SOCIODEMOGRAPHIC DETERMINANTS OF QUALITY OF LIFE AMONG PATIENTS WITH MAJOR DEPRESSIVE DISORDERS

[1,2]Davou F John, [2,3]Moses D Audu, [2]Armiya'u A Yushau, [2]Tungchama F Philip, [2,3]Suwa G Go'ar, [2,3]Maigari Y Taru, [2,3]Piwuna G Christopher

[1]Department of Psychiatry, University of Abuja, Gwagwalada, Abuja, Nigeria.
[2]Department of Psychiatry, Jos University Teaching Hospital (JUTH), Jos, Plateau State, Nigeria
[3]Department of Psychiatry, University of Jos, Plateau State, Nigeria.

Corresponding author:
Dr. Davou Francis John,
Department of Psychiatry, Jos University Teaching Hospital,
E-mail: davoufj@yahoo.com,
Phone:+2348096313456

ABSTRACT

Background: *Improving Quality of Life (QOL) is the ultimate goal of treatment for patients with depression. A large store of studies have shown that depression affects the overall quality of life of patients due to its negative impact on mood, energy and pleasure. Though the effects of depression is well documented, evidence also revealed that sociodemographic variables such as age, gender, education, income etc. may also predict quality of life. The aim of the study was to determine the impact of sociodemographic factors on the quality of life depressed patients and also to assess the predictors of patients' subjective QOL.*

The aim of this study is to determine the impact of sociodemographic factors on the quality of life of depressed patients, and also to determine the predictors of patients' subjective QOL.

Methodology: *This is a cross-sectional study of depressed outpatients over a period of 6 months. Sociodemographic variables was obtained using a self-reported questionnaire designed by the researchers. Diagnosis of depression as well as severity of depression were assessed with the Mini International Neuropsychiatric Interview questionnaire and Hamilton Rating Scale for depression respectively. Quality of life measures was assessed with the World Health Organization Quality of Life Brief Version (WHOQOL-BREF). One hundred patients were recruited for the study.*

Results: *As many as 64.0% of the subjects were females while 36.0% were males. The mean age of the subjects was 39.78 years (SD±13.36). Maximum income of subjects was N50,000.00 ($139.00) per month. Among the subject, 42.0% were still depressed with majority (61.9%) in remission, 26.2% in mild, 7.1% in moderate and 4.8% in severe stages of depression. Overall QOL with respect to sociodemographic factors was statistically significant (P=0.001). Gender (P=0.001), age (P<0.001), marital status, (P<0.0010), and number of depressive episodes all yielded significant outcome.*

Conclusion: *Depression is a debilitating illness which reduces general wellbeing. Improving social and economic factors which adds to further impair QOL as revealed by our study will reduces the added burden on the patient.*

Keywords: *Major Depression, Quality of Life, Determinants.*

INTRODUCTION

Quality of life (QOL) has been a subject of relevance with regards to issues concerning mental health and mental illness.The basic concept of QOL emphasizes the patient's subjective appraisal of their own satisfaction. Self-evaluations by people with psychiatric disorders were previously thought to lack reliability because of the presence of psychopathological symptoms and poor awareness of the disease[1]

Felce and Perry[2] defined quality of life as an overall sense of well-being comprised of both subjective and objective evaluations of physical, material, social and emotional well-being together with personal development and purposeful activity.The subjective quality of life refers to level of satisfaction of a person with his or her living situation and general well-being while objective QOL pertains to how well the patient functions in social settings and daily activities[3].

At a minimum, QOL covers persons' sense of well-being; which often includes how they are doing (functional status), and what they have (access to resources and opportunities).

Depressive disorders are common illnesses affecting about 15% of the general population[4]and are associated with relatively long duration of episodes, high rates of chronicity, relapses and recurrence[4,5].

A correlation has been notedbetween the QOL of patients suffering from depression and socio-demographic factors including age and gender[6-11], the intensity of depressive symptoms[6,8-13] and social support[8,14,15]. In this part of the world where poverty, hunger and disease prevails, quality of life outcomes may be worse for depressed patients. These patients are faced with the challenge of unemployment (thus unable to sustain their healthcare needs) and survival in a tense political, religious and economic environment.

