ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 17, Issue, 05, pp.32688-32692, May, 2025
DOI: https://doi.org/10.24941/ijcr.48808.05.2025

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

REVIEW ARTICLE

PREVALENCE OF DEPRESSION AND ASSOCIATED FACTORS AMONG CAREGIVERS OF PATIENT WITH SEVERE MENTAL ILLNESS ATTENDING CLINIC AT MUHIMBILI NATIONAL HOSPITAL, TANZANIA

Wanda Rwiza[1], Samuel Likindikoki[2] and Ester Steven[3]

Department of Psychiatry and Mental Health, Muhimbili University of Health and Allied Sciences

ARTICLE INFO

Article History:
Received 20th February, 2025
Received in revised form
19th March, 2025
Accepted 26th April, 2025
Published online 30th May, 2025

Key words:

Hexavalent Chromium, Cement Contamination, Libya, Industrial Pollution, Environmental safety, Kiln Temperature, Heavy Metals, Occupational Health.

**Corresponding author:*
Dr. Wanda S. Rwiza

ABSTRACT

Background: Depression among caregivers of patients with Severe Mental Illness may develop due to longer periods of multiple responsibilities needed for the patient, as these tasks may result in exhaustion and stress. Caregivers' depression may lead to low family functioning and ineffective involvement in the patient's management since patient recovery of the patients with severe mental illness depends on caregiver health status. **Objective:** To determine the prevalence of depression and associated factors among caregivers of patients with severe mental illness. **Material and method:** The study was a hospital-based cross-sectional analytical study that utilizes systematic sampling method; a structured social demographic questionnaire was used to collect data, Patient Health Questionnaire (PHQ- 9) was used to asses depression and Multidimensional Scale of Perceived Social Support (MSPSS) was used to asses perceived social support. Descriptive statistics, bivariate and multivariate analyses were conducted. **Results:** A total of 260 caregiver of patients with SMI were studied, male 82 (31.5%) and female 178 (68.5%). Prevalence of depression among female was 23.6%. Mean age was 46.9 (SD=13.12). Prevalence of depression among caregivers of patients with severe mental illness was 21.1%. Low perceived social support (AOR 5.453; 95% CI 1.96, 15.16) was associated with c depression among caregivers of patient with severe mental illness. **Conclusion:** This study found that about 1 in 5 caregivers of patients with severe mental illness had depression. The burden of depressive illness is relatively higher among caregivers of patients with severe mental illness. Regular screening for depression among caregivers of patients with severe mental illness should be offered during the clinic visits as well as psychoeducation and group therapy approaches should be utilized to address depression.

Citation: Wanda Rwiza, Samuel Likindikoki and Ester Steven. 2025. *"*Prevalence of depression and associated factors among caregivers of patient with severe mental illness attending clinic at Muhimbili National Hospital, Tanzania*". International Journal of Current Research, 17, (05), 32688-32692.*

INTRODUCTION

World Health Organization (WHO) estimates that the burden of mental disorders is growing and that depression has significant health and socio-economic impact. Depression account for 4.3% and one of the cause of disability worldwide. (1). Caregivers of patients with mental illness are an essential part of the community since patients with mental illness depend on their caregivers on their management at the hospital and home care. Caregiving process involves emotional, time, skills and knowledge of a person who is giving care to the patient(2).The health condition of caregivers of patients with severe mental illness (SMI) is essential as it affects patients and families' wellbeing.(3). Depression among caregivers of patients with SMI may develop due to longer periods of multiple responsibilities needed for the patient, as these tasks may result in exhaustion and stress (4). Globally different studies has done across America, Asia, and Sub- Saharan countries on prevalence of depression among caregiver of patients with (SMI) ranging from 19 to 73.8%.Factors associated with caregiver depression being biological factors such as:age, sex, Patient diagnosis and duration of illness and psychosocial factors such as: marital status, employment status, level of education, relationship to the patient, duration of care and perceived social support (5–10). Depression on caregiver may lead to poor family functioning in problem-solving skills, communication, roles and affective involvement (11).Therefore recovery of the patients with SMI depends on the caregiver health status, as they need physical, emotional, psychological and social support(12). In Tanzania one study done on caregiver, patient and community found that recovery of the patients with SMI depends on the caregiver health status, as they need physical, emotional, psychological and social support(12).However little is known about depression among caregivers of patients with SMI. Therefore the aim of this study was to determining the proportional of the depression and associated factors among caregivers of patients with SMI.

