

## Original article

# Factors affecting depression in caregivers of patients with schizophrenia

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### *Abstract*

**Background:** Caregiving in schizophrenia can be a burdensome task and caregivers may experience psychopathology in the form of depression or anxiety during this process. **Aim:** The study aimed at exploring the various factors that affect depression in caregivers of patients with schizophrenia. **Methods:** The study was a quantitative, cross-sectional assessment of 40 caregivers meeting the pre-defined study criteria. They were assessed using a semistructured proforma and the Montgomery Asberg Depression Rating Scale. Multiple regression analysis was conducted with depression as a dependent variable. **Results:** The mean age of sample ( $n=40$ ) was  $48.9\pm 13.50$  years, with an equal representation of male and female caregivers. The duration of illness, number of hospitalizations and religion emerged as significant predictors of the caregiver depression. **Conclusion:** The study highlights multiple factors contributing to the depression in caregivers of schizophrenic patients. Further research is required to find out types of strategies and psycho-education, which will be helpful in order to minimize the level of depression.

**Key words:** Schizophrenia, Caregivers, Depression

### **Introduction**

Schizophrenia is a disorder that can result in chronic impairment and disability for both the patient and the caregiver. Though its prevalence is lower than depression or anxiety disorders, it is among the most burdensome and costliest illnesses worldwide.<sup>1-2</sup> A large number of studies have been done in order to assess the level of burden<sup>3</sup>, stress levels<sup>4</sup> and coping skills<sup>5</sup> among the caregivers of patients with schizophrenia, however few attempts

have been made to find and elucidate the prevalence, severity and factors affecting depression among the caregivers. Caregiving in patients with schizophrenia is an enormous task and most caregivers seem to be unprepared for the longitudinal course and duration of an illness like schizophrenia.<sup>6</sup> The diagnosis of schizophrenia in a family member can lead to mixed emotions like shock, anger, depression, confusion and denial amongst caregivers.<sup>7</sup> An illness like schizophrenia with a course of multiple hospitalizations, relapses and

acute exacerbations can lead to depression and chronic stress among caregivers.<sup>8</sup>

Caregiving itself is a multi-thematic construct encompassing physical, psychological, emotional, social and financial changes that caregivers encounter in the process of providing care to a family member with schizophrenia.<sup>9</sup> Caregiving in schizophrenia involves assuming unpaid and unanticipated responsibility for the patient who, in turn, is unable to reciprocate the same and may have difficulties in the maintenance of most adult relationships.<sup>10</sup> This makes caregiving burdensome and it may not be a satisfying experience for many caregivers.<sup>11-12</sup> It is well known that first degree relatives of schizophrenic patients (who are often caregivers) suffer from psychological morbidity themselves.<sup>13</sup> A number of Indian studies have explored family burden and caregiver stress in schizophrenia.<sup>14-16</sup> Studies have even found caregiver burden to be greater than that in other chronic psychiatric disorders.<sup>17</sup> Family studies in schizophrenia have revealed broken homes, bad parenting, lack of cohesion as a family unit, parental psychopathology and family violence all serving as a risk factor for the development of schizophrenia in the patient. It is no doubt that the caregivers coming from such an environment are also vulnerable to psychiatric illnesses.<sup>18-19</sup> While caregivers are often the source of economic, social and emotional assistance to all their family members, their own lives can be considerably affected by the caregiving role.<sup>20-21</sup> Disturbance in family functioning contributing to depression in the caregiver has been noted in a previous study by one of the authors.<sup>22</sup> Coping with the behaviour of the patients is another difficult task for the caregiver. Patients with schizophrenia demonstrate a number of positive, negative, vegetative and residual

symptoms which are often very difficult for the caregiver to comprehend and respond to.<sup>23</sup> Studies have reported that negative symptoms of schizophrenia were found to be more difficult to cope for caregivers than the more positive and acute symptoms of schizophrenia.<sup>24</sup> It has been noted that caregivers of patients with schizophrenia are often unable to accomplish and achieve their desired roles and responsibilities, at a personal, occupational, familial and social level.<sup>25</sup> Role changes and role conflict amongst caregivers have been reported in many studies.<sup>26-27</sup>

In the existing studies, only a few attempts have been made to find and elucidate the factors affecting depression among the caregivers. The aim of the present study is to explore the factors affecting depression amongst caregivers of patients with schizophrenia.

## **Materials and method**

This was a quantitative, cross sectional study to assess depression in caregivers of patients with schizophrenia.

