54 years scored higher than that of urban group of the same age in spiritual domain, and in both two previous groups the differences were significant,

Table (5):The distribution of the domains mean scores and standard deviation according to marital status in urban and rural areas group.

DOMAINS	Married			Single			Divorced, widowed and separated		
	Urban N=14 Mean (SD)	Rural N=20 Mean (SD)	P value	Urban N=35 Mean (SD	Rural N=22 Mean (SD)	P value	Urban N=23 Mean (SD)	Rural N=12 Mean (SD)	P value
I- Physical health	13.0 (1.2)	12.7 (1.7)	0.574	11.5 (1.1)	13.0 (1.8)	0.0003	11.0 (1.4)	12.2 (1.4)	0.020
II- Psychological health	11.8 (0.1)	12.0 (1.2)	0.540	11.2 (0.9)	12.8 (1.8)	0.000	10.8 (1.7)	12.0 (2.2)	0.082
III-Level of independence	12.5 (1.6)	11.5 (0.9)	0.027	12.2 (1.8)	12.2 (2.4)	1.000	12.0 (2.7)	11.2 (2.4)	0.394
IV- Social relationships	12.0 (1.4)	11.0 (1.5)	0.058	10.8 (1.6)	11.5 (1.6)	0.114	10.0 (1.8)	10.3 (1.6)	0.630

V- Environment	10.4 (1.2)	10.4 (2.1)	1.000	9.8 (2.0)	10.2 (1.3)	0.409	11.3 (2.2)	10.7 (1.7)	0.416
VI- Spiritual domain	9.3 (2.2)	12.8 (2.1)	0.0001	9.0 (1.2)	11.4 (2.2)	0.000	9.0 (2.4)	11.8 (1.9)	0.0006

Regarding domains difference according to the marital status:As shown in table (5) the study showed generally that the urban married schizophrenic patients scored significantly higher that of rural groups in level of independence and social relationships domains, but not in spiritual domain in which the rural patient was dominating. But being single was mostly going with side of rural group.

Table (6): The distribution of the domains mean scores and standard deviation according to educational level in urban and rural areas groups.

DOMAINS	None			Primary			Secondary and higher		
	Urban N=21 Mean (SD)	Rural N=14 Mean (SD)	P value	Urban N=21 Mean (SD)	Rural N=27 Mean (SD)	P value	Urban N=30 Mean (SD)	Rural N=13 Mean (SD)	P value
I- Physical health	10.4 (1.9)	12.6 (2.4)	0.004	11.5 (1.0)	12.0 (2.0)	0.300	12.6 (1.8)	13.7 (1.4)	0.0572
II- Psychological health	11.0 (2.4)	11.8 (1.4)	0.269	11.4 (1.9)	12.3 (1.7)	0.091	11.2 (2.1)	12.5 (1.6)	0.0532
III-Level of independence	11.5 (1.7)	11.0 (1.8)	0.411	12.7 (3.0)	11.9 (1.8)	0.257	12.0 (1.4)	12.2 (2.0)	0.708
IV- Social relationships	10.8 (1.3)	11.4 (1.3)	0.191	10.1 (1.4)	10.8 (1.2)	0.069	11.0 (1.8)	11.0 (1.3)	1.000
V- Environment	10.0 (2.4)	10.3 (2.2)	0.711	10.8 (1.6)	10.1 (1.8)	0.168	10.5 (2.2)	9.8 (1.5)	0.303
VI- Spiritual domain	9.3 (1.8)	11.6 (1.8)	0.0008	9.0 (2.2)	12.0 (1.2)	0.000	9.4 (1.9)	11.8 (0.8)	0.000

Regarding the domains difference according to educational level of the tow study groups as shown by table (6): The increasing level of education reflected good outcome in the rural group and in different domains.

Table (7):The distribution of the domains mean scores and standard deviation according to job in both groups

DOMAINS	workers			Unemployed			Unable to work		
	Urban N=22 Mean (SD)	Rural N=25 Mean (SD)	P value	Urban N=25 Mean (SD)	Rural N=19 Mean (SD)	P value	Urban N=25 Mean (SD)	Rural N=10 Mean (SD)	P value
I- Physical health	12.5 (1.9)	13.6 (1.6)	0.037	11.2 (1.9)	12.4 (2.1)	0.0539	10.0 (1.3)	11.7 (2.2)	0.007
II- Psychological health	11.9 (2.3)	13.1 (1.9)	0.0564	11.1 (1.8)	11.9 (2.0)	0.171	10.4 (1.4)	11.0 (1.8)	0.299
III-Level of independence	12.4 (2.3)	12.7 (1.4)	0.598	11.8 (2.0)	11.5 (1.6)	0.595	11.3 (1.8)	10.9 (1.4)	0.534
IV- Social relationships	10.8 (1.7)	10.9 (2.1)	0.859	10.5 (2.0)	11.1 (1.6)	0.289	11.0 (2.4)	11.0 (2.4)	1.000
V- Environment	10.6 (2.3)	10.1 (1.8)	0.408	10.2 (1.6)	1O.2 (1.7)	1.000	10.5 (1.4)	9.7 (1.9)	0.178
VI- Spiritual domain	9.1 (2.0)	12.3 (2.1)	0.000	9.2 (2.3)	11.6 (1.6)	0.0002	9.2 (1.8)	11.2 (2.3)	0.019