METHODS AND MATERIALS

Study area and period: The study was conducted at the Department of Psychiatry and Mental Health at Muhimbili National Hospital (MNH), located in Ilala Municipality, in Dar es Salaam Region, Tanzania. MNH is a national referral hospital and a University Teaching Hospital. MNH was chosen because it provides services to referral cases from the five districts in the region and beyond. The Department provides inpatient and outpatient services. The study was conducted during regular outpatient clinic visits. The average number of clients per month attending the psychiatry clinic was estimated to be around 550.. This study was conducted from 31/03/2021 to 30/04/ 2021.

Study design: The study was a hospital-based analytical cross-sectional study that utilizes a quantitative approach to determine the prevalence of depression and associated factors among caregivers of patient with severe mental illness.

Sampling procedure and sample size Estimation: A systematic sampling (probability) method was used to enroll caregivers of patients with severe mental illness until the sample size was reached. During the daily clinic activities, the patients' files were screened to get the sample needed formula used was: population size (no. of the patients of data collection day/desired sample size = nth number. Caregivers of each respective patient were approached and asked to participate in the study. Based on study done in Ethiopia with the prevalence of depression 19% among caregivers' of patients with severe mental illness(8), sample size estimation was calculated as follows:

$$N = \frac{Z^2 P (1-P)}{d^2}$$

Whereby: N=estimated sample size, Z=confidence level 95 % P=PrevalenceD=Margin of error at 5% .Based on this assumption the total sample size of the study was 260.Caregivers aged 18 years and older, who have been living and caring for a patient for more thansix month and who signed a consent. Those who had chronic illness were excluded from the study.

Patients' diagnosis: In this study severe mental illness included schizophrenia, Bipolar disorders and major depressive disorder. The diagnosis were obtained from patients files.

Tools and measurements

Social demographic factors and clinical factors: Interviewer-administered structured questionnaire that contains information including sex, age, marital status, level of education, employment status, relationship to the patient, duration of caring, duration of patient severe mental illness and type of diagnosis was used to obtained caregiver and patients related factors.

Patient Health Questionnaire (PHQ-9): PHQ -9 was used to screening for depression among caregivers. This structured tool has been validated in Tanzania with Cronbach's Alpha of 0.83, sensitivity of 78% and specificity of 87%. The tool has been designed based on the nine DSM 5 criteria for Major Depressive disorder with scores ranging from 0 to 27 (Smith et al., 2019 Fink, 2018). In this tool, the higher the score the more the likely hood of depression. The participants with a score 9 and above were considered to screen positive for depression and those with scores less than 9 were considered to screen negative for depression.

Multi-Dimensional Perceived Social Support scale (MDPSS): The MDPSS tool was used to measure perceived social support(13). This tool has been validated in low-income countries, Malawi and Uganda (14). MDPSS measured participants perception about support received from 3 different sources: significant others, family and friends. Subscales scores were obtained by adding individual subscale total score divided by 4, while the total scale score is calculated by adding all items divided by 12 Perceived social support is considered good as the score goes higher with a score of 1 to 2.9 representing low social support, 3 to 5moderate social support and 5.1 to 7 high social support.

Data collecting procedures: Data was collected by interviewing the caregiver of patient with severe mental illness attended at the psychiatry clinic. The researcher and two trained research assistants participated in collecting data. Eligible and interested participants were escorted to a private research office to complete the informed consent procedure and the study survey. The researcher supervised, monitored data quality and checked all questioner for completeness.

Data analysis: Data was entered using statistical package for the Social Science (SPSS for windows version 23). Descriptive statistics data was collected, organized and summarized in univariate analysis and interpreted through tables using means, frequencies, standard deviation and ranges for each variable to be studied. Bivariate analyses were done to determine the presence of significant associations and the strength of association between independent factors and depression. Multiple Logistic regression was used to identify independently associated risk factors for all bivariate variables with associations at p-value <0.20 to adjust for confounders andusing odds ratio and confidence intervals. A p-value of 0.05 and below was considered statistically significant.

