Original Article

J Nepal Health Res Counc 2020 Oct-Dec;18(49): 702-8

DOI: https://doi.org/10.33314/jnhrc.v18i4.3006

Assessment of Anxiety and Depression among Caregivers of Mentally Ill Patients Attending Mental Hospital, Lalitpur, Nepal

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ABSTRACT

Background: Family take the role of caregivers and provide the mentally ill member with help, care and support. Caregivers are at the high risk to anxiety and depression. The main objective of the research was to assess anxiety and depressive status among caregivers of mentally ill patients attending Mental Hospital, Lalitpur, Nepal.

Methods: A cross sectional study based on clinical setting was conducted among 184 caregivers of mentally ill patients attending outpatient department of Mental Hospital, Lagankhel, Lalitpur, Nepal. Purposive sampling technique was used for the study. Pre-tested semi-structured questionnaire and validated Nepali translated version of hospital anxiety and depression scale was used to assess anxiety and depressive status among caregivers. The collected data was entered in Microsoft Excel 2013 and data analysis was done in Statistical Package for Social Sciences (SPSS) international business machine version 25. Ethical consideration was maintained during the study.

Results: Anxiety and depressive symptoms among caregivers of mentally ill patients was 24.5% and 19.6% respectively. Risk factors significantly associated with anxiety and depressive symptoms in caregivers were sex of caregiver, socio-economic status and sex of patient. Types of mental illness of patient was also significantly associated with anxiety while educational status was significantly associated with depressive symptoms in caregivers.

Conclusions: Anxiety and depressive symptoms were found among caregivers of mentally ill patients. It is high time to consider mental health of caregiver and mental health promotion programs and policies for caregivers should be implemented.

Keywords: Anxiety; caregiver; depression; mentally ill patient; Nepal

INTRODUCTION

The major source of support for mentally ill patients is family[1] and they take the role of caregivers. Along with the primary individuals diagnosed with mental illness, families and people around them are also affected by mental illness.[2] Caregivers' own physical and mental health gets disregarded when they face difficulty in balancing family, work and caregiving.[3] As a result, they experience physical and mental distress, reduction in social exposure, financial struggles, no personal enjoyment and report lower life satisfaction.[4]

Research has shown that in comparison to general population, anxiety, depression and insomnia were twice high among caregivers of mentally ill patients.[5] A study in Nepal among caregivers of patients with schizophrenia and bipolar affective disorder showed 29% had anxiety and 25% had depression.[6] Such studies are limited in context of Nepal. This study aimed to assess anxiety and depressive status among caregivers of mentally ill patients attending Mental Hospital, Lalitpur, Nepal.

METHODS

We conducted a cross sectional study among the caregivers of mentally ill patients attending the outpatient department of Mental Hospital, Lagankhel which is in Lalitpur district of Nepal. Purposive sampling technique was used to select the samples. A total of 184 caregivers, who gave consent and met the inclusion criteria were face to face interviewed and data was collected between mid-May to mid-June, 2019.

The inclusion criteria of the study were: primary caregiver who is an immediate family relative or non-immediate family relative, within the age of 18-65 years as recommended by Hospital Anxiety and Depression

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Scale (HADS)[7, 8] and caregiver of those patient diagnosed with mental illness. Similarly, the exclusion criteria were: caregivers with prior history of any mental illness, not involving directly in giving care and whose patients were visiting first time for checkup. Data collection was carried out after the questionnaires had been pretested on a sample (10% of the total sample) of caregivers of mentally ill patients attending psychiatric OPD of another hospital of Kathmandu.

The final version of semi-structured questionnaire was used to assess the characteristics of caregivers and patients. Anxiety and depressive status in caregivers was measured using validated Nepali translated version of standard Hospital Anxiety and Depression scale (HADS).[7] Cronbach's alpha of validated Nepali translated version of standard HADS was 0.76 for anxiety (HADS-A) and 0.68 for depression (HADS-D).[7] HADS contains 14 items in two subscales: Anxiety sub-scale (HADS-A) and Depression sub-scale (HADS-D), each with seven items. Each item is rated on a four-point scale from 0-3 in which 3 indicates maximum symptom severity. The scores are summed and the score of each subscale has a potential range from 0 to 21. The cases of either anxiety or depression is indicated by a threshold of 11 and more score on either sub-scale. "Borderline" cases ranges from summed scores of 8-10 and 0-7 represents being in the normal range.[7, 8] In this study, a threshold of 11 and more has been used to screen anxiety and depressive symptoms among caregivers.

