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SCREENING FOR DEPRESSION AND ANALYSIS OF ITS ASSOCIATED PSYCHO-SOCIO-DEMOGRAPHIC FACTORS AMONG ELDERLY CAREGIVERS OF PERSONS WITH MENTAL ILLNESS

Clinical Research

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ABSTRACT

Background: About 70% of persons with mental illness (PWMI) live in their families, with elderly family members assuming the role of caregivers.
Aims: To screen for depression and associated sociodemographic and illness-related variables, among elderly caregivers of PWMI.
Materials: Caregivers above the age of 60 years of PWMI were assessed by Geriatric Depression Scale- Short Form (GDS-SF), Multiphasic Inventory for Perceived Social Support (MSPSS) and WHO – QOL Bref.
Results: 64% of the caregivers were screened positive for depression. Even though 92.5% had moderate to high PSS. Low PSS was significantly related to depression(p=0.001). The mean(SD) QoL score was 52.02(11.402). These two variables predicted 41.1% of the possibility of depression and PSS was more associated with caregiver depression.
Conclusion: Understanding the prevalence of depression and the various associated factors is important to plan for interventions that can have an indirect impact on the care of the PWMI.

KEYWORDS

Caregiver burden, Geriatric depression, Social support, Quality of Life

INTRODUCTION

With phenomenal demographic transition, the proportion of the elderly population in India has risen from 5.6% in 1961 to 9% in 2016 with the expected further increase to 15% by 2050.[1] Depression, the second leading cause of Disability-Adjusted Life Years (DALY), is the most common mental disorder prevalent in the elderly.[2] The median prevalence of depression among the elderly in India is 18.2% with a range from 8.9% to 62.16%. This is also associated with a 1.83 fold increase in mortality.[3]

Deinstitutionalization of patient care has shifted the onus of managing People With Mental Illness(PWMI) from hospital to community.[5] About 70% of the PWMI in India live in their families, with the family members being the primary caregivers looking into the day to daycare, medications, hospital and financial needs.[6]

Caregiver Burden secondary to emotional exhaustion of the caregiver due to restriction of social and leisure activities, social discrimination and stigma attached, is seen in upto 80% of caregivers, harming their mental health and quality of life.[6] Caring for a person with a psychiatric illness has more burden compared to chronic medical illness.[7] Depression is one of the most common psychological consequences of caregiving. A study from Sri Lanka has shown that depression and anxiety are seen in up to 60% of caregivers of mentally ill patients.[4] In a study from India 18 to 47% of caregivers had depression.[7] Depression is associated with younger age and low educational status of the caregiver.[2] The demographic factors have shown to influence the pattern of the burden, while the clinical factors determine the severity of burden.[9] Poor social support system is also associated with depression.[10,11,12]

Kerala, with 12.6% of elderly population, there is a high possibility of a large proportion of elderly will be donning the role of caregivers of PWMI , presupposing significant economic, mental and personal exhaustion.[13,14] The interface between depression, perceived social support, and quality of life of caregivers of mentally ill patients is an important area of research as it will help to develop new strategies to aid in caregiving. With this milieu, this study was carried out to determine the prevalence of depression among elderly caregivers of PWMI and to determine the socio-demographic and illness-related variables associated with it. The determination of the quality of life and perceived social support among elderly caregivers and its association with depression was also studied as the secondary objective.

METHODS

The study was conducted as a cross-sectional study at the Department of Psychiatry, in a tertiary care teaching hospital situated in central Kerala. The study was initiated after clearance from the Institutional Ethics Committee. The expected duration of the study was for four months from June, 2019.

Study definition

Care Giver – A person who resides with the patient and holds the major responsibility in the care of the patient for a period of a minimum of two years and is bonded by relation – parents, spouse, siblings, children, son in law or daughter in law.[4]

Mental Illness – A mental illness diagnosed as per International Classification of Diseases – 10th Revision (ICD-10) and having an illness duration of two or more years.[13]

Inclusion criteria

1) Caregivers of persons with mental illness more than 60 years of age and fulfilling the definition.
2) Caregiver who can read and write Malayalam (Regional language).

Exclusion criteria

1) Caregivers already having a diagnosis of mental illness and is or was on treatment.
2) Caregivers having a score of less than 6 on the Abbreviated Mental Test Score.
3) Who are not willing to participate in the study

Caregivers of PWMI above the age of 60 years, attending psychiatry Out-patient and In-patient service at the department were enrolled in the study by consecutive sampling until the predetermined sample size was reached. One caregiver per patient will be included in the study.