Omer et al[16] while studying the QOL of depressed patients in relation to that of the general Turkish population, found that all the domains (P<0.0001) of quality of life were impaired among the depressed group. In the same study, they also found out that patients with recurrent depressive disorders had poorer QOL than those with single episodes. Females were reported to also experience poorer QOL (P<0.001) compared to males.

Furthermore,in a study on factors related to Quality of Life in depressed outpatients in Taiwan, Su-Ching et al[17]reported that the severity of depression is most consistently associated with influential factors in various dimensions of Quality of Life. Those participants with higher Hamilton Rating Scale for Depression (HRSD) scores on depression had poorer Quality of Life in the physical, psychological, social relationship, and environmental domains.

In a more recent study by the Author, Davou et al[18] used the WHOQOL-BREF in their study to determine the subjective QOL in outpatients with depression, they found that the mean QOL scores among depressed respondents was lower than the control group. High unemployment status, low incomewere also identified as the most important factors in explaining poor subjective QOL.

Likewise,Gureje et al[19] while studying the determinants of QOL of elderly Nigerians revealed that, age, economic status, educational status, availability of social support and depression negatively affected overall subjective QOL and QOL domains. They concluded that among these factors, depression and functional disability exerted more negative impact on QOL.

Depression has consistently being shown to impact negatively on quality of life; however, several social, economic and personal characteristics (such as age and sex) have been demonstrated to add to this negative outcome.

METHODOLOGY

This was a cross sectional study of depressed outpatients in the Psychiatry outpatient clinic of the Jos University Teaching Hospital.

Ethical approval was obtained from the Joint Ethical Committee of the Hospital before conducting the study. Depressed outpatients18 years and above who were on follow-up at the Psychiatry outpatient clinic were recruited for the study over a period of 6 months.

Those excluded were patients who have other physical, neurological or substance related disorders. Also excluded were patients with Bipolar Affective Disorders in the depressive phase of their illness and those who refused to participate.

One hundred outpatients who met the inclusion criteria were recruited consecutively during clinic days.

The following questionnaires were used to collect

samples.

Sociodemographic questionnaire
This was designed by the authors. It a semi-structured questionnaire which covered areas such as age, sex, ethnicity, marital status, educational level, occupation, monthly income, living arrangements, amount spent on treatment per month, level of social support, relationships etc.

Illness related variables such as duration of illness, number of episodes and number of admissions were also included.

Mini International Neuropsychiatric Interview
Depression was assessed using the Mini International Neuropsychiatric Interview (MINI) instrument [20]. The instrument is a structured interview designed for major axis I psychiatric disorders in DSM-IV and ICD-10. It has been widely used across different cultures including Nigeria.

World Health Organization Quality of Life Scale-Brief Version (WHOQOL-BREF)
This instrument (WHOQOL-BREF)[21] which was developed to measure subjective response of patients' life condition is a 26-item self-administered generic questionnaire. The assessment usually covers the preceding 2-week period. The instrument has been validated across different cultures.

Hamilton Rating Scale for Depression
This is a 21 question multiple choice questionnaire that can be used to rate theseverity of depression in patients. It rates the severity of symptoms in depression, such as, low mood, insomnia, agitation, anxiety and weight loss. The questionnaire is presently one of the most commonly used scales for rating depression in clinicalresearch. Each question has between 3 and 5 possible responses. The clinician chooses the possible response to each question by interviewing the patient and by observing the patient's symptoms. The first 17 questions contribute to the total score. Questions 18 to 21 are recorded to give further information about the depression (such as, the presence of diurnal variation or paranoid symptoms), but are not part of the scale.

DATA ANALYSIS
The data was analyzed using Statistical Package for Social Sciences (SPSS) version 20.

Mean and standard deviation was done for quantitative variables like age. Analyses of continuous and categorical variables were done using students T-test and Chi-square test respectively. Regression analysis was done to determine the predictors of quality of life. The domain scores of the WHOQOL-BREF were calculated according the instructor's manual and served as the dependent variable.

Statistical significance was set at 0.05.

