

## Original Research Article

# Prevalence and clinical correlates of psychiatric morbidity among caregivers of patients attending a psychiatric hospital in North India

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## ABSTRACT

**Background:** Consequent to the high prevalence of psychiatric disorders in present day world, their caregivers form an important group in the public health. Research on the physical and psychological well-being of caregivers is being carried worldwide with varied results. Psychological health of these caregivers is usually ignored both by these persons themselves and the health-care providers. The objective of the study was to screen for psychiatric morbidity among caregivers of patients attending a psychiatric hospital in North India, and to study the clinical correlates of the same.

**Methods:** A total of 205 patients and their caregivers were consecutively recruited over a one month period. Sociodemographic and clinical information of patients was obtained either from the hospital records or from the caregiver. Scoring of the patient's global assessment of functioning (GAF) was done by clinicians. The caregivers were administered a sociodemographic questionnaire, general health questionnaire (GHQ-12) and Zarit Burden interview. The presence of psychiatric morbidity was confirmed by a consultant psychiatrist.

**Results:** Among the caregivers, 32.2% had GHQ scores of 3 and above. Majority of caregivers in this study were females (59.0%) while as majority of the patients were males (61.9%). Factors associated with psychiatric morbidity among caregivers include the high level of subjective burden of care, low level of functioning, and comorbid medical and psychiatric conditions.

**Conclusions:** The study reveals a high level of psychiatric morbidity among the caregivers of patients with mental health problems.

**Keywords:** Patient, Morbidity, Caregiver, Burden

## INTRODUCTION

Mental disorders being an important public health issue leave an enormous burden on healthcare services in modern day societies, demanding a more important role for primary care practitioners and caregivers.<sup>1,2</sup> The chronicity of these disorders often affects the entire household adversely, particularly those people who take

on the role of caregiver to the patient. Caregivers often perceive effects of the disease that patients themselves do not, either because patients have learned to cope by ignoring such effects or because patients have adapted to their more limited role by changing their reference standards and expectations.<sup>3</sup> Further caregivers are more likely than non-caregivers to disregard their own health care needs.<sup>4</sup>

Given the magnitude of services provided and the sacrifices made by family caregivers, the adverse consequences of care-giving have emerged as a serious public health concern.<sup>5,6</sup> There is also an increased incidence of verbal abuse, threats, temper outbursts and physical aggression towards caregivers of mentally unwell patients.<sup>7</sup> With passing time there is a compiling research, consistently demonstrating that increased caregiver burden relates to decreased mental and physical health.<sup>8-10</sup> Studies have consistently report higher levels of depressive symptoms and mental health problems among caregivers than among their non-caregiving peers.<sup>11</sup> However there has been a varied symptomatology in care-givers which has been trending from anxiety disorders to sleep problems and substance use disorders.<sup>12-15</sup>

Caregivers are likely to experience a higher level of distress and morbidity when care recipients exhibit more problem behaviours or show greater dependency, when caregivers spend long hours, or when they do not receive reciprocal help or positive feedback from care recipients.<sup>16-18</sup> Other predictors of psychiatric morbidity among caregivers are the patient's cognitive and functional ability, stressful life events, extent of social support, age and gender.<sup>19,20</sup>

Considering these facts in the rest of the world, this study aimed to investigate the prevalence of psychiatric morbidity among care-givers of patients attending OPD of a psychiatric hospital in Kashmir, India. The study also sought to determine the correlates of psychiatric morbidity among caregivers.

**METHODS**

This was a cross-sectional study and was approved by the ethics committee of the institute. All participants gave an informed written consent. A convenient sample of caregivers of patients attending the outpatient clinic of the Government psychiatric diseases hospital, Srinagar, Jammu and Kashmir, between February 2020 and March 2020, were approached to be recruited in the study. A total of 205 caregivers consented to take part in the study. The selected caregiver had to be the primary care and living with the patients for at least 2 years before recruitment in the study and had to be having daily contact with the patient. Those caregivers who had history of psychiatric illness, having dementia were excluded from the study.

The caregivers were administered a sociodemographic questionnaire, the 12-item version of the GHQ-12 and the Zarit Burden interview. GHQ-12 was used to screen for psychiatric morbidity in the caregiver using a cut-off of 3 and above for caseness. The GHQ-12 has been widely used in this environment to screen for psychiatric morbidity and the cut-off of 3 used in the validation study was shown to have good specificity and sensitivity in this part of world and elsewhere.<sup>21,22</sup> The Zarit Burden interview is a self-administered 22-item questionnaire used to determine the level of burden to the caregiver. Those who could not read

or write were assisted by the authors to complete the questionnaires. Other variables such as clinical diagnoses were obtained from the patient's case files. The diagnoses of all patients had been verified by the consultant in-charge of the out-patient unit. The presence of psychiatric morbidity prior to caregiving excluded the person from the study. The sociodemographic information on patients was obtained from the hospital records, with further clarification made from the caregiver where necessary. Scoring on the GAF scale on patients was performed by clinicians. A proper informed consent was taken both from the patient and the caregiver. The study was also approved by the departmental ethical committee.