The caregivers who met the inclusion criteria and are willing to participate in the study were included in the study after explaining the purpose of the study and obtaining informed consent. The basic information of the patient and the caregiver was collected in a specially prepared socio-demographic datasheet. Abbreviated Mental Test Score (AMTS) will be initially administered to rule out cognitive impairment. Caregivers who score 6 or more on AMTS will be assessed by using the Geriatric Depression Scale – Short Form (GDS-SF) to assess for depression. Following this WHOQOL-Bref was administered to assess the quality of life and the Multiphasic Inventory for Perceived Social Support (MSPSS) to assess for perceived social support.

Scales used:

The Abbreviated Mental Test Score (AMTS)- This is a brief and easy to use screening tool to rule out dementia.It assesses orientation, registration, recall and concentration, and scores of 6 or below (from a

maximum of 10) .[15]

Geriatric Depression Scale – Short Form (GDS-SF): Depression was assessed using GDS-SF which is a standard, 15-item self-report, dichotomous response, screening scale for depression where the participants respond to closed-end questions according to how they felt in the previous two weeks; based on which they were categorized as 'normal' and 'depressed' for scores <5 and >5 points respectively.[16] The questionnaire has been translated to Malayalam and then back to English to know the validity of the tool.

Multi-dimensional Scale for Perceived Social Support (MSPSS)- This is a 12-item questionnaire used as a brief measure of satisfaction with social support . Respondents with MSPSS mean scores <3; between 3 to 5 and >5 were considered to have perceived as low, moderate, and high support respectively.[16] The questionnaire has been translated to Malayalam and then back to English to determine the validity of the tool.

WHO QOL BREF: This 26 item questionnaire is used to study quality of life in four domains namely physical health, psychological, social relationships and environment .The total score and average score were calculated by using the scale.[17]The scale also has been translated into the local language and has been found to have good psychometric properties.[18]

A sample size of 200 was arrived at considering the confidence level as 95% , the margin of error as 0.07 and the prevalence of geriatric depression in the community as 39.1%.[9]

The data were collected and analyzed by using SPSS version 19. The relationship between depression and various socio-demographic factors and perceived social support was analyzed by using Chi square test. Binary logistic regression was used to analyze the association between geriatric depression and perceived social support and quality of life. The p value was kept at 5% level of significance.

RESULTS

The study sample consisted of 200 care-givers of persons with mental illness satisfying the inclusion and exclusion criteria, either attending the psychiatry out-patient or in-patient services of a tertiary care center. None of the caregivers had cognitive impairment as per ATMS scale. The descriptive data of Elderly caregivers and illness related variables are given in Table-1.

Table 1 – Socio-demographic and illness related variables

Variables	N	%
Age of Caregivers		
60 – 65	132	66.0%
65 – 70	65	32.5%
>70	3	1.5%
Gender of Caregivers		
Male	68	34.0%
Female	132	60.0%
Relationship with PWMI		
Father	52	26.0%
Mother	56	28.0%
Spouse	79	49.5%
Others	13	6.5%
Medical morbidity		
Yes	131	65.5%
No	69	34.5%
Family Type		
Joint	18	9.0%
Nuclear	131	65.5%
Third Generation	51	25.5%
Diagnosis of PWMI		
Substance Use Disorders	49	24.5%
Psychosis	32	16.0%
BPAD	78	39.0%
MDD	33	16.5%
Anxiety	8	4.0%
Duration of Disorder of PWMI		
<5 years	86	43.0%
>5 years	114	57.0%

Of the 200 caregivers in the study, majority belonged to Above Poverty Line(APL) economic class (n= 108, 54%), depending on the reported categorization given to them by governmental agencies. 76% (n=153) of the caregivers were either earning or were being supported by their family. A small minority 1.5%(n=3) had no means of any economic and social support either for caring for the person with mental illness or for their daily life. A large proportion of the care givers 65.5%(n=131) had associated medical morbidities.

Among the caregivers 64%(n=128) was screened positive for depression according to according to GDS-SF. Of the total care givers, 7.5%(n=15) had low perceived social support. Majority had 54%(n=108) moderate and 38.5%(n=77) high social support. The overall mean score (SD) on the WHO QOL-BREF scale was 52.02 (11.402).

Chi square test was used to compare various epidemiological factors with the GDS-SF score of the care givers. Depression was significantly more among care givers when the diagnosis of PWMI was psychosis (Chi =9.131, p=0.002) or depression (Chi=19.431,p=0.003). The proportion with depression was not significantly related to the duration of illness.

Depression was significantly higher among the caregivers in the age group of 60 to 65 years (Chi=36.848, p=0.001) and among male care givers (Chi=6.980, p=0.008).

Among the socio-economic variables depression was significantly more among caregivers belonging to BPL family. Depression was also significantly more when the caregiver is the earning member of the family or when the caregiver had no source of income. The caregivers with depression was significantly more in those with low perceived social support on MSPSS(Chi square = 54.0318, p=0.001).