### *Study criteria*

For the purpose of the study, caregivers were defined using following criteria:

1. Immediate relatives who lived with and provided care to their family member suffering from schizophrenia
2. Performed at least four of the following activities:
  - a) prepare meals for the patient
  - b) do the washing and laundry for the patient
  - c) would remind the patient to take his/her medication
  - d) would accompany the patient for psychiatric consultations and follow ups, and

- e) accompany the patients for social and recreational activities.

The caregivers of either gender, aged between 25-55 years, not suffering from mental retardation or any medical or psychiatric disorder as per clinical interview were selected for inclusion in the study. It was also ensured that they should not be away from home for a period of one month or more for any reason during the last 3 months.

The patients must have been diagnosed as schizophrenia using the DSM-IV criteria<sup>28</sup> with persistent symptoms for a period of at least 1 year. The patients in acute phase of schizophrenia, having an organic disorder or medical illness or subnormal intelligence were excluded from the study. The patient must not be away from home for a period of one month or more for any reason during the last three months.

#### *Instruments for assessment*

- The Montgomery-Asberg Depression Rating Scale (MADRS): It has been used in order to determine the symptomatic orientation and prevalence of depression among the caregivers of schizophrenia. The MADRS measures the severity of a number of symptoms on a scale from 0 to 6. There are 10 questions, but each question has 6 possible ratings. It covers core symptoms of depression such as mood and sadness, tension, sleep, appetite, energy, concentration, suicidal ideation and restlessness. This scale has a good reliability and validity and has been in used widely in various studies on depression and antidepressant efficacy.<sup>29-31</sup>

#### *Study procedure*

Caregivers who met the study criteria were recruited after an informed valid consent was taken. Relevant data was collected using

a semi-structured interview in one sitting and caregivers were assessed for depressive symptoms using MADRS.

#### *Statistical analysis*

Descriptive statistics have been used to describe the sample characteristics and caregiver depression. Multiple regression analysis was conducted in order to determine the factors affecting depression level among caregivers. A total of nine variables i.e. age, gender, occupation, religion, medical illness in the caregivers, other illness in the patients, number of hospitalization, other family members with schizophrenia and duration of illness in the patients have been used to build a model.

#### **Results**

A total of 93 caregivers were screened in the three-month study period between April, 2009 and June, 2009. Of these, 40 caregivers met the study criteria and were interviewed for the study.

The mean age of the sample was  $48.9 \pm 13.50$  years. The youngest caregiver in the study was 25 years old and the oldest was 63 years old. The sample had an equal gender distribution for male and female caregivers (n=20 each). Most (60%) of caregivers were employed (60%) and were parents (55%) of the patient. Mothers constituted the dominant caregiver group (35%). One-fourth (25%) of caregivers reported the presence of a medical illness in self, which was neither acute or serious in nature. Nearly 22.5% of the caregivers reported an additional member of their family (other than the patient) suffering from schizophrenia.

The depression scores for the sample have been categorized as normal, mild, moderate or severe depression and are shown in Table 1.

**Table 1: Caregiver depression scores (N=40)**

Depression scores (MADRS)	Frequency (%)
Normal (0-6)	14 (35.0%)
Mild (7-19)	14(35.0%)
Moderate (20-34)	11(27.5%)
Severe (35-60)	1(2.5%)

**Table 2: Caregiver depression scores in relation to socio-demographic profile (N=40)**

Caregiver depression scores	Mean ±SD
<b>Gender</b>	
Male caregivers	14.7 ± 11.3
Female caregivers	14.9 ± 11.7
<b>Employment</b>	
Employed	14.8 ± 12.5
Unemployed	14.8 ± 9.7
<b>Religion</b>	
Hindu	11.3 ± 9.4
Muslim	23.6 ± 11.7
Others	28.0 ± 0.00
<b>Relation to patient</b>	
Daughters	24.0 ± 11.3
Fathers	17.5 ± 11.5
Husbands	15.0 ± 21.2
Mothers	16.6 ± 11.2
Sister	20.0 ± 0.0
Son	16.0 ± 9.4
Others	6.4 ± 9.1

The mean depression scores according to sociodemographic profile have been shown in Table 2. A larger number of younger caregivers had higher depression scores than older caregivers. No differences were seen in the caregiver depression on the basis of gender or employment. It was noted that children of the patients (sons + daughters) had higher depression scores than the parents of the patient (mothers + fathers).

Multiple regression analysis was used in order to determine the factors affecting depression level among caregivers. All the nine variables stated earlier have been used to build a regression model, as shown in Table 3, which explained around 54% of variance. Only three variables i.e. religion, duration of illness in the patients and number of hospitalizations were found to be significant.

