

Comparison of Depression, Anxiety and Stress in Caregivers of Patients with Schizophrenia and Bipolar Affective Disorder

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ABSTRACT

Objective: To compare depression, anxiety, and stress amongst caregivers of patients with Schizophrenia and Bipolar Affective Disorder

Study Design: Cross-sectional study.

Place and Duration of Study: Psychiatry Department, Fauji Foundation Hospital, Rawalpindi Pakistan, from May to Nov 2021

Methodology: One hundred caregivers of patients with Schizophrenia and Bipolar Affective Disorder took part in the study. The “Depression Anxiety Stress Scales” scale assessed depression, anxiety and stress. The difference in both groups was checked by the chi-square test.

Results: One hundred caregivers (46 caregivers of patients with Schizophrenia and 54 caregivers of patients with the bipolar affective disorder) were recruited. Among caregivers of patients with Schizophrenia, 29(63%) had significant depression, 33(71%) had anxiety, and an equal proportion had stress. Of those who cared for patients with bipolar affective disorder, 16(29.6 %) had depression, 29(53.7 %) had anxiety, and 25(46.29%) had stress. Depression, anxiety, and stress among caregivers had a statistically significant association with clinical diagnosis in our target population (p -value 0.002, 0.033, 0.007), respectively.

Conclusion: Depression, anxiety, and stress are significantly higher among caregivers of patients with Schizophrenia as compared to caregivers of patients with bipolar affective disorder. Our findings have identified a significant need for supporting caregivers of patients with serious mental illness.

Keywords: Anxiety, Bipolar affective disorder, Caregivers, Depression, Schizophrenia, Stress.

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INTRODUCTION

Mental health is the foundation for an individual's well-being and effective functioning. Thirteen percent of the world's population suffers from the debilitating effects of Mental health and substance use disorders (World Health Organization 2017).^{1,2} Among these, Bipolar Affective Disorder and Schizophrenia are ranked within the top 15 causes of disability.³ Forty-five million people are afflicted with Bipolar Affective Disorder, and another 10 million have Schizophrenia worldwide.^{4,5}

Caregiving is a challenging responsibility that affects the caregiver's physical and psychological well-being. Various studies have reported that caregivers of chronic and severe illnesses show high levels of depression, anxiety, and stress.^{6,7} Both formal and informal caregivers appear to suffer a negative psychological impact.⁶ Caregiving distress in care-givers of patients with psychiatric illness has been well documented in studies done in the West.^{8,9}

In Low- and middle-income economies, the long-term care for a patient is not formally developed, and the family members have to bear the hefty load of caregiving on themselves. In a recent local study published in Karachi, the quality of life and satisfaction among caregivers of Schizophrenic patients was explored.¹⁰ Most caregivers were found to have poor satisfaction regarding their quality of life, which also affects their level of caregiving. Identifying the caregiver burden can potentially guide mental health professionals to provide appropriate and timely support needed to improve psychiatric morbidity in caregivers. Considering the limited data available locally, our study was planned to explore the levels of depression, anxiety, and stress in caregivers of patients with Schizophrenia and Bipolar Affective Disorder in a tertiary care hospital in Rawalpindi and to compare the psychological impact among caregivers of these patients.

METHODOLOGY

After getting ethical approval from the Ethical Committee (Ref no. 483/RC/FFH/RWP dated 19th May 2021), the cross-sectional study was conducted from May 2021, to November 2021. The WHO

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calculator was used to determine the sample size by using the population proportion of anxiety in caregivers of patients with Schizophrenia as 78% and keeping a margin of error of 10%.¹¹ Consecutive non-probability sampling was used to gather the sample.

Inclusion Criteria: All caregivers of patients with Schizophrenia and Bipolar Affective Disorder coming to OPD or admitted to the psychiatry department were invited to be part of the study. Caregivers were operationally defined as any close family member living in the same home with the patient for at least six months, responsible for dispensing medicines and daily care. In addition, all caregivers were ensured to be above 16 years of age.

Exclusion Criteria: Caregivers with already diagnosed psychiatric illness, substance abuse, and uncontrolled medical illness were excluded from the study.

Mental illness in the patient was diagnosed by a consultant psychiatrist based on ICD 10 diagnostic criteria.¹² Every participant included in the study was briefed about the title of the study and its objectives. With written informed consent, each was assigned a serial reference number, and complete data were treated with total confidentiality. Caregiver distress in the primary caregivers was measured by Depression Anxiety Stress Scales attached with Performa recording a detailed demographic profile of each participant.

The DASS scale has 42 items, with 14 on each scale representing current depression, anxiety, and stress symptoms. It uses a four-point scale (0-3) to rate all the items. Its validated Urdu version has been used previously in published local studies.¹³ For depression, anxiety and stress, the cutoff scores to establish clinical significance were nine, seven, and fourteen on the DASS, respectively.¹⁴

The data were analyzed using Statistical Package for the Social Sciences (SPSS) version 26:00. Comparison of depression, anxiety, and stress in caregivers of patients with Schizophrenia and bipolar affective disorder was carried out using descriptive statistics. The relationship between the variables was determined by Chi-square analysis. The p-value lower than or up to 0.05 was considered as significant.

