

Mental Health Outcomes Among Caregivers of Children with Intellectual Disabilities: A Quantitative Study

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Abstract

The relationship between parental mental health outcomes, including anxiety, depression, and stress regarding caregivers of children with intellectual disabilities, exists in abundance in academic literature. However, Pakistan faces limited research on this topic precisely when it comes to mental health outcomes, i.e. depression, anxiety and stress among caregivers of children with intellectual disabilities. Therefore, the objective of this study is to overcome this gap. The research intends to address the current literature gap of knowledge through effects-based policy recommendations and support upcoming academic studies. Caregivers of at least one child with intellectual disabilities below eighteen years old participated in this research through purposive sampling within a cross-sectional correlational design. The correlational analysis depicts a significant association between stress, anxiety and depression among caregivers of children with intellectual disabilities. Hayes Process 4.1, Model 4 confirmed the positive and significant mediating role of anxiety between stress and depression. The research findings were discussed with relevant literature while proposing social welfare measures through counselling, peer networks, mental health assistance programs combined with educational guidance for children, and advocacy for government-operated intellectual disabilities education facilities. The government needs to establish effective policies which enable ongoing caregiver counselling support together with effective intellectual disability treatment solutions for children.

Keywords: Depression, Stress, Anxiety, Caregivers, Intellectual Disabilities.

Introduction

An intellectual disability is characterized by limitations in mental abilities that affect intelligence, learning, and everyday life skills. The signs and symptoms of intellectual disability include delayed learning, difficulty communicating, challenges in understanding social norms, impaired working memory, weak performance in practical tasks, limited reasoning and logical thinking, difficulty problem-solving, struggles with planning and decision-making, and challenges in carrying out daily tasks such as dressing, using the

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washroom, or managing personal care. Additionally, some individuals may exhibit impaired motor and fine motor skills, and some children may experience tantrums. The effects of this condition can vary widely. Some individuals may experience minor challenges and still live independent lives, while others may have severe limitations and require lifelong assistance and support (Patel et al., 2020; Lee et al., 2019; Schalock et al., 2021).

Caring for children with intellectual disabilities has been shown to significantly impact their caregivers, leading to detrimental mental health outcomes such as higher stress levels, severe depression, and elevated anxiety (Singh et al., 2020; Scherer et al., 2019; Sharma et al., 2021; Shahrier et al., 2016; Bhatia et al., 2015). Mental health outcomes in caregivers of children with disabilities—i.e., stress, anxiety, and depression—can be described in the following way: stress is a state of pressure or mental tension due to environmental factors, challenges, or emergencies that may escalate due to ineffective coping skills in dealing with specific situations. It may vary from person to person. Anxiety can be described as a state of tension, uneasiness, agitation, or fear in response to specific stressors or perceived danger. It may be characterized by panic about the future, sweating, a rapid heartbeat, and shivering. Depression can be described as a persistent state of sadness, occurring nearly every day, accompanied by a lack of decision-making ability, loss of pleasure in daily activities, disinterest in life, suicidal thoughts or attempts, and insomnia or hypersomnia (Wheatley, 1997; Szabó & Lovibond, 2006; Veysi et al., 2014).

Caregivers of children with intellectual disabilities (ID) often face significant mental health challenges, including depression and anxiety, due to the demands of caregiving and associated stressors such as financial strain and lack of support. A study conducted in Kenya found that 79% of caregivers of children with ID were at risk of clinical depression (Mbugua et al., 2011). Similarly, a systematic review revealed that 31% of parents of children with ID met the clinical cutoff for moderate depression, compared to 7% of parents of children without ID. Anxiety levels were also higher, with 31% of ID parents reaching the cutoff for moderate anxiety versus 14% of non-ID parents. Factors such as disability severity, lower income, and lack of family support exacerbated these mental health issues (Scherer et al., 2019).

In India, a study of 99 parents of children with ID found that 94% of mothers and 66.7% of fathers exhibited anxiety or depressive symptoms, with mothers being more affected. The severity of the child's disability and lack of family support were significant correlates (Sharma et al., 2021). Another Indian study highlighted that parents of children with moderate to profound ID experienced higher stress and anxiety compared to those with milder disabilities, with mothers reporting more significant distress than fathers (Chouhan et al., 2016). A similar study conducted in Malawi found that parents of children with ID reported psychological distress associated with low socioeconomic status, perceived care burden, and lack of psychological support as key predictors (Masulani-Mwale et al., 2018).

