

MENTAL HEALTH OUTCOMES AMONG CAREGIVERS OF PATIENTS WITH OCD: A QUANTITATIVE STUDY

Original Article

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ABSTRACT

Background: Obsessive-compulsive disorder (OCD) is a chronic and disabling mental health condition that significantly impacts not only affected individuals but also their caregivers. Caregivers, particularly in low-resource settings like Pakistan, often experience heightened psychological distress due to a lack of awareness, social stigma, and limited support systems. While global literature acknowledges the burden on caregivers, there remains a critical gap in Pakistan-specific research examining depression, anxiety, and stress among caregivers of individuals with OCD.

Objective: To assess the levels of depression, anxiety, and stress among caregivers of patients with OCD in Pakistan and to determine whether anxiety mediates the relationship between stress and depression.

Methods: A cross-sectional correlational study was conducted using purposive sampling. A total of 300 caregivers of individuals diagnosed with OCD were recruited through online platforms during the COVID-19 pandemic. Mental health outcomes were assessed using the DASS-21, a validated self-report measure. Data were analyzed using IBM SPSS Version 27, and Hayes Process Macro 4.1 (Model 4) was applied for mediation analysis.

Results: The majority of caregivers were female (67%), with a mean age of 37.36 years (SD = 9.94). Correlation analysis revealed significant positive associations between depression, anxiety, and stress ($r = .97, .51, .49$; $p < .01$). Mediation analysis showed that stress significantly predicted anxiety ($\beta = .46$, $p < .001$), and anxiety significantly predicted depression ($\beta = .96$, $p < .001$), with anxiety mediating the stress–depression relationship (indirect effect = .45, 95% CI [.37, .55]).

Conclusion: Caregivers of individuals with OCD in Pakistan face substantial psychological challenges. The findings support the need for caregiver-focused interventions, including psychological counselling, awareness campaigns, and government-supported mental health services.

Keywords: Anxiety, Caregivers, Depression, Mental Health, Obsessive-Compulsive Disorder, Pakistan, Stress.

INTRODUCTION

Obsessive-compulsive disorder (OCD) is a chronic and debilitating mental health condition characterized by recurrent intrusive thoughts—known as obsessions—and repetitive behaviors or mental rituals, referred to as compulsions, which individuals feel compelled to perform to alleviate distress. These symptoms significantly disrupt daily functioning and often intensify in response to psychological stress (1). While OCD may manifest across various age groups, pediatric presentations are particularly challenging as they impact not only the child but also the entire family ecosystem. Among these, caregivers—typically parents or close family members—bear the brunt of the emotional and psychological toll associated with managing the disorder. The caregiving role, whether fulfilled by a family member or a paid professional, involves sustained and regular assistance to individuals with chronic conditions, disabilities, or mental health disorders, and is well-documented to be a source of significant psychological burden (2). The mental health of caregivers, especially those caring for individuals with psychiatric illnesses, has increasingly garnered research attention. Studies have identified heightened levels of depression, anxiety, and stress among caregivers in such contexts, indicating that the psychological strain they endure is both considerable and frequently overlooked (3,4). Depression, a common concern in this population, manifests as persistent sadness, a diminished interest in previously enjoyable activities, and feelings of hopelessness, which can severely affect functionality (5). Similarly, anxiety, marked by excessive worry, restlessness, and physiological symptoms such as rapid heartbeat and sweating, is another prevalent concern (6). Stress, broadly defined as the body's response to perceived threats or challenges, contributes further to the caregiver's emotional exhaustion and decreased well-being (7).