RESULTS

One hundred caregivers were selected, including forty-nine (49%) males and 51(51%) females. There were 46(46%) caregivers of patients with schizophrenia and 54(54%) caregivers of patients with bipolar affective disorder. Caregiver’s general characteristics were summarized in Table-I.

Table-I: General Characteristics of Caregivers participating in the study (n=100)

| Characteristics | n (%) |
|--|----------|
| Age | |
| 16-29 years | 29(29%) |
| 30-49 years | 34(34%) |
| >50 years | 37(37%) |
| Gender | |
| Male | 49(49%) |
| Female | 51 (51%) |
| Education | |
| No | 9(9%) |
| Primary | 27(27%) |
| Matric | 40(40%) |
| Graduate | 24(24%) |
| Marital Status | |
| Unmarried | 33(33%) |
| Married | 58(58%) |
| Widowed/divorced | 9(9%) |
| Relationship of Caregivers with the Patient | |
| Parents | 33(33%) |
| Spouse | 12(12%) |
| Sibling/children | 47(47%) |
| Others | 8(8%) |
| Duration of Caregiving | |
| 0y-5y | 40(40%) |
| 6y-10y | 22(22%) |
| >10y | 38(38%) |
| Clinical Diagnosis of the Patients | |
| Care givers of Schizophrenia | 46(46%) |
| Care givers of Bipolar affective disorder | 54(54%) |

Table-II details a percentage breakdown of depression, anxiety, and stress scores among caregivers of patients with Schizophrenia and bipolar affective disorder. Of the 46(46%) caregivers of schizophrenic patients, 17(30.9%) had no depression, 13(34.2%) had no anxiety, and 13(31.0%) had no stress on the DASS scale. Among 54(54%) caregivers of patients with bipolar affective disorder, 38(69.1%) had no depression, 25(65.8%) had no anxiety, and 29(69.0%) had no stress. Caregivers of patients with Schizophrenia had higher scores of depression, anxiety, and stress than caregivers of patients with bipolar affective disorder, and the difference was statistically significant (*p*-value 0.002, 0.033, 0.007), respectively.

Higher anxiety scores in caregivers were shown to be significantly associated with low levels of education (*p*-value 0.023). At the same time, no statistically significant association was identified with other factors like age, gender, education, the relationship of caregivers and duration of caregiving (*p*-value >0.05), as evident in Table-III.

Comparison of Depression, Anxiety and Stress

Table-II: The score of the DASS Scale among Caregivers of Patients with schizophrenia & Bipolar Affective Disorder (n=100)

| DASS Scale | Caregivers of SCZ Patient n(%) 46 (46%) | Caregivers of BAD n(%) 54(54%) | Sig-nificance p-value |
|-------------------------|--|-----------------------------------|-----------------------|
| Depression Score | | | |
| No Depression | 17(30.9%) | 38(69.1%) | 0.002 |
| Mild/moderate | 14(58.3%) | 10(41.7%) | |
| Severe Depression | 15(71.4%) | 6(28.6%) | |
| Anxiety Score | | | |
| No Anxiety | 13(34.2%) | 25(65.8%) | 0.033 |
| Mild/moderate | 14(42.4%) | 19(57.6%) | |
| Severe Anxiety | 19(65.5%) | 10(34.5%) | |
| Stress Score | | | |
| No Stress | 13(31.0%) | 29(69.0%) | 0.007 |
| Mild/moderate | 16(47.0%) | 18(52.9%) | |
| Severe Stress | 17(70.8%) | 7(29.2%) | |

anxiety, and stress among caregivers of patients with Schizophrenia and bipolar affective disorder.

A narrative review was conducted in Iran to determine the challenges of family caregivers of mentally ill patients. The authors concluded that the challenges faced by family caregivers of mentally ill patients included burnout, high caregiving burden and social stigma, low social support of caregivers, and poor quality of life.¹⁴ According to a local study conducted in Pakistan to assess psychological distress in caregivers of patients with Schizophrenia, 15 72 % of caregivers were found to have significant psychological stress. These findings are consistent with our results where 63% of the caregivers of patients with Schizophrenia had significant depression, 71% had anxiety, and an equal proportion had significantly high-stress levels. Another study in Dhaka assessed