RESULTS
Table 1: Of the 100 subjects enrolled in the study, 36(36.0%) were males and 64(64.0%) were females.The mean age of the respondents was 39.78±13.36 years. 40.0% of them had achieved secondary education while 47.0% were not married as at the time of the study.

Table 1: socio-demographic characteristics of respondents

Characteristics	Parameters	Respondents(%)
Gender	Male	36(36.0)
	Female	64(64.0)
Age group	<20years	3(3.0)
	20-29	22(22.0)
	30-39	29(29.0)
	40-49	23(23.0)
	50-59	14(14.0)
	60	9(9.0)
	Mean±SD	39.78±13.36
Marital Status	Never Married	47(47.0)
	Presently Married	40(40.0)
	Separated	6(6.0)
	Widowed	7(7.0)
Religion	Christianity	76(76.0)
	Islam	24(24.0)
Education	None	21(21.0)
	Primary	19(19.0)
	Secondary	40(40.0)
	Tertiary	20(20.0)
Employment status	None	32 (32.0)
	Yes	68 (68.0)
Occupation	-Skilled	10 (14.7)
	-Semi-skilled	33 (48.5)
	-Unskilled	25 (36.8)
Monthly Income	No income	39(39.0)
	<N20,000 (<$56.0)	42(42.0)
	N20,000-N50,000 ($56.0-$139.0)	19(19.0)
	N50,000(>$139.0)	0(0.0)
Diagnosing Depression (MINI)	Yes	42(42.0)
	No	58(58.0)
Severity of depression (HRSD)	Normal	26(61.9)
	Mild	11(26.2)
	Moderate	3(7.1)
	Severe	2(4.8)

More than two-third of the respondents were employed with 14.7% engaged in skilled labor, a third were in the semi-skilled professions while the remaining (36.8%) were involved in non-skilled jobs.Most of the subjects who had jobs earned less than N20,000.00 (<$56.00) per month, a little below one-fifth of them (19.0%) earned between N20,000.00-N50,000.00, ($56.00-$139.00) and no respondent earned above N50,000.00 (>$139.00). Thirty nine (39.0%) does not have any form of income

The Mini International Neuropsychiatric Interview (MINII) revealed that 42.0% of the subjects were still depressed during the study. Among those who were diagnosed to be depressed using the MINI, 61.9%had normal score on HRSD, 26.2% were mildly depressed and 7.1% and 4.8% were moderately and severely depressed respectively.
Table 2, revealed a statistically significant relationship between overall quality of life and sociodemographic variables. The respondents' overall quality of life with respect to their

sociodemographic variables was statistically significant (P=0.001). The result also showed that gender (P=0.005), age (P<0.001), marital status (P<0.001), education (P<0.001), occupation (P<0.001), income (P<0.001) and number of depressive episodes (P=0.034) negatively impacted overall quality of life of the respondents.

Table 2: Relationship between overall quality of life, sociodemographic variables and number of depressive episodes

Variable	frequency	Percentage	Df	X^2	Significance
Overall satisfaction with QOL:					
Very poor	7	7.0	4	19.900	0.001
Poor	15	15.0			
Neither poor nor good	18	18.0			
Good	30	30.0			
Very good	30	30.0			
Total	100	100.0			
Gender:					
Male	36	36.0	1	7.810	0.005
Female	64	64.0			
Total	100	100.0			
Age (years):					
<20	3	3.0	6	48.680	<0.001
20-29	22	22.0			
30-39	29	29.0			
40-49	23	23.0			
50-59	14	14.0			
60	18	18.0			
Total	100	100.0			
Marital status:					
Never married	47	47.0	3	55.760	<0.001
Married	40	40.0			
Separated	6	6.0			
Widowed	7	7.0			
Total	100	100.0			
Education:					
None	15	15.0	3	25.680	<0.001
Primary	15	15.0			
Secondary	46	46.0			
Tertiary	24	24.0			
Total	100	100.0			
Occupation:					
Skilled	15	15.0	2	17.660	<0.001
Semi-skilled	49	49.0			
Unskilled	36	36.0			
Total	100	100.0			
Monthly income:					
No income	18	18.0	3	40.560	<0.001
<N20,000.00	45	45.0			
N20,000-N50,000	34	34.0			
>N50,000.00	3	3.0			
Total	100	100.0			
Number of depressive episodes:			3	8.686	0.034
Once	20	20.0			
Twice	15	15.0			
Thrice	10	10.0			
>thrice	6	6.0			
No response	49	49.0			
Total	100	100.0			