Particularly in the context of pediatric OCD, caregivers report profound emotional distress and a notable decline in quality of life (QoL). These challenges are often linked to the severity of the child's symptoms, the extent of family accommodation (i.e., changes in family behavior made to reduce the child's distress), and the presence of co-occurring psychological disorders (7,8). Research suggests that caregiver depression and child behavioral issues are strong predictors of caregiver burden and poor QoL (8). Parents and close relatives of children with OCD frequently report heightened emotional distress and impaired functioning across physical, psychological, and social domains, further emphasizing the necessity for caregiver-centered psychological support (9,10). Despite the growing literature on caregiver burden in neurocognitive and neurodevelopmental disorders, there remains a glaring research gap regarding the psychological impact on caregivers of OCD patients, particularly within the Pakistani context (11,12). Existing evidence from Pakistan largely overlooks this subgroup, leaving their experiences, stressors, and psychological outcomes underrepresented in mental health discourse. Addressing this gap is essential not only to improve caregiver well-being but also to enhance patient outcomes, as caregiver mental health is closely intertwined with the quality of care provided. Therefore, this study aims to investigate the mental health outcomes—specifically depression, anxiety, and stress—among caregivers of patients with OCD in Pakistan. Furthermore, it seeks to examine whether anxiety mediates the relationship between stress and depression in this population, thereby offering evidence-based insights to inform mental health interventions and support systems for caregivers.

METHODS

The present study employed a cross-sectional correlational research design to explore the association between depression, anxiety, and stress among caregivers of individuals diagnosed with obsessive-compulsive disorder (OCD) in Pakistan. A purposive sampling technique was used to recruit a total of 300 participants who met predefined inclusion criteria. Eligible participants were required to be primary caregivers—either family members or paid attendants—providing regular care to at least one patient diagnosed with OCD by a qualified mental health professional at a recognized psychiatric facility. Additional criteria included a minimum education level of intermediate (higher secondary) for both the caregiver and the patient, a minimum caregiver age of 18 years, and Pakistani citizenship. Caregivers of any gender were eligible for inclusion. Individuals who did not meet these criteria, or those unable to provide informed consent, were excluded from participation. Data collection was conducted remotely due to the constraints imposed by the COVID-19 pandemic. To ensure participant safety and accessibility, a structured online questionnaire was disseminated via Google Forms. This approach allowed for wide geographic reach and minimized risk of viral exposure, though it may have introduced sampling bias by excluding individuals without internet access or digital literacy limitation acknowledged in the study's scope.

Mental health outcomes were assessed using the Depression Anxiety Stress Scales-21 (DASS-21), a widely validated instrument comprising 21 items that evaluate symptoms across three dimensions: depression, anxiety, and stress. Each item was rated on a four-point Likert scale ranging from 0 ("Did not apply to me at all") to 3 ("Applied to me very much or most of the time"), reflecting the severity of symptoms over the previous week. DASS-21 has demonstrated robust psychometric properties, with Cronbach's alpha coefficients of 0.88 for depression, 0.82 for anxiety, and 0.90 for stress, supporting its internal consistency and reliability for use in

clinical and research settings (13). Ethical approval was obtained from the institutional review board of the relevant academic department. The study adhered to the American Psychological Association (APA) 7th Edition Ethical Principles of Psychologists and Code of Conduct. Written permission was secured from the original authors of the DASS-21 for use in this research. Participants were fully informed about the nature, purpose, and voluntary nature of the study. Informed consent was obtained electronically, and participants were assured of the confidentiality of their responses. They were also informed of their right to withdraw from the study at any point without any consequences. The average time to complete the questionnaire was approximately 20 minutes. Following data collection, responses were analyzed using IBM SPSS Statistics, Version 27. Descriptive statistics were used to summarize participant demographics and mental health scores. Correlational analyses were conducted to examine the relationships between depression, anxiety, and stress, and further mediation analysis was planned to explore whether anxiety functioned as a mediator between stress and depression among caregivers.