The different variables studied and analyzed were: socio-demographic characteristics (age, sex, relationship with patient, educational, socio-economic status), respondent providing care to patient related characteristics (duration of caregiving) and patient's illness related characteristics (types of mental illness of patient, duration of illness).

Ethical approval was obtained from Institutional Review Committee (IRC) of Manmohan Memorial Institute of Health Sciences, Kathmandu, Nepal and permission from Mental Hospital, Lagankhel. Data was collected after obtaining written and verbal informed consent from each and every participant. The objective of the study was clearly explained prior to data collection.

The collected data was entered in Microsoft Excel 2013 and data analysis was done in Statistical Package for Social Sciences (SPSS IBM version 25). Data was presented in the form of frequency, percentage, mean and standard deviation. Chi-square test (at 5% level of significance and 95% CI) was done to see the association between dependent and independent variables. Binary logistic regression was used to calculate the unadjusted odds ratio.

Caregiver is a family member or friend providing care rather than by a professional who is reimbursed for services.[9] We categorized the relationship of caregiver with patient further into immediate family relative (spouse, parents, children and siblings) and non-immediate family relative (other relative: uncle, aunt, grandfather, grandmother and so on). We included the educational status of primary level (completed 8th standard), secondary level (completed 12th standard) and higher education (pursuing or completed education above 12th standard) into formal education. The poverty line was set according to World Bank criteria of 1.90 US dollar per day per person. Socio-economic status was categorized with reference of <US$1.90/day/person as below poverty line and ≥US$1.90/day/person as above poverty line. This information was assessed by asking both formal and informal income of participants. We obtained the diagnoses of the patient from patients' record card or was reported by caregivers. We then, classified the diagnosed mental illness of patient according to WHO International Classification of Disease (ICD-10) code.

RESULTS

A total of 184 primary caregivers participated in the study. Table 1 shows the socio-demographic characteristics of caregivers. The mean age of caregivers was 36.26 ± 12.819 years with a majority (62%) of female caregivers. Majority (34.8%) of caregivers were spouse and majority (65.8%) had received formal education. It was found that 19% of caregivers were illiterate and 15.2% were literate. More than half (58.2%) had their socio-economic status below poverty line. Most of the caregivers (70.1%) were providing care for up to five years while 29.9% of caregivers were providing care for more than five years.

Table 1. Socio-Demographic characteristics of caregivers (n=184).

Variables	Frequency (%)
Age of caregiver (in years)	
Mean age ± SD	36.26 ± 12.819
16-25	44 (23.9)
26-35	54 (29.3)
36 and above	86 (46.7)
Sex of caregiver	
Male	70 (38)
Female	114 (62)
Relationship with the patient	
Spouse	64 (34.8)

Parents	28 (15.2)
Children	51 (27.7)
Siblings	29 (15.8)
Other relative(Uncle, Aunt, Grandfather, Grandmother)	12 (6.5)
Educational status	
Illiterate	35 (19)
Literate	28 (15.2)
Formal education	121 (65.8)
Socio-economic status	
Below poverty line (<US$1.90/ day/person)	107 (58.2)
Above poverty line(≥US$1.90/ day/person)	77 (41.8)
Duration of caregiving	
Up to 5 years	129 (70.1)
More than 5 years	55 (29.9)

Table 2 shows the socio-demographic characteristics of patients. The mean age of patients was 40.49 ± 14.984 years with a majority (56%) of female patients. The predominant diagnosis of patients was Schizophrenia, Schizotypal and Delusional disorders (33.2%) followed by Depressive disorders (21.7%), Anxiety disorders (18.5%), Bipolar affective disorders (14.1%), Mental and behavioral disorders due to psychoactive substance use (9.2%) and Dissociative disorders (3.3%). Majority of the patients (71.7%) had duration of illness of more than one year.

Table 2. Socio-Demographic characteristics of patients (n=184).

Variables	Frequency (%)
Age of patient (in years)	
Mean age ± SD	40.49 ± 14.984
35 and below	76 (41.3)
36-45	46 (25)
46-55	32 (17.4)
56 and above	30 (16.3)
Sex of patient	
Male	81 (44)
Female	103 (56)
Types of mental illness	
Depressive disorders	40 (21.7)
Anxiety disorders	34 (18.5)
Bipolar affective disorders	26 (14.1)
Dissociative disorders	6 (3.3)
Mental and behavioral disorders due to psychoactive substance use	17 (9.2)
Schizophrenia, Schizotypal and Delusional disorders	61(33.2)
Duration of illness	
Up to 1 year	52 (28.3)
More than 1 year	132 (71.7)

Table 3 shows the distribution of anxiety and depressive status among the caregivers. Anxiety and depressive symptoms among caregivers of mentally ill patients was 24.5% and 19.6% respectively. The caregivers falling under borderline anxiety category is 24.5% and 51.1% were in normal range. The caregivers falling under borderline depression category is 22.3% and 58.2% were in normal range.