Table 3: Relationship between mean domain scores of respondents, sociodemographic variables and number of depressive episodes

Variable/Domain	Physical	Psychological	Social	Environmental
Gender:				
Male	13.81±3.861	14.72±3.186	13.78±3.788	14.28±2.732
Female	14,56±3.211	15.16±2.801	14.56±2.927	14.59±2.677
Mean±SD	14.29±3.459	15.00±2.937	14.28±3.266	14.48±2.687
df	1	1	1	1
t	1.104	0.501	1.334	0.316
p	0.296	0.481	0.251	0.575
Age (years):				
<20	10.00±0.000	10.33±1.155	13.00±3.464	13.67±0.577
20-29	13.50±3.997	13.91±3.146	13.36±3.580	13.27±3.135
30-39	15.00±3.433	15.45±2.959	14.03±3.968	14.93±2.685
40-49	14.52±3.073	15.22±2.215	15.39±2.105	14.83±2.424
50-59	14.64±2.706	16.00±2.774	14.50±2.794	14.86±2.476
≥60	13.75±4.027	15.50±3.207	14.25±2.964	14.63±2.669
Mean±SD	14.29±3.470	15.00±.2.937	14.28±3.266	4.48±2.687
df	6	6	6	6
t	1.470	2.496	0.960	1.095
p	0.197	0.028	0.456	0.371
Marital status:				
Never married	14.28±3.481	14.72±2.700	14.23±3.272	14.62±2.222
Married	15.03±2.904	15.85±2.637	15.15±2.869	15.15±2.327
Separated	12.00±4.099	13.00±4.817	10.50±3.7987	9.83±3.764
Widowed	12.14±4.634	13.71±3.251	12.86±2.340	13.71±2.984
Mean±SD	12.29±3.487	15.00±2.937	14.28±3.266	14.48±2.687
df	3	3	3	3
t	2.485	2.771	4.503	8.676
P	0.065	0.046	0.005	<0.001
Education:				
None:	12.87±4.307	14.27±3.240	14.20±3.468	13.87±2.264
Primary	14.20±3.610	14.53±4.138	13.60±3.924	14.00±3.780
Secondary	14.39±3.137	14.98±2.534	14.59±2.761	14.65±2.321
Tertiary	15.04±3.329	15.79±2.570	14.17±3.714	14.83±2.854
Mean±SD	14.29±3.459	15.00±2.937	14.28±3.266	14.48±2.687
df	3	3	3	3
t	1.250	1.021	0.358	0.614
P	0.296	0.387	0.784	0.608
Occupation:				
Skilled	13.73±3.973	14.73±3.150	13.60±4.356	14.67±3.155
Semi-skilled	15.33±2.989	15.76±2.673	15.27±2.243	15.20±1.958
Unskilled	13.11±3.495	14.08±2.989	13.22±3.602	13.42±3.046
Mean±SD	14.29±3.459	15.00±2.937	14.28±3.266	14.48±2.687
df	2	2	2	2
t	4.832	3.616	4.782	5.008
p	0.010	0.031	0.010	0.009
Monthly income:				
None	13.61±3.822	14.61±2.682	14.72±2.675	13.72±2.630
<N20,000.00	14.44±3.526	15.33±2.804	14.29±3.131	14.56±2.351
N20,000-N50,000	14.35±3.329	14.59±3.304	13.85±3.815	14.56±3.106
>N50,000.00	13.33±2.309	17.00±0.000	16.33±0.577	17.00±1.732
Mean±SD	14.29±3.459	15.00±2.937	14.28±3.266	14.48±2.687
df	3	3	3	3
t	3.0349	0.984	0.693	1.394
P	0.700	0.404	0.559	0.249
Number of episodes:				
Once	11.30±3.570	12.60±3.085	11.85±3.703	11.65±2.581
Twice	13.27±2.120	14.47±2.167	13.40±3.776	14.13±1.302
Thrice	11.50±2.461	12.40±2.875	13.00±2.667	12.00±1.414
>thrice	11.17±3.710	13.17±3.061	13.00±3.950	13.00±2.757
Mean±SD	11.90±3.061	13.18±2.847	12.67±3.536	12.61±2.299
df	3	3	3	3
t	1.464	1.604	0.603	4.395
p	0.236	0.201	0.616	0.008