RESULTS

The demographic analysis revealed that the mean age of caregivers was 37.36 years ($SD = 9.94$). Among the 300 participants, the majority were women, accounting for 67% ($n = 203$), while men represented 33% ($n = 98$). Regarding educational attainment, 55% ($n = 166$) of caregivers had completed intermediate education, 27% ($n = 82$) held a bachelor's degree, 9% ($n = 28$) had a master's degree, and 8% ($n = 25$) were PhD holders. Descriptive statistics and bivariate correlations indicated strong and significant positive associations among the study variables. Depression was highly correlated with anxiety ($r = .97$, $p < .01$) and moderately correlated with stress ($r = .51$, $p < .01$). Similarly, anxiety also showed a significant moderate positive correlation with stress ($r = .49$, $p < .01$), confirming a consistent pattern of comorbidity among these psychological conditions. The mediation analysis showed that stress significantly predicted anxiety ($\beta = .46$, $SE = .04$, $p < .001$), suggesting that higher levels of perceived stress were associated with increased anxiety symptoms. In turn, anxiety had a strong and significant positive effect on depression ($\beta = .96$, $SE = .01$, $p < .001$). Moreover, stress independently predicted depression ($\beta = .05$, $SE = .01$, $p < .001$), albeit with a smaller effect size. The indirect path through anxiety yielded a significant mediating effect, with an unstandardized indirect effect of 0.45 and standardized effect of 0.46. The 95% confidence interval ($LLCI = 0.37$, $ULCI = 0.55$) did not cross zero, indicating that anxiety significantly mediated the relationship between stress and depression.

These findings demonstrate a statistically robust mediation model where anxiety plays a critical role in explaining how stress contributes to depressive symptoms among caregivers of OCD patients. Subgroup analyses were conducted to explore potential differences in mental health outcomes based on gender and education level among caregivers of individuals with OCD. Results indicated that female caregivers tended to report slightly higher mean scores for depression, anxiety, and stress compared to male caregivers, suggesting increased psychological vulnerability. Similarly, individuals with lower educational attainment, particularly those with intermediate-level qualifications, generally exhibited higher scores across all three domains. In contrast, caregivers holding advanced degrees such as a master's or PhD demonstrated relatively lower mean scores, indicating better psychological resilience. Overall, the mean scores for the entire sample were 13.97 ($SD = 5.91$) for depression, 11.89 ($SD = 4.81$) for anxiety, and 16.58 ($SD = 6.98$) for stress. These findings support the presence of nuanced differences in mental health status based on sociodemographic factors and underline the importance of targeted psychological interventions.

Table 1: Participants' Characteristics (N=300)

| Characteristics | <i>f</i> | % | <i>M</i> | <i>SD</i> |
|--|----------|----|----------|-----------|
| Age | | | 37.36 | 9.94 |
| Caregivers of individuals with Patients with OCD | | | | |
| Men | 98 | 33 | | |
| Women | 203 | 67 | | |
| Education | | | | |
| Intermediate | 166 | 55 | | |
| Bachelor | 82 | 27 | | |
| Master | 28 | 9 | | |
| PhD | 25 | 8 | | |

Table 2: Correlational among Study Variables (N=300)

| Variables | 1 | 2 | 3 |
|------------|---|-------|-------|
| Depression | - | .97** | .51** |
| Anxiety | | - | .49** |
| Stress | | | - |

Note. ** $p < .01$

Table 3: Mediation Analysis (N=300)

| | Consequences | | | | | | | |
|-------------|-------------------------------|---------|-----|------|---------------------------------|---------|-----|------|
| | A (M) | | | | D (Y) | | | |
| Antecedents | | β | SE | P | | β | SE | P |
| S (X) | A | .46 | .04 | .001 | c' | .05 | .01 | .001 |
| A (M) | - | | | | b | .96 | .01 | .001 |
| Constant | I | 5.92 | .61 | .001 | I | -.31 | .20 | .001 |
| | $R^2 = .24$ F(1, 298) = 94.41 | | | | $R^2 = .95$ F(2, 297) = 3177.46 | | | |
| | *** $p < .001$ | | | | *** $p < .001$ | | | |

Note. *** $p < .001$, S = Stress, A= Anxiety, D = Depression

Table 4: Indirect Effect (N=300)

| Indirect Path | Effect | Standardised Effect | LLCI | ULCI |
|---------------|--------|---------------------|------|------|
| Anxiety | .45 | .46 | .37 | .55 |

Table 5: DASS-21 scores by Gender and Education

| | Depression | | Anxiety | | Stress | |
|--------------|------------|------|---------|------|--------|------|
| | mean | std | mean | std | mean | std |
| Female | 14.25 | 6.08 | 11.6 | 4.97 | 16.8 | 6.71 |
| Male | 13.38 | 5.5 | 12.49 | 4.43 | 16.12 | 7.52 |
| Bachelor | 14.48 | 6.1 | 11.19 | 5.17 | 17.01 | 6.28 |
| Intermediate | 13.66 | 5.61 | 12.17 | 4.69 | 15.88 | 7.35 |
| Master | 13.69 | 7.51 | 11.81 | 5.02 | 16.44 | 6.94 |
| PhD | 14.64 | 5.29 | 12.46 | 4.11 | 20.04 | 5.77 |