Regarding the domains difference according to job of the tow study groups:As shown in table (7),the rural schizophrenic patients who were workers scored significantly higher than that urban group in most domains.

Table (8): The distribution of the domains mean scores and standard deviation according to financial resources in urban and rural areas groups.

DOMAINS	Satisfactory income			Not satisfactory		
	Urban N=28 Mean(SD)	Rural N=34 Mean(SD)	P value	Urban N=44 Mean(SD)	Rural N=20 Mean(SD)	P value
I- Physical health	12.5 (2.5)	13.7 (2.3)	0.054	11.1 (2.2)	12 .2 (1.8)	0.055
II- Psychological health	12.2 (1.5)	13.1 (1.2)	0.011	10.4 (1.3)	11.6 (1.3)	0.001
III-Level of independence	13.1 (2.4)	12.3 (2.5)	0.207	11.3 (2.7)	11.3 (2.4)	1.000
IV- Social relationships	10.9 (1.8)	11.0 (1.6)	0.818	11.0 (1.9)	11 (1.7)	1.000
V- Environment	10.3 (1.6)	9.9 (1.4)	0.298	10.6 (1.7)	10.2 (1.6)	0.378
VI- Spiritual domain	9.2 (1.8)	11.9(1.9)	0.000	9.1 (1.8)	11.6 (1.8)	0.000

Regarding the domains difference according to financial resources of the tow study groups: As shown in table (8), the rural schizophrenic patient group who were with satisfactory income scored significantly higher than that urban group in, (physical health, psychological health and spiritual domains).Surprisingly the rural group who were with unsatisfactory income also scored significantly higher for the same domains in comparison with urban group,

Discussion:

This cross sectional study represented two samples of schizophrenic outpatients living in the community but in different cultures, urban and rural cultures, who were explored to find the effect of quality of life on both of them.

In reviewing the demographic variable :Table (1) it was found that number of females or males patients was not conclusive in both samples.The prominent age group in both sample was for the age group (35-54).19.4% of urban sample were married, while 37% of rural sample who were married. Patients who are living in rural area and according to Iraqi rural well know norms, have easier chance to be married than to be divorced. Rural schizophrenic patients' educational level was lower than that of urban area and this is also expected in Iraqi rural area.

The schizophrenic patients in rural area scored higher in occupational and financial resources than that of urban area and this may be due to fact that rural culture give more opportunity for non skillful work, than relatively professional, skillful ones needed in urban area, which is not easily accessible.

However, generally both groups showed lower accepted level of being married or keeping work, this result is consistent with study of Tan HY,etal. [4], and to that study of NasreenKhatri,etal[12].

This study compared the effect of QoL on different domains in life of rural and urban schizophrenic patients.Most of schizophrenic patients from urban and rural areas scored badly on the above questionnaire ,it represent a negative effect of schizophrenic disorder on QOL ,this result is in the line with other studies[4,5,7,8] .

However patients from rural areas scored better than patients from urban areas on all domains of quality of life,table (2) and the difference was significant ; this may point to that, rural culture has good effect on such type of patientsthese results wereconsistent with study of E. S. PAYKEL ,etal[13],who concluded that urban subjects had higher rates than rural of psychiatric morbidity.

The effect of gender within different domains of QoL, table (3); rural males scored higher than urban males on domains.of psychological health and spiritual domains. The results were significantlydifferent ; also rural females scored better than urban females on domains of social relationship and spiritual domain which were also significantly different; this is also in favor of better outcome for that group living in rural areas .

The highly significantly scored physical and spiritual heath of younger aged patients in rural areas as compared with counterpart of urban patients were fading with increasingage, table (4), this result in the line with that obtained by study of; Carl I. Cohen and coworkers.[3] who found that older schizophrenic persons were significantly more likely to have functional impairment, higher levels of acute stressor, higher scores on lifetime trauma, more financial strain and more depressive symptoms.