On table 3, the relationship between gender and all domains was not statistically significant. However, a statistically significant relationship was demonstrated between age and the psychological domain (P=0.026) of QOL. The physical (P=0.197), social (P=0.456) and environmental (P=0.371) domains did not reveal a similar outcome. An association was noted between the psychological (P=0.046), social (P=0.006) and environmental (P<0.001) domains and marital status. The physical domain (P= 0.065) could not produce such statistical association. Education and monthly income were not associated with a decrement in QOL according to the result on table 3 as no significant statistical relationship was observed. All domains were affected by occupational type while the number of episodes adversely affected only the environmental domain (P=0.008).

Table 4 displays the result of the regression analysis done to reveal the determinants of quality of life. Respondents' gender (P=0.036), occupation (P=0.001) and depression (P=0.001) predicted quality of life.

Table 4: Multiple regression analysis

Variables	Regression coefficient	t-test	P-value
Gender	-0.149	2.116	0.036
Age	-0.014	0.409	0.683
Occupation	0.083	3.246	0.001
Educational status	0.042	1.039	0.300
Marital status	0.032	1.108	0.269
Constant (depression)	1.253	4.574	0.001

DISCUSSION

Overall quality of life and sociodemographic variables

Demographic factors can either improve or impair QOL among patients suffering from depression. From our study, overall satisfaction with QOL was adjudged to be poor. A study byFons et al[9]among depressed Dutch patients presented a similar outcome. In their study, they found that depressed patients scored low on overall aspects of QOL when compared to the general population. Similar impairments in the overall QOL in depressed patients was also reported by Ristner et al[15] among the Israelis and Karl and Colleagues[22] in older South African patients.

In this study, gender was a significant contributory factor to poor overall QOL. Omer et al[16] studied QOL of depressed patients in Turkish population and reported that females experienced poorer QOL compared to males. Maria et al[23] could not however identify gender difference in their study on subjective QOL in mentally ill, physically ill and healthy individuals. The negative multiplier effect of our culture, poor economic status of females and social factors may well contribute to the poor QOL we found[24].

Agepredicted poorer overall QOL in our findings, this association was in keeping with findings by Holloway et al[11] and Gureje et al[19].The extent to which quality of life varies by age has been a subject of controversies among researchers [25,26]. These

studies showed that quality of life increases from 50 years of age onward, peaking at 68 years of age and gradually declines with increasing age. In our community (Low Income Country) where this research was done provides fewer or no platform for personal development and job opportunities for young people (a Characteristic of our study population). This leads to increasing stress in striving to make both ends meet. Majority of them are thus, highly dependent for their daily needs of food, shelter, health and other needs.

Respondents' overall QOL and marital status was statistically significant in this study. Studies in the past have produced similar results where marital status predicts QOL in depressed persons[27]. Most of these studies showed that overall QOL among the unmarried population are negatively affected more than in the married.

Educational status is a consistent factor in securing better paid jobs, better standard of living and higher social class. Our result revealed that educational status is a strong confounder to overall QOL in depression. A report by Ho et al[28] while studying the subjective QOL among depressed Hong Kong Chinese patients showed that good educational, social support and higher social class correlated well with good subjective QOL. Education also creates opportunities and social relationships which by extension promotes overall wellbeing. Depression however, interferes with education and productivity putting the patient at an economic and social disadvantage.

A statistically significant relationship was also observed between our subjects' overall QOL and monthly income (P<0.001). This could be due to the fact that most of the respondents were down the occupational ladder, either due to job losses or due to the reason that majority of them engaged in menial jobs and petty trading from which the income is usually meager. Depression has also been shown to reduce productivity and increases absenteeism from work[29].