Statistical analysis was performed using Statistical Package for Social Sciences (SPSS), version 20.0. Results were calculated as frequencies. Comparison of variables with presence of psychiatric morbidity was done using chi-square and independent sample T-test where appropriate. Spearman's correlation was used to compare continuous variables. Tests were two-tailed and level of significance was set at 95%.

**RESULTS**

**Sociodemographic and clinical profile**

A total of 205 caregivers were interviewed. Most of the patients in the study were males (61.9%) and the majority of the caregivers were females (59.0%). Parents, sisters and brothers almost represented equally as caregivers. The mean age of caregivers and patients was 34.3 years (SD±7.8) and 32.6 years (SD±5.6) respectively. A high proportion of the patients (47.3%) had been unwell for more than 5 years. Details of other sociodemographic data are reported in Table 1 and 2.

**Table 1: Socio-demographic and clinical profile of patients.**

Patient Variable	No. (N=205)	Percentage
<b>Sex</b>		
Male	127	61.9
Female	78	38.1
<b>Educational class</b>		
None	61	29.7
Primary	46	22.4
Secondary	32	15.6
Graduate	26	12.7
Professional	40	19.6
<b>Employment</b>		
Employed	62	30.2
Unemployed	143	69.8
<b>Duration of psychiatric condition</b>		
<1 year	22	10.7
1-5 years	86	42.0
6-10 years	34	16.6
>10 years	63	30.7%

**Table 2: Socio-demographic and clinical profile of caregivers.**

Caregiver variable	No. (N=205)	Percentage
<b>Relationship with the patient</b>		
Father	26	12.7
Mother	40	19.5
Brother	54	26.3
Sister	59	28.8
Aunt/uncle	16	7.8
Others	10	4.9
<b>Sex</b>		
Males	84	41.0
Females	121	59.0
<b>Employment</b>		
Unemployed	148	72.2
Employed	57	27.8
<b>Marital status</b>		
Married	122	59.5
Separated	21	10.2
Single	16	7.8
Widow/widower	34	16.6
Divorced	12	5.9
<b>Religion</b>		
Islam	200	97.6
Hindu	1	0.5
Sikh	4	1.9

A total of 66 caregivers (32.2%) were found to have psychiatric morbidity, having scored 3 or more on the GHQ-12. The mean score of the caregivers on the Zarit Burden scale was 26.69 (SD±16.12). Mean score of GAF scale for patients was 58.23 (SD±14.30).

A high proportion of the patients (42.1%) had a main diagnosis of unipolar depression. Other main diagnoses included: bipolar mood disorder (20.3%); schizophrenia (11.2%); seizure disorder (10.3%) obsessive compulsive disorder (8.4%); other anxiety disorders (4.2%) , mental retardation (2.2%) and others including organic brain syndromes (1.3%). Twenty two percent had co-morbid medical conditions like hypertension, diabetes and hypothyroidism.

**Comparison of psychiatric morbidity with the various variables**

Ages of both patient and caregivers did not show any significant relationship with the presence of psychiatric morbidity in the caregivers (age of patient, T-test=-1.348, p=0.178; age of caregiver, T-test=-0.335, p=0.738). The association between psychiatric morbidity and the various sociodemographic variables of patients and caregivers was determined using chi-square test (Table 3). The duration of psychiatric morbidity and the caregiver morbidity showed a significant relationship (p=0.002). It was also observed that there was a significant association between psychiatric morbidity and the presence of

psychosis or comorbid psychiatric and medical conditions in the patient (p=0.04). Further the results showed that there was no significant relationship between having psychiatric morbidity and all the other sociodemographic variables of both the patients and their caregivers (p>0.05). Factors associated with psychiatric morbidity included Zarit scores (p=0.001); and GAF (p=0.002). GHQ scores were strongly correlated with Zarit scores (correlation coefficient=0.709, p=0.001).