Table-III: DASS Score vs. Different Variables (n=100)

| Variables | Depression | | p-value | Anxiety | | p-value | Stress | | p-value |
|------------------------------------|---------------|-------------------------|---------|---------------|-------------------------|---------|---------------|-------------------------|---------|
| | Mild/Moderate | Severe/Extremely Severe | | Mild/Moderate | Severe/Extremely Severe | | Mild/Moderate | Severe/Extremely Severe | |
| Age | | | | | | | | | |
| Y | 8(27.6%) | 7(24.1%) | 0.654 | 8(27.6%) | 7(24.1%) | 0.665 | 10(34.5%) | 5(17.2%) | 0.669 |
| 30-40 Y | 11(32.4%) | 12(35.3%) | | 11(32.4%) | 12(35.3%) | | 10(29.4%) | 11(32.4%) | |
| >58 Y | 14(37.8%) | 10(27.0%) | | 14(37.8%) | 10(27.0%) | | 14(37.8%) | 8(21.6%) | |
| Gender | | | | | | | | | |
| Male | 11(22.4%) | 8(16.3%) | 0.410 | 15(30.6%) | 11(22.4%) | 0.162 | 16(32.7%) | 10(20.4%) | 0.569 |
| Female | 13(25.5%) | 13(25.5%) | | 18(35.5%) | 18(35.3%) | | 18(35.3%) | 14(27.5%) | |
| Educational level | | | | | | | | | |
| No formal | | | 0.341 | | | 0.023 | | | 0.532 |
| Primary | 3(33.3%) | 2(22.2%) | | 6(66.6%) | 2(22.2%) | | 5(55.6%) | 2(22.2%) | |
| Matriculate | 9(33.3%) | 5(18.5%) | | 13(48.1%) | 8(29.6%) | | 8(29.6%) | 6(22.2%) | |
| Graduate/above | 9(22.5%) | 11(27.5%) | | 10(25.0%) | 13(32.5%) | | 14(35.0%) | 12(30.0%) | |
| | 3(12.5%) | 3(12.5%) | | 4(16.7%) | 6(25.0%) | | 7(29.2%) | 4(16.7%) | |
| Relationship of care givers | | | | | | | | | |
| Parents | 9(27.3%) | 9(27.3%) | 0.686 | 14(42.4) | 10(30.3%) | 0.496 | 14(42.4%) | 8(24.2%) | 0.800 |
| Spouse | 4(33.3%) | 1(8.3%) | | 2(16.7%) | 3(25.0%) | | 32(5.0%) | 2(16.7%) | |
| Siblings/c children | 9(19.1%) | 9(19.1%) | | 14(29.8%) | 13(27.7%) | | 15(31.9%) | 12(25.5%) | |
| Others | 2(25.0%) | 2(25.0%) | | 3(37.5%) | 3(37.5%) | | 22(5.0%) | 2(25.0%) | |
| Duration of care Giving | | | | | | | | | |
| 0-5 Y | 9(22.5%) | 6(15.0%) | 0.518 | 12(30.0%) | 11(27.5%) | 0.812 | 13(32.5%) | 9(22.5%) | 0.878 |
| 6-10 Y | 5(22.7%) | 4(18.4%) | | 6(27.3%) | 7(31.8%) | | 8(36.4%) | 4(18.2%) | |
| >10 Y | 10(26.3%) | 11(28.9%) | | 15(39.5%) | 11(28.9%) | | 13(34.2%) | 11(28.9%) | |

DISCUSSION

Schizophrenia and bipolar affective disorders are both chronic conditions that directly impact the family and friends of those affected. Seeing a loved one go through such severe psychological and emotional turmoil has its toll on the caregivers. Therefore, we conducted this study to compare the levels of depression,

mental illness among caregivers of schizophrenic patients and reported a lower incidence of psychiatric disorders than ours. They found 11.8 % of caregivers to have a major depressive disorder, while 4.8% suffered from Generalized Anxiety Disorder.¹⁶ This difference is likely due to the selection of tools used to assess psychiatric morbidity and the inclusion of caregivers in their study who were not primary caregivers of the

patients. However, in a cross-sectional study conducted with 157 Taiwanese primary family caregivers of individuals with Schizophrenia, caregivers who were older and had lower educational status reported greater caregiver burden and poor quality of life.¹⁷ We found no significant association between most socio-demographic factors and caregiver burden. This may be partly explained by our poorly developed mental health services, where the better educational or financial status of caregivers still fails to provide them access to appropriate caregiver support.

Few types of research compare mental health in schizophrenia and bipolar affective disorder caregivers. For example, in a study conducted in India in 2018, caregivers of schizophrenic patients exhibited higher depression, anxiety, and stress scores than bipolar affective disorder caregivers; however, no statistically significant differences in scores between the two groups were identified.¹⁸ In another study, 47.8% of caregivers of bipolar affective disorder and 60.7% of caregivers of schizophrenic patients suffered from psychological distress. The distress was significantly higher among caregivers of patients with Schizophrenia.¹⁹ Our findings supported this; the difference in depression, anxiety, and stress scores between the caregivers of Schizophrenia and Bipolar affective disorder was statistically significant.

CONCLUSION

Depression, anxiety, and stress are significantly higher among caregivers of patients with Schizophrenia than caregivers of patients with bipolar affective disorder. Our findings have identified a significant need for supporting caregivers of patients with serious mental illness.

Conflict of Interest: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

QUA., SM: Conception, interpretation of data, drafting the manuscript, approval of the final version to be published.

UBZ: Study design, data analysis, drafting the manuscript, critical review, approval of the final version to be published.

NA., TL: Data acquisition, interpretation of data, approval of the final version to be published.

MB: Critical review, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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