Table 3. Status of Anxiety and Depression among the caregivers (n=184).

Variables	Frequency (%)
Status of Anxiety	
Anxiety	45 (24.5)
Borderline Anxiety	45 (24.5)
Normal	94 (51.1)
Presence of Anxiety	
Yes	45 (24.5)
No	139 (75.5)
Status of Depression	
Depression	36 (19.6)
Borderline Depression	41 (22.3)
Normal	107 (58.2)
Presence of Depression	
Yes	36 (19.6)
No	148 (80.4)

Table 4 shows the association of anxiety symptoms with socio-demographic characteristics of caregivers and patients. Anxiety symptoms in caregivers was found to be significantly associated with sex of caregiver (p=0.031), socio-economic status (p=0.043), sex of patient (p=0.032) and types of mental illness of patient (p=0.002). It was observed that female caregivers were 2.280 times more likely to show anxiety symptoms than male. The risk of having anxiety was observed to be twice more among caregivers of below poverty line. It was less likely in those who had female patients. Caregivers providing care to patients diagnosed with mental and behavioral disorders due to psychoactive substance use were 8.333 times more likely to show symptoms of anxiety in comparison to caregivers of patients with schizophrenia, schizotypal and delusional disorders.

Table 5 shows the association of depressive symptoms

in caregivers with socio-demographic characteristics of caregivers and patients. Depressive symptoms in caregivers was found to be significantly associated with sex of caregiver (p=0.029), educational status (p=0.002), socio-economic status (p=0.022) and sex of patient (p=0.007). It was observed that female caregivers were 2.523 times more likely to show depressive symptoms than male. Literate caregivers were more likely of showing symptoms of depression than illiterate. The risk of being depressed was observed to be twice more among caregivers of below poverty line. It was less likely in those who had female patients.

Table 4. Association of Anxiety symptoms in caregivers with Socio-Demographic characteristics of caregivers and patients (n=184).

Variables	Anxiety symptoms in caregivers		p-value	Unadjusted Odds Ratio (95% CI)
	Yes n (%)	No n (%)		
Sex of caregiver				
Male	11 (15.7)	59 (84.3)	0.031*	Ref
Female	34 (29.8)	80 (70.2)		2.280 (1.068-4.867)
Socio-economic status				
Below poverty line	32 (29.9)	75 (70.1)	0.043*	2.101 (1.017-4.340)
Above poverty line	13 (16.9)	64 (83.1)		Ref
Sex of patient				
Male	26 (32.1)	55 (67.9)	0.032*	Ref
Female	19 (18.4)	84 (81.6)		0.478 (0.242-0.947)
Types of mental illness of patient				
Depressive disorders	9 (22.5)	31 (77.5)	0.002**	1.320 (0.491-3.546)
Anxiety disorders/ Dissociative disorders	9 (22.5)	31 (77.5)		1.320 (0.491-3.546)
Bipolar affective disorders	5 (19.2)	21 (80.8)		1.082 (0.335-3.499)
Mental and behavioral disorders due to psychoactive substance use	11 (64.7)	6 (35.3)		8.333 (2.536-27.386)
Schizophrenia, Schizotypal and Delusional disorders	11 (18)	50 (82)		Ref

**p-value significant at <0.05, ** p-value significant at <0.01*

Table 5. Association of Depressive symptoms in caregivers with Socio-Demographic characteristics of caregivers and patients (n=184).

Variables	Depressive symptoms in caregivers		p-value	Unadjusted Odds Ratio (95% CI)
	Yes n (%)	No n (%)		
Sex of caregiver				
Male	8 (11.4)	62 (88.6)	0.029*	Ref
Female	28 (24.6)	86 (75.4)		2.523 (1.078-5.909)
Educational status				
Illiterate	10 (28.6)	25 (71.4)	0.002**	Ref
Literate	11 (39.3)	17 (60.7)		1.618 (0.563-4.646)
Formal education	15 (12.4)	106 (87.6)		0.354 (0.142-0.880)
Socio-economic status				
Below poverty line	27 (25.2)	80 (74.8)	0.022*	2.550 (1.122-5.794)
Above poverty line	9 (11.7)	68 (88.3)		Ref
Sex of patient				
Male	23 (28.4)	58 (71.6)	0.007**	Ref
Female	13 (12.6)	90 (87.4)		0.364 (0.171-0.776)