Binary logistic regression indicates that the score on perceived social support and quality of life are significant predictors of Geriatric depression (Chi square=71.362, df=2, p=0.00(<0.05)). The two predictors explained 41.1% of possibility of depression and both are negatively related. The perceived social support and quality of life are significant at 5% level (MSPSS: Wald = 8.508, p=0.004 ; QoL: Wald = 14.090, p=0.00). The Odds ratio of perceived social support is 0.286 (95% CI =0.123 to 0.663) and of QoL is 0.912 (95% CI = 0.870 to 0.957)(Table-2). This model correctly predicts 84.4% of those who are depressed and 68.1% of those who are not depressed with an overall prediction of 78.5%.

Table-2: Relationship between Geriatric Depression and PSS & QoL

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
WHOTOTAL	-.092	.024	14.090	1	.000	.912	.870	.957
MSPSS	-1.25	.429	8.508	1	.004	.286	.123	.663
Constant	7.355	1.161	40.142	1	.000	1563.619		

DISCUSSION

The study was initiated with the main aim of screening for epression among elderly caregivers of PWMI. The understanding of their ality of life and perceived social support, the association of both these ariables with depression also was undertaken in order to plan for constructive interventions for elderly caregivers.

Depression among caregivers is considered to be an important aspect of subjective burden of caregiving.[19] The study shows that the 64% caregivers were screened positive for depression as per GDS-SF. In various Indian studies the prevalence of Geriatric depression varied from 8.9% to 62.16% depending on the study setting and type of tool used for screening.[1] This was higher than that in other Indian studies looking into depression among caregivers of PWMI by Prasanth et al, Sumi et al and Singh et al ,where the prevalence ranged from 27.5% to 45%.[4,7,20] Similar studies done in other countries showed a range from 19% to 40 %.[2]This higher prevalence in our study could be due to the subset of elderly caregivers we have studied, where the higher prevalence could be due to the additive effect of two factors, one being the age and the other being the burden of caregiving.

With 66% of caregivers being females, higher feminization is one of the main characteristic of formal and informal caregiving. This was similar to that in other studies by Sumi et al , Perez et al and Shamsaei et al .[4,14,21]Majority of the caregivers were either parents or spouses, high lighting the fact that the responsibility of caregiving is on the

shoulders of close family members. Presence of medical morbidities among 65% of the elderly caregivers is also in line with other studies.[22,23,24,25] This is also an indirect validator of the Stress process model of depression by Pearlin et al.[8]

A diagnosis of Schizophrenia & related psychosis and MDD in PWMI, was significantly associated with the positivity for depression in the elderly caregiver on GDS-SF . This was in line with study by Ayalew et al.[19,26] This could be either because of the poor prognosis associated with both the disorders or due to the genetic diathesis.

In most studies, female caregivers were shown to have higher burden of caregiving and increased risk of depression.[2, 19] In contradiction, this study showed that male caregivers screened positive for depression. Male being the bread weaner of the family may have to compromise his work hours at the same time will have to bear the direct and indirect cost of caregiving. Similar was the finding when the caregiver was involved in a skilled job. Belonging to a family of BPL economic status increased the risk of depression, mainly due to the reduced economic buffer available to cover the costs of caregiving. This has been replicated in previous studies.[19]

In the study, even though majority (92.5%) of the caregivers had moderate to high social support which was in line with study by Sun et al, depression was more among those with low perceived social support, similar to that in other studies.[8,10,11,12,28,29]This is an indirect validator of previous studies by Perlick et al and Magliano et al, which showed increased social support reduced the caregiver burden.[30,31] The mean quality of life of the caregivers in the study was 52.02, which was just half of the total score of 100. Study by Settineri et al, showed that caregivers of PWMI was much less quality of life compared to that of chronic medical illness.[32]

Binary Logistic Regression to understand the relationship between elderly caregiver depression with perceived social support and quality of life showed that the two variables could 41.1% of the possibility of depression. The overall predictability of this model was 78.5%, with perceived social support being a greater predictor than quality of life.

The study had its own limitations. The study being conducted only in one setting and inclusion of patients with too many diagnostic categories, can have a bearing on the generalizability of the results. Similarly, not measuring the severity of psycho-pathology and level of functioning of the patient could have confounded the results. The risk of biased responses especially for perceived social support and quality of life for some reason is also to be considered as a limitation. More over the tools that we used, MSPSS and GDS-SF, has not been validated in the Indian context. Nevertheless, these findings will help inform further planning of care and future research.

CONCLUSION

Depression is a two way street in caregiving especially for PWMI. Various factors associated with illness, social and demographics, augment the magnitude of the burden. This study highlights that fact that organization and mobilization of the social support systems, which are a set interpersonal resources which an individual can access to buffer the stress, is of primary importance when dealing with elderly caregivers of people with mental illness.

Further studies are also required to see whether there are any differences between factors predicting psychiatric morbidity between care givers of PWMI and other chronic medical illnesses.

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