Several depressive episodes predicted poorer overall QOL in this study. Findings from the study concurred with that of Omer[16] who reported a poorer subjective QOL among patients with two or more episodes of depression than those with a single episode or the general population.

Sociodemographic variables and domain scores

A striking finding in this study was the lack of statistical relationship between males and females in all domains of subjective QOL. This finding replicated that by Maria et al[23] who could not identify significant differences in gender in their study on subjective QOL in the mentally ill, physically ill and healthy individuals in all domains of QOL. Omer et al[16] however reported a contrary outcome. In their report, females scored low in all domains of QOL compared to their male counterparts.

Apart from the psychological domain, the physical social and environmental domains in relation to age were negatively associated with depression in these patients. This finding is contrary to several other studies[30,31] which consistently reported that the psychological domain was negatively affected by depression. Our study however, concurred with finding by Bonicatto et al[32] in which only the physical and environmental domains scored low on the QOL scale. Family and religious support, which patients enjoy in the study location, may be responsible for this outcome. Family and religious support help to relieve guilt feelings, improve self-esteem, hopelessness and physical strain which predict the psychological wellbeing of depressed patients.

In the same vein, marital status was not significantly associated with the psychological domain of subjective QOL. The physical, social and environmental domains were nevertheless associated with marital status. From our study we also found that majority (almost half) of our respondents were single. Being married is often associated with household, cultural, childcare and other domestic stress which in turn affects their psychological wellbeing which the never married population does not experience hence, the result[24].

This study did not find any statistical relationship between education and QOL domains. Education is known to improve self-esteem, social relationships, job opportunities and knowledge to cope with environmental and other psychosocial difficulties. Weng and Colleagues[33] reported that good professional-patient communication and social relationships improves motivation and enhance their confidence to receive and maintain their treatment

course. Similarly, Ho et al[28], reported that higher socio-economic class, good social support, Christianity and educational attainment correlated well with good subjective QOL.

Occupation is an important factor in predicting several disease conditions and illnesses and the ability to seek help. Our study revealed a relationship between occupation and all domains of QOL. This relationship can be adduced to the fact that depression affects an individual's capacity to work and socio-economic class. Absenteeism from work, decreased productivity, job losses[29] and the cost of treatment[34] adds more burden to the patient. Income which confers financial independence was not associated with decrement in subjective QOL domains. Studies by (Eaton et al[34] and Johnson et al[35] yielded contrary results. Possible explanation for this outcome is due to the financial and social support received from relations which helped to cushion of augment the lean financial status of the respondents.

Despite the fact that a host of studies in the past have associated recurrent depression and QOL domains[4,5,16], our study could only associate such relationship with the environmental domain. This domain assesses indices such as financial resources, freedom, safety, social care and recreation or leisure. The reason for this could be hinged on the fact that such activities usually suffer during depression. Recurrent depression increases these difficulties cited above. Similarly, the psychological, physical and social domains can combine to the environmental domain negatively during depression.

The association between sociodemographic factors and quality of life among depressed patients has been replicated by this study when compared to previous results obtained from similar studies. Age[36], severity of depression[37, 19,38], and gender[37] were the factors that predicted subjective QOL in the study participants.

A series of multiple regression analyses was done. Firstly, to identify the predictors of subjective QOL. Secondly, to examine the role of depression in predicting QOL. We found that gender and occupation were predicted poor QOL among depressed patients. This was the same outcome with studies by Ruesch et al[8], Fons et al[9], and Shtasel and colleagues[12]. Further regression analysis to control for gender and occupation showed that, the constant (i.e. depression) still had a significant impact on the QOL of the participants. It can therefore be said that depression is a significant factor in determining the quality of life of patients even when controlled for other factors.

CONCLUSION

The findings in this study demonstrated a significant negative relationship between depression and QOL. Naturally and socially assigned demographics were also shown to impair QOL. From the foregoing, it is worthy to draw the attention of physicians on prompt diagnosis and treatment as well as social intervention to reduce the burden of social demographic factors in order to holistically improve QOL in patients.

CONFLICT OF INTEREST: None to declare

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