**Discussion**

The study attempts to explore the factors affecting depression levels in caregivers of patients with schizophrenia. The study results indicate that the average level of depression amongst younger caregivers was greater than older caregivers, which is in line with the previous research. Younger caregivers of patients with schizophrenia may have a greater

**Table 3: Multiple Regression Analysis: Caregiver depression as a dependent variable**

	B	SE	β	t	p	95% CI	
						Lower	Upper
Constant	-6.27	13.78		-0.46	0.65	-34.42	21.88
Age	0.01	0.15	0.02	0.09	0.93	-0.30	0.33
Medical illness in caregivers	1.81	4.09	0.07	0.44	0.66	-6.55	10.17
Number of hospitalization	1.08	0.51	0.39	2.13	0.04	0.04	2.12
Duration of illness in patients	-0.99	0.25	-0.75	-3.88	<0.01	-1.51	-0.47
Occupation	5.08	4.00	0.22	1.27	0.21	-3.08	13.24
Other family members with Schizophrenia	5.06	3.54	0.19	1.43	0.16	-2.18	12.29
Other illness in patients	-3.45	4.48	-0.12	-0.77	0.45	-12.61	5.71
Religion	8.11	2.18	0.53	3.72	<0.01	3.66	12.56
Gender	1.63	3.31	0.07	0.49	0.63	-5.14	8.39

B: Unstandardized coefficient; SE: standard error for B; β: Standardized coefficient; CI: Confidence intervals for β

burden due to lack of experience and relatively poor life skills.<sup>32</sup> One possible explanation for the relation between younger age and higher depression is that younger caregivers, particularly those in adulthood and early middle age, are more likely to have additional responsibilities and social roles, such as work and other caregiving roles that include raising children and caring for aging parents. On the other hand, older caregivers may have had more time to develop resources and coping strategies that reduce their level of psycho-logical distress and they have more life experience in handling stressful situations.<sup>33-34</sup>

Previous studies have demonstrated that women experience a greater sense of burden and frustration than men when caring for their mentally ill relatives.<sup>35</sup> It has been stated in Indian context that women are often suppressed in male dominated families and already, may suffer from mild or sub-threshold depression and somatization. The caregiver burden may add to their woes and lead to full blown depression.<sup>36</sup> However, the male and female caregivers in the present study showed no significant difference in depression scores, which suggests unlike previous literature, caregiving may affect male caregivers similar to the females. Further, in this study, parents reported lower depression scores than children of the patients. A previous study found a high level of emotional distress among parents of mentally-ill individuals and mothers manifested significantly higher degrees of anxiety, depression, fear, and emotional drain.<sup>37</sup>

The duration of illness was a significant predictor of depression in caregivers. This finding is in line with some earlier studies. The caregiver's knowledge and experience of handling the disorder may increase over a period of time and they may adopt better coping strategies.<sup>42</sup> Social support and proper

knowledge gained over a period of time can reduce the level of burden amongst caregivers of patients with schizophrenia.<sup>38</sup> It points towards the necessity to provide appropriate psycho-educational interventions and family-based psychotherapy to the families of patients with newly diagnosed schizophrenia in order to enhance the effective coping styles.<sup>39-41</sup>

If patients with schizophrenia are hospitalized multiple times, it is likely to increase the financial and other burden on the caregivers. The study findings also support this as the recurrent hospitalizations were found to be a significant predictor of depression scores. This finding is in consonance to the available research. Previous studies suggest that certain patient factors may increase family burden and caregiver depression. These include the severity of symptoms, length of time spent in hospital, number of hospitalizations, duration of illness and the level of social functioning.<sup>43-44</sup>

This study has several limitations. It is a small-scale study and cross sectional in nature. The study needs to be replicated across various sub-populations and multiple cultures to authenticate these findings. Various other factors related to caregiver depression e.g. severity of illness, nature of symptoms, degrees of remission achieved etc. were not assessed in the present study.

To conclude, caregiving is not a straightforward exercise and majority caregivers have some level of depression. Multiple factors may affect the depression among caregivers of patients with schizophrenia. In the present study, it was found that factors such as duration of illness, number of hospitalizations and religion predict the depression. This brings us to the role and importance of coping strategies, psycho-education and proper medical treatment. Further, the type of

services or support which would assist the caregivers to cope with this responsibility is worth exploring. Further research in this direction will be helpful to minimize the caregiver depression.

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