Ethical concerns: Ethical clearance was obtained from Muhimbili University of Health and Allied Sciences (MUHAS), Senate Research and Publications Committee. All participants were verbally informed about the study and requested to participate. It was communicated that participation is voluntary, and that refusal to participate in the study would not bear any consequences to the recruits or their patients.All participants that were identified to have depression were advised and then linked for further clinical assessment

RESULTS

Caregiver and patients characteristics: In this study a total 260 caregivers participated in the study, among them female were 178 (68.5%).The mean age was 46.9 with Standard Deviation of 13.12. Most of caregivers aged between 35 and 54 years (49.8%). Caregivers were either married or cohabiting by 154 (59.2%) and about half of participants (47.7%) had primary level of education. A half of caregivers (51%) were self-employed and just below a half of participants were parents of the patients (46.2%). Table 1.

Table 1. Frequency distribution of socio-demographic characteristics of patients and caregiver

Variables	Frequency (%)
Patient diagnosis	
Schizophrenia	164(63.1)
Bipolar disorder	58(22.3)
Major depressive disorder	38(14.6)
Patient illness duration	
≤10 years	217 (83.2)
>10years	43 (16.8)
Caregiver Sex	
Male	82(31.5)
Female	178(68.5)
Caregiver age	
Mean(SD)	46.9 (13.1)
18-34	56(21.5)
35-54	129(49.6)
>55	75(28.8)
Caregiver marital status	
Married/cohabiting	154(59.2)
Single	66(25.4)
Separated/divorce/widow/widower	40(15.4)
Caregiver education level	
Non	11(4.2)
Primary school	124(47.7)
Secondary school	76(29.2)
College/university	49(18.8)
Caregiver employment status	
Employed/Self employed	187 (71.9)
Unemployed/retired	73 (28.1)
Caregiver relationship	
Parents	120(46.2)
Spouse	19(7.3)
Siblings	65(25.0)
Children	24(9.2)
Other relative	32(12.3)
Caregiver duration of care	
≤10 years	217 (83.5)
>11years	43 (16.8)
Perceived social support	
Low social support	56(21.5)
Moderate social support	138(53.1)
High social support	66(25.4)

Prevalence of depression among caregivers of patient with severe mental illness: Prevalence of depression among caregivers of patients with severe mental illness was 55(21.1. %) Among all participants 23.6% of female had depression, 32% caregiver aged more than 55years found to have depression and those who were either separated/divorced /widow or widower were also had depression of 45%. Caregivers who never went to school, unemployed/retired, care for patients more than 10 years and those who cared for patients with major depressive disorder were found to have depression of 36%, 21.9%, 32.6% and 23.7% respectively.

Those caring for patients who had severe mental illness more than 10 years and caregivers who were parents to the patients were found to have depression of 27.6% and 25% respectively. On perceived social support caregivers who had low social support had depression of 42.9%.Table 2.

Factors associated with caregivers depression among patients with severe mental illness: Caregivers age of was statistically significant associated with depression ($p < 0.006$) as well as caregivers marital status was associated with depression ($p < 0.000$), duration of care to the patient was also associated with caregiver depression ($p < 0.045$) and perceived social support was also associated with caregivers depression of $p<0.000$. Table 2.

Predictive of caregivers' depression among patients with severe mental illness: Perceived social support was a predictor of caregivers' depression among patients with severe mental illness. Those with low social support carried five times odds for reporting depression (AOR = 4.861, 95% CI ;(1.601, 14.761) p=0.003) as compared to those with high perceived social support. Other factors were not showing independently strength of association. Table 3.