The effect of marital status on different domains of quality of life gave apparently contradicting result table (5),in which married urban scored better than counterparts married rural patients on domains of;(level of independence and social relationship) but not for that of spiritual domain which the rural group was scored significantly higher,this, may be due to quality of marriage which is generally established is better standards in urban area, and if it is maintained it gives good support for mentally ill patients , conversely single rural patients scored better than single urban on physical , psychological and spiritual health domains and the difference was significant, this may be due to effect of cultural difference .

The good (physical, psychological and spiritual heath) in rural patients with secondary and higher education table (6) were pointing to good outcome in those with increasing level of education.

Rural worker patients group significantly scored better than urbancounterpart; this in favor of better outcome for working group. But this effect fade in non working patients for both cultures, table (7).This is referred to negative effects of schizophrenic illness on quality of life especially among not working and unable to work groups, similar result was reported by study of Schmidt, et al[6].

Rural areas patients with satisfactory income ,table(8)scored better than urban on domains for physical health ,psychological health ,and spiritual domain ;this effect remain significantly different even with those with unsatisfactory income, this may be due to cultural effect on QoL .However level of independence scoring is still not significant for both factors(satisfactory and unsatisfactory income)and in both study groups, probably due to negative effect of schizophrenia on quality of life.

This result is consistent with study of Malm and colleagues[14].

Conclusion

Although it is well know that schizophrenia as amajor mental illness has its negative impact on the quality of life of all sufferers, but still there are some factors which can ameliorate the situation. This study showed that schizophrenic patients living in rural area had relatively better quality of life than those living in urban area, exploring different domains of quality of life like physical health, psychological health, level of independence ,social relationship ,environmental and spiritual domains, supported that hypothesis, more confirmation was done by studying different demographical variables in correlation with quality of life, it showed that ,rural patients scored significantly higher than urban patients in regarding to different correlation variable like e.g. marital status, job and financial resources

References

1-WHOQOL group. Study protocol for the World Health organization project to develop a Quality of life assessment instrument (WHOQoL).quality of life research19932,153-159,.

2.Louise Gee , Emma Pearce and Mike Jackson :,Quality Of Life in schizophrenia : A grounded theory approach . BioMedCentral .Health and Quality Of Life Out come , 2003, 1:31

3. Carl I. Cohen, M.D., Paul M. Ramirez, Ph.D., Michelle Kehn, M.A., Carol Magai, Ph.D., Joseph Eimicke, and Ronald Brenner, M.D. Assessing Quality of Life in Older Persons With Schizophrenia; Am J Geriatr Psychiatry December 2003;,11:658-666,

4.Tan HY, Choo WC, Doshi S, Lim LE, Kua EH: A community study of the health-related quality of life of schizophrenia and general practice outpatients in Singapore. Soc Psychiatry PsychiatrEpidemiol. 2004 Feb;39(2):106-12

5. Chan S, Yu IuW: Quality of life of clients with schizophrenia. J AdvNurs. 2004 Jan;45(1):72-83

6. Schmidt K, Staupendahl A, VollmoellerW : Quality of life of schizophrenic psychiatric outpatients as a criterion for treatment planning in psychiatric institutions. Int J Soc Psychiatry. 2004 Sep;50(3):262-73.

7. Kurs R, Farkas H, Ritsner M: Quality of life and temperament factors in schizophrenia: comparative study of patients, their siblings and controls. Qual Life Res. 2005 Mar;14(2):433-40

8. Smidt K, Staupendahl A, Vollmoeller W; QoL of schizophrenic patients as a criterion for treatment planning in psychiatric institutions; Int J Soc Psychiatry. 2004 Sep; 50(3):262-73.

9.World Health Organization. International Statistical Classification of Diseases and Related Health Problems.Rev.10.(ICD-10).Geneva,Switzerland:World Health Organization,1992.

10. WHOQoL-100 - Arabic version-;Al-escanderia Medical collage-Egypt(web site).

11-Skevington-S.M ,Measuring quality of life Britain; Introducing The WHOQoL-100-jpsychosom- Research. 1999, Nov;47(5)449-59,

12. NasreenKhatri ., David M. Romney . and Guy Pelletier: American Psychiatric Association, Validity of Self-Reports About Quality of Life Among Patients With Schizophrenia PsychiatrServ ,April 2001, 52:534-535

13. E. S. PAYKEL , R. ABBOTT , R. JENKINS , T. S. BRUGHA and H. MELTZER: Urban–rural mental health differences in Great Britain: findings from the National Morbidity Survey Psychological Medicine March 2000; / Volume 30 / Issue 02 / , pp 269-280

14. Malm U, May P, Dencker S: Evaluation of the quality of life in schizophrenic outpatients: A checklist. Schizophr Bull 1981; Volume 7: pp 477-486,.