**p-value significant at <0.05, ** p-value significant at <0.01*

DISCUSSION

This study assessed anxiety and depressive symptoms among caregivers of mentally ill patients was 24.5% and 19.6% respectively. This is comparatively a little lower than other studies done in Nepal in which the prevalence of anxiety and depression was found to be 29% and 25% respectively.[6] Depressive symptoms in our study is also found to be lower than that reported from other studies of Nepal (42.5%)[1] and Sri Lanka (37.5%).[10] However, the assessment in this study were found to be higher than the studies of Singapore (12.7% anxiety and 18.3% depression)[11] and Southwest Ethiopia (19% depression).[12] It is however important to note that our study examined anxiety and depressive status among caregivers of people with various mental illness, as opposed to studies which looked at caregivers of specific populations i.e. patients with Schizophrenia and Bipolar affective disorders in a study of Nepal.[6] Discrepancy in findings might be due to the use of different screening tools for anxiety and depression with different cut off points in different studies.

Our finding showed more female caregivers (62%) were involved in providing care which is supported by study done in India[13,14] South West Ethiopia[12] and Singapore.[11] In majority of Asian countries, the primary role of caring for dependent family members has been assigned to women.[15] Female caregivers were more likely to have anxiety and depressive symptoms which was observed to be consistent with studies conducted in India,[16] Pakistan[17] and Portugal.[18]

Majority of caregivers (46.7%) belonged to age group of 36 years and above which is supported by study of National Alliance for Caregiving in which most of the mental health caregivers were 45 to 64 years old.[19] It shows that mostly the caretaking of mental ill patients are provided by older age caregivers. Our study has found majority of caregivers (34.8%) were spouse. However many other studies observed majority of caregivers were parents.[12, 20-22]

Caregivers who were literate were more likely have depressive symptoms than those who were illiterate. However, caregivers with formal education were less likely to have depressive symptoms compared to illiterate caregivers. It is supported by a study in Nepal which showed caregivers who were illiterate had severe depression than the educated caregivers.[1] Although in this study, statistical association between educational status and anxiety symptoms was not observed, a study of Portugal showed caregivers with less education have more anxiety than those with higher education.[18]

Those caregivers who had their socio-economic status below poverty line were twice more likely to show anxiety and depressive symptoms which is consistent with a study of Nepal.[1] This may indicate the mental health status of those with low socio-economic status is more affected since they may face difficulty in providing care and treatment to their ill patient. We did not find duration of caregiving associated with the status of anxiety as well as depression. However a study from Saudi Arabia opposed this finding.[23]

Majority of patients (41.3%) belonged to age group of under 35 years which is supported by study in Indonesia where 50% of patients were age below 30 years.[24] Our findings showed majority of patients were female (56%) followed by male patients (44%) and sex of patient was significantly associated with anxiety and depressive symptoms in caregivers. Similarly, caregivers who had female patients were less likely to show anxiety and depressive symptoms. In contrary, a study in Nepal revealed that depression was significantly higher in caregivers of female patients.[1]

Mental problems in caregivers of mentally ill patients was greatly affected by the illness diagnosed in the patient which was shown by various studies.[9,11,25] In this study, the predominant diagnosis of patients was found to be Schizophrenia, Schizotypal and Delusional disorders (33.2%) which resembles to the similar findings of Singapore.[11] Our study showed anxiety symptoms in caregivers was significantly associated with types of mental illness of patient and caregivers of patients with mental and behavioral disorders due to psychoactive substance use were more likely to suffer from anxiety whereas it was not found associated with depressive symptoms. However, studies in Nepal[1] and Pakistan[25] showed relation between depression and diagnosed illness of patient.

This study is limited to a single Mental Hospital of Nepal so it might not be the representation of whole population. The study also does not attempt to do the absolute diagnosis test for anxiety and depressive disorders. However, the result produced may help researchers and program planners to address the mental health status of caregivers. Further studies are recommended including qualitative studies for better understanding the status of anxiety and depression among the caregivers of patients with mental illness.

CONCLUSIONS

The study assessed anxiety symptoms among caregivers of mentally ill patients was 24.5%. Depressive symptoms among caregivers of mentally ill patients was found to

be 19.6% which was comparatively lower than that of anxiety. Anxiety and depressive symptoms in caregivers were significantly associated with sex of caregiver, socio-economic status and sex of patient. Similarly, types of mental illness of patient was found to be significantly associated with anxiety while educational status was significantly associated with depressive symptoms in caregivers. Therefore, it is important to consider the mental health of caregivers of mentally ill patients as they are also at high risk of mental health challenges. The findings emphasize advocacy at program and policy level and the need of mental health promotion programs for caregivers to help them deal with mental problems associated with caring the patients.

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