DISCUSSION

In this study prevalence of depression among caregivers of patient with severe mental illness was 21.1%, this was higher than the study done in Nigeria 13.8% but in the same range with the other studied that were done in Ethiopia 19%, Saudi Arabia 18.33% and Malaysia 27.8% 28.5%(6,8,9,15,16). However the prevalence of depression found in this study was lower compare to the studied done in India 73.8%, China 53.5%, Ethiopia 56.7% and America 40%(5,7,10). The differences might be due to the tool used, some study asses' only one type of mental illness while in this study three mental illnesses, duration of the study, sample sizeand methodology. Prevalence of depression among female caregivers was higher compared to male, those who were not having partners were

Table 2. Association between social demographic characteristics with depression in caregivers of patients with severe mental illness

Variable	No depression (%)	Depression (%)	Chi-square	p-value
Patient diagnosis				
Schizophrenia	130(79.3)	34(20.7)	0.171	0.918
Bipolar disorder	46(79.3)	12(20.7)		
Major depressive disorder	29(76.3	9(23.7)		
Patient illness duration			5.451	0.1
≤10 years	150(81.5)	34(18.5)		
>10years	55(72.4)	21(27.6)		
Caregiver sex				.
Male	69(84.1)	13(15.9)	2.017	156
Female	136(76.4)	42(23.6)		
Caregiver age				
18-34	51(91.1)	5(8.9)	10.385	.006
35-54	103(79.8)	26(20.2.)		
>55	51(68.0)	24(32.8)		
Caregiver marital status				
Married/cohabiting	124(79.0)	30(19.5)	18.298	.000
Single	59(89.4)	7(10.6)		
Separated/divorce/widow/widower	22(55.0)	18(45.0)		
Caregiver education level				.
Never went to school	7(63.6)	4(36.4)	5.735	098*
Primary school	94(75.8)	30(24.2)		
Secondary school	60(78.9)	16(21.1)		
College/university	44(89.8)	5(10.2)		

Continue ….

Caregiver employment status				.
Employed/Self employed	148(84.6)	39(20.9)	1.328	0.851
Unemployed/retired	57(78.1)	16(21.9)		
Caregiver relationship				.
Parents	90(70.5)	30(25.0)	7.369	131*
Other relative	22(68.8)	10(31.3)		
Siblings	54(83.1)	11(16.9)		
Children	22(91.7)	2(8.3)		
Spouse	17(89.5)	2(10.5)		
Caregiver duration of care				.
≤10 years	176(81.5)	41(18.9)	7.304	0.045
>10years	29(67.4)	14(32.6)		
Perceived social support				
Low social support	32(57.1)	24(42.9)	21.389	.000
Moderate social support	114(82.6)	24(17.4)		
High social support	59(89.4)	7(10.6)		

Table 3. Independent strength of association between caregiver of patient with severe mental illness and selected factors

Variables	Adjusted Odds Ratio (95% CI)	P-value
Patient diagnosis		
Schizophrenia	Ref	
Bipolar disorder	0.449(0.158-1.270)	
Major depressive disorder	0.602(0.182-1.999)	0.131
		0.408
Patient illness duration		
≤10 years	Ref	
>10years	1.95(0.68,6.09)	0.248
Caregiver sex		
Male	Ref	
Female	2.166(0.881,5.327)	0.092
Caregiver age		
18-34	Ref	
35-54	1.579(0.397-6.276)	0.516
>55	2.249(0.433-11.672)	0.335
Caregiver marital status		
Married/cohabiting	Ref	
Single	0.525(0.175-1.582)	0.252
Separated/divorce/widow/widower	1.957(0.753-5.088)	0.168
Caregiver education level		
Non	4.021(0.522,30.964)	0.181
Primary school	2.063(0.578,7.361)	0.265
Secondary school	1.595(0.458,5.561)	0.464
College/university	Ref	
Caregiver employment status		
Employed/Self employed	Ref	
Unemployed	0.687(0.196-2.408)	0.557
Caregiver relationship		
Children	Ref	
Parents	0.665(0.193,2.280)	0.518
Spouse	0.267(0.036,1.972)	0.605
Sibling	0.284(0.035,2.315)	.0.195
Other relative	1.443(0.360,5.781)	0.240
Duration of care		
≤10 years	Ref	
>10years	0.53(0.14,2.09)	0.366
Perceived social support		
Low social support	5.453(1.96,15.156)	0.001
Moderate social support	1.295(0.472,3.552)	0.655
High social support	Ref	