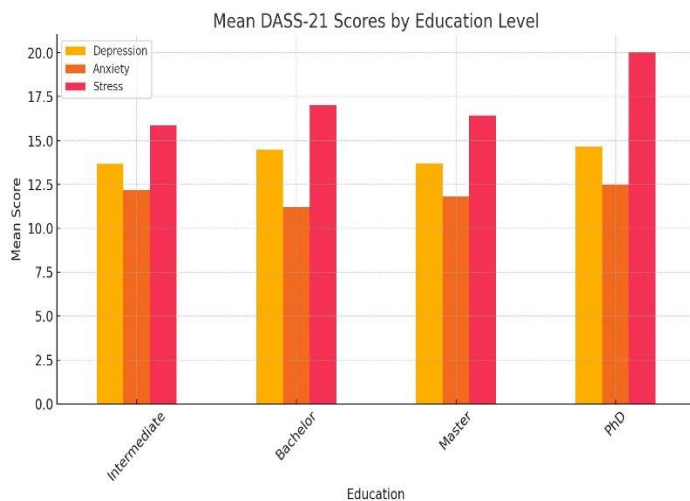


Figure1 Mean DASS-21 scores by Educational level

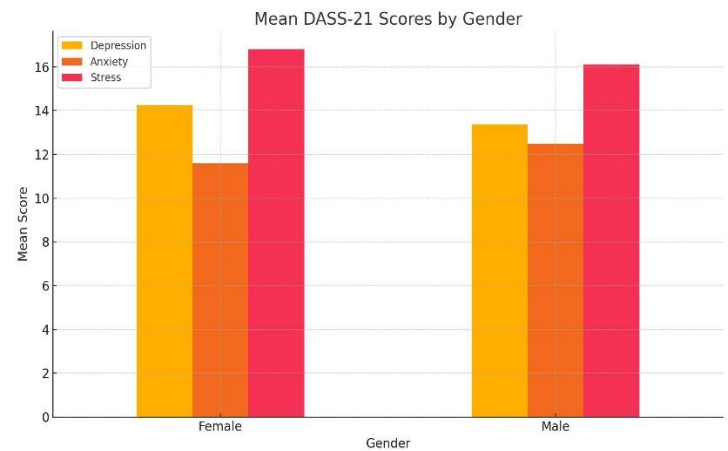


Figure 2 Mean DASS-21 scores by Gender

DISCUSSION

The current study was conducted to address a significant gap in the existing literature by investigating the mental health outcomes of caregivers of individuals with obsessive-compulsive disorder (OCD) in Pakistan, a group that remains largely overlooked despite evidence suggesting a high burden of psychological distress. The findings provided empirical support for both proposed hypotheses, revealing a strong positive correlation among depression, anxiety, and stress, as well as a significant mediating role of anxiety in the relationship between stress and depression. These outcomes contribute to a growing body of research that emphasizes the psychological vulnerability of caregivers responsible for patients with chronic psychiatric illnesses and neurodevelopmental disorders (14). The significant associations identified among depression, anxiety, and stress align with previous research on caregivers of individuals with psychiatric and developmental conditions, where elevated stress levels have been consistently linked to increased symptoms of anxiety and depression (15). This interrelationship may stem from the cumulative emotional toll of long-term caregiving, compounded by insufficient social support, persistent stigma around mental health, and limited access to structured psychological services. In Pakistan, these challenges are further exacerbated by a lack of public awareness, financial constraints, and the unavailability of caregiver-specific coping resources, all of which contribute to the chronic stress experienced by this population (16,17).