**Table 3: Relationship between caregiver morbidity and various factors.**

Factor	Chi square	P value
<b>Patient sex</b>	0.02	0.76
<b>Patient education</b>	10.32	0.89
<b>Patient employment</b>	13.34	0.55
<b>Duration of illness</b>	3.34	0.002
<b>Caregiver sex</b>	0.34	0.78
<b>Caregiver employment</b>	1.76	1.02
<b>Caregiver education</b>	12.34	0.90
<b>Relationship with the patient</b>	0.46	0.34
<b>Comorbid conditions</b>	2.89	0.04
<b>Zarit burden interview scores</b>	10.36	0.001
<b>Global assessment of functioning scores</b>	9.23	0.002

The ASC was more in males bilaterally than in females. The difference was statistically significant on right side (p=0.00). The ASS was more in females than in males on right and vice versa on the left side. The difference was not statistically significant. The ATS was more in the males bilaterally than in females. The difference was not statistically significant. The thickness of the asterion was more in females on right and the same was more on left in males. The difference was not statistically significant (Table 3).

**DISCUSSION**

This is one of the first attempts to study the level of caregiver morbidity and the different clinical correlates in this part of the world. In terms of our study hypothesis, we found that: the morbidity among the caregivers of psychiatric patients attending our hospital seems to be high, increased morbidity was associated with high caregiver burden and high duration of care-giving, presence of co-morbid medical and psychiatric conditions along with psychosis increased the chances of caregiver morbidity, the majority of caregivers were females, contrary to our expectations, many variables (like relationship status and education) didn't influence the presence of morbidity in caregivers.

A significant number (32.2%) of caregivers had morbidity having scored 3 or more on GHQ-12 which is in

concordance with the findings in this region and worldwide.<sup>23,24</sup>

This high morbidity could be explained by a number of factors, one of them being the constant stress and burden perceived by the attendants. The complex stress process and the subsequent proliferative effects of the stress involved in the care-giving is known to effect physical and mental health which depends on the caregivers' ability to sustain their own social roles.<sup>25,26</sup> Also the stress related increase in IL-6 in caregivers has been linked to subsequent development of psychiatric morbidity.<sup>27</sup> Further the genetic vulnerability posed may make these relatives prone to the caregiver-stress and subsequent development of morbidity.<sup>28,29</sup>

High burden perception was related to caregiver morbidity (P=0.001). Although we did not measure caregiver burden as objective measures of care-recipient need, but as elsewhere in literature, increased daily hours of caregiving did relate to burden and the subsequently to the level of morbidity in caregivers (P=0.002).<sup>30,31</sup> The effect of duration of the neuropsychiatric condition on caregiver morbidity was further aggrieved by the presence of medical comorbidities and psychosis. Other investigators have also reported severe psychotic symptoms with high burden of care in the caregiver and the consequent psychiatric morbidity.<sup>32</sup> Co-morbidities leading to low GAF scores in patients and the subsequent increased caregiver dependency has been shown to further negatively affect the caregiver health.<sup>11,16</sup>

An estimated 59% to 75% of caregivers are female worldwide, and our study showed similar results with predominance of mothers in caregivers.<sup>33,34</sup> This finding is also in agreement with some previous research studies that the traditional role of care-giving is often expected of and performed by females.<sup>35</sup> Women have multiple caring roles and so they have to face multiple demands as mothers providing care to their children, while some may have to attend to demands in their employment. They even have to encounter other gender-related disadvantages, such as social, financial, and emotional pressures associated with multiple family-caring roles.<sup>36,37</sup> Further a number of studies have found that female caregivers are more likely than males to suffer from psychiatric morbidity due to caregiving.<sup>29,38</sup> This could further explain the high psychiatric morbidity in our female predominant caregiver population.

Relationship status with ill neuropsychiatric patients has been a predictive factor for development of psychiatric morbidity.<sup>28, 39</sup> But the majority (87.3%) of the caregivers being first degree relatives decreased the chances of finding a significant difference in morbidity variations between these groups in this study.

Although caregiving has been usually described as a very stressful situation for many caregivers, studies also show that there are positive effects, including feeling positive

about being able to help a disabled spouse, feeling appreciated by the care recipient, and feeling that their relationship with the care recipient had improved.<sup>40,41</sup> However this was not studied in the present research. Thus, to sustain family caregiving, mental health professionals need to know not only how to ameliorate caregivers negative experiences, but also how to synergise their positive experiences.

Despite having a small sample size, this study has shown that psychiatric morbidity among caregivers of patients with psychiatric disorders is very high. This is in spite of having socially stable joint family structure where burden sharing is common. It also showed that burden of caregiving and dependency is the most important factor responsible for this morbidity. However more studies need to be conducted on various aspects of caregiver status such as subjective and objective burden, quality of life, family dynamics, treatment satisfaction and coping with stigma.<sup>24</sup>

In this part of world the mental health services are incomplete without catering to the needs of the caregivers. They should have better access to information, treatment for physical and psychological problems, so that their unmet needs are catered. There is need to have a comprehensive community based psychiatry services which is integrated in primary care and includes highly trained community mental health workers who will provide active outreach services. This will decrease not only economic and social burden on caregiver but also will help in early intervention of patients.

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