more depressed than those who were married or cohabiting and caregivers who cared for patients with severe mental illness for long time, as in this study more than 10 year were depressed than those who cared for less than 10 years, This is probably due to the fact that those with partners have someone to share responsibilities and other support such as financial, as well as on the process of caring for the patients for long time they became exhausted/tired since the patients may become less functional. Those with low social support were more depressed than those with high social support, this might due to the stigma in the family and community. On multivariate analysis low perceived social support was associate with caregiver's depression five times than those with fold. This shows that caring for patient with severe mental illness in terms of social support is holistic,that not only family member are needed but also society/community around has great influence on wellbeing of the people who are living and caring for patient with severe mental illness. The study was cross sectional design, it will not establish a direct causal effect relationship. However, the findings will help establish a foundation for interventions and further studies in this population. I recommend further studies on other biological, psychologic

and social factors which were not included in this studysuch as caregiver stigma, caregiver amount of money earning, time spent with patient etc.

REFERENCES

WHO. Mental affect one in four people Disorders. world Heal Rep [Internet]. 2001; Available from: https://www.who.int/news/item/28-09-2001-the-world-health-report-2001-mental-disorders-affect-one-in-four-people

Hermanns M, Mastel-Smith B. Caregiving: A qualitative concept analysis. Qual Rep. 2012;17(38):1–18.

Children M of HCDGE and, community Development, Gender E and children. Strategic and action plan for the prevention and control of non communicable Diseases in Tanzania 2016 – 2020. 2020;

Darlami K, Ponnose R, Jose P. Caregiver ' S Stress of Psychiatric Patients. 2015;03(02):39–43.

Sintayehu M, Mulat H, Yohannis Z, Adera T, Fekade M. Prevalence of mental distress and associated factors among caregivers of patients with severe mental illness in the outpatient unit of Amanuel Hospital , Addis Ababa , Ethiopia , 2013 : Cross-sectional study. J Mol Psychiatry [Internet]. 2015;1–10. Available from: http://dx.doi.org/10.1186/s40303-015-0014-4

Chai YC, Mahadevan R, Ng CG, Chan LF, Dai F. Caregiver depression : The contributing role of depression in patients , stigma , social support and religiosity. 2018;

Sun X, Ge J, Meng H, Chen Z, Liu D. The Influence of Social Support and Care Burden on Depression among Caregivers of Patients with Severe Mental Illness in Rural Areas of Sichuan , China. 2019;

Derajew H, Tolessa D, Feyissa GT, Addisu F, Soboka M. Prevalence of depression and its associated factors among primary caregivers of patients with severe mental illness in southwest , Ethiopia. 2017;(March).

Js IV, Wl C, Helmy H. Mental Health Status and Its Associated Factors Among Caregivers of Psychiatric Patients in Kuching , Sarawak. 2019;14(2):18–25.

Manhas RS, Manhas GS, Manhas A, Thappa JR, Dar MM, Akhter R. Prevalence of Depression among Caretakers of Patients with Bipolar Disorder. Int J Res Rev Vol [Internet]. 2019;6(8):44–8. Available from: www.ijrrjournal.com

Heru AM, Ryan CE, Madrid H. Psychoeducation for caregivers of patients with chronic mood disorders. 2005;69(4):331–40.

Ambikile JS. Promoting Recovery in Mental Illness : The Perspectives of Patients , Caregivers , and Community Members in Dar es. 2020;2020.

Zimet G. Multidimensional Scale of Perceived Social Support (MSPSS) - Scale Items and Scoring Information. 2016;(December):3–5.

Stewart RC, Umar E, Tomenson B, Creed F. Validation of the multi-dimensional scale of perceived social support (MSPSS) and the relationship between social support , intimate partner violence and antenatal depression in Malawi. 2014;1–11.

Akinfala A, Hospital N, Sowunmi O, Hospital N. Prevalence and Factors Associated with Depression among Primary Caregivers of Patients with Schizophrenia Attending Nigerian Tertiary Hospital. 2021;(April).

El-tantawy AMA, Raya YM, Zaki AMK. Depressive Disorders Among Caregivers of Schizophrenic Patients in Relation To Burden of Care and Perceived Stigma. 2010;40–6.

****