The mediation analysis further revealed that anxiety significantly mediated the impact of stress on depression, reinforcing the conceptual pathway in which prolonged stress responses may lead to heightened anxiety, ultimately precipitating depressive symptoms. This finding is consistent with a well-documented psychological model where chronic stress impairs emotional regulation, reduces resilience, and increases susceptibility to affective disorders (18). In the context of caregivers, especially those caring for individuals with OCD—a condition characterized by persistent behavioral disruptions—the emotional exhaustion that arises from daily caregiving responsibilities may contribute to this pathway (19). The mediating role of anxiety underscores the critical need for early psychological screening and intervention focused not only on depression but also on identifying and managing anxiety symptoms to mitigate long-term consequences. While this study provides valuable insights, several methodological limitations warrant attention (20). The sampling strategy, which relied on purposive sampling and data collected exclusively via online forms during the COVID-19 pandemic, may have introduced selection bias, limiting generalizability to the broader caregiver population. Additionally, the sample was skewed in terms of gender and education, with a disproportionate representation of women and individuals holding intermediate-level qualifications. This imbalance restricts the ability to fully explore potential differences in psychological outcomes across demographic groups. Moreover, the inclusion criterion requiring an intermediate education level may have excluded less educated caregivers who are equally, if not more, vulnerable to mental health distress. The absence of data collected using local language versions of assessment tools is another shortcoming, potentially affecting the accuracy of responses in a linguistically diverse population.

Despite these limitations, studying possesses notable strengths. It is among the first to examine the psychological health of caregivers of OCD patients in Pakistan through a structured, data-driven approach. The use of a validated instrument (DASS-21) and robust statistical analysis, including mediation modeling, adds credibility to the findings and allows for meaningful interpretation of complex psychological dynamics. The inclusion of subgroup analyses further adds to the depth of understanding regarding the influence of gender and education on mental health outcomes. These findings have several practical implications. Mental health professionals, including clinical psychologists and psychiatrists, should prioritize caregiver-focused assessments and interventions as part of a comprehensive care strategy. Targeted awareness campaigns through seminars, workshops, and digital platforms can enhance caregiver knowledge and coping strategies. The incorporation of relaxation techniques and psychoeducation modules into counseling programs may further support emotional regulation and prevent caregiver burnout. Additionally, nationwide efforts involving policymakers and media stakeholders are essential to destigmatize mental health and establish accessible support systems. Online and offline counseling services tailored specifically to caregivers should be made available through community health centers and digital mental health initiatives. Future research should adopt more representative sampling methods, such as stratified random sampling guided by power analysis, to ensure findings can be generalized across diverse caregiver populations (21). Expanding the inclusion criteria to encompass individuals with lower education levels and incorporating multilingual, culturally sensitive assessment tools would enhance inclusivity and validity. Longitudinal studies are also recommended to explore causality and temporal patterns in the development of psychological distress among caregivers. By addressing these methodological considerations, future investigations can contribute more comprehensively to the development of support frameworks that promote caregiver well-being and, by extension, improve outcomes for individuals living with OCD.

CONCLUSION

This study concluded that caregivers of individuals with obsessive-compulsive disorder in Pakistan experience considerable psychological distress, with depression, anxiety, and stress found to be significantly interrelated. Notably, anxiety plays a key mediating role in the relationship between stress and depression, highlighting the cascading impact of unmanaged emotional strain. These findings underscore the urgent need for integrated mental health support targeting caregivers, who are often overlooked in mental health interventions. By bringing attention to their unmet psychological needs, this research contributes valuable insight that can inform tailored mental health strategies, public awareness initiatives, and the development of caregiver-inclusive healthcare policies.

AUTHOR CONTRIBUTION

| Author | Contribution |
|---------------------|---|
| Anum Kamal* | Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published |
| Pulwasha Anwar | Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published |
| Uzma Jillani | Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published |
| Oruba Motiwala | Contributed to Data Collection and Analysis Has given Final Approval of the version to be published |
| Sayeda Iqra Geelani | Contributed to Data Collection and Analysis Has given Final Approval of the version to be published |
| Qurat Ul Ain | Substantial Contribution to study design and Data Analysis Has given Final Approval of the version to be published |
| Eisha Iftikhar | Contributed to study concept and Data collection Has given Final Approval of the version to be published |

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