There is minimal literature regarding the association of mental health outcomes—i.e., stress, depression, and anxiety—among caregivers of children with intellectual disabilities in low-income countries like Pakistan, where awareness of intellectual disabilities is minimal. Therefore, this study was conducted to address the gap in the existing literature and provide implications for caregivers of children with intellectual disabilities, aiming to foster positive and productive change in society.

Objectives

1. To find the association between mental health outcomes—stress, anxiety, and depression—among caregivers of children with intellectual disabilities in Pakistan.
2. To investigate the mediating role of anxiety between the independent variable (stress) and the dependent variable (depression) among caregivers of children with intellectual disabilities in Pakistan.

Hypotheses

1. There is likely to be a positive and significant relationship between stress, anxiety, and depression among parents of children with intellectual disabilities in Pakistan.
2. There is likely to be a mediating role of anxiety between the independent variable (stress) and the dependent variable (depression) among caregivers of children with intellectual disabilities in Pakistan.

Methodology

Research Design

The study adopted a cross-sectional correlational research design to examine the relationship between anxiety, depression, and stress among caregivers of children with intellectual disabilities. Data was collected using purposive sampling from 202 caregivers of children with intellectual disabilities.

Inclusion Criteria

The inclusion criteria for participants required that caregiver must be looking after at least one child diagnosed with intellectual disabilities from a reputable special education institute, with the child being under 18 years old, and the caregivers having at least an intermediate level of education.

Measures

The Depression Anxiety Stress Scale (DASS-21) developed by Dr. Sydney Lovibond and Dr. Peter F. Lovibond in 1995, a 21-item scale with a four-point Likert scale ranging from "Did not apply to me" [0] to "Applied to me most of the time" [4], was used to assess the levels of depression, anxiety, and stress. The scale has a Cronbach's alpha of 0.88 for depression, 0.82 for anxiety, and 0.90 for stress.

Ethical Consideration and Procedure

Ethical considerations followed the APA 7 code of conduct, with permission obtained from both the department and the author to use the questionnaire. The study ensured participants' confidentiality and informed consent was obtained, making it clear that participation was voluntary, and they could withdraw at any juncture. Participants completed the questionnaires in 20 minutes, and their involvement was highly appreciated. Data was analyzed using SPSS version 27.

Results

Table 1: Characteristics of the Participants (N=202)

Characteristics	Frequency	Percentage	Mean	Standard Deviations
Age			37.81	9.62
Caregivers of Children with ID				
Male	80	40		
Female	122	60		
Education				
Intermediate	87	43		
Bachelor	62	31		
Master	28	14		
PhD	25	12		

Note: ID = Intellectual disabilities

The demographic characteristic of parents of children with autism depicts mean age of 37.81 and standard deviation of 9.62. Moreover, among caregivers of children with mostly female 122(60%) participated in the study followed by minority male 80 (40%). The qualification categories depicts 87(43%) participants got intermediate qualification, followed by 62 (31%) bachelor qualified then master 28(14%) and lastly 25 (12%) PhD qualified.

Table 2: Correlational Analysis between Study Variables (N=202)

Variables	1	2	3
1.Stress	-	.52**	.55**
2.Anxiety		-	.97**
3.Depression			-

Note: ** $p < .01$

The table above shows a significant positive relationship between stress, anxiety, and depression among caregivers of children with intellectual disabilities.

Table 3: Regression Analysis for Study Variables (N=202)

		Consequences						
		Anxiety (M)			Depression (Y)			
Antecedents		β	SE	P		β	SE	P
Stress (X)	A	.51	.05	.001	c'	.06	.01	.001
Anxiety (M)	-				b	.95	.01	.001
Constant	I	5.80	.80	.001	I	7.62	.73	.007
		$R^2=0.27$ F(1, 200) = 75.83			$R^2=.94$ F(2, 199) = 1780.43			
		$p < .001$			$p < .001$			

Note: *** $p < .001$

According to the table above, there is a significant positive direct effect of stress on anxiety ($\beta=.51^{***}$, $SE=.05$, $p<.001$). Furthermore, the direct effect of stress on depression is also significant ($\beta=.06^{***}$, $SE=.01$, $p<.001$). Moreover, the effect of anxiety on depression is also significantly positive ($\beta=.95^{***}$, $SE=.01$, $p<.001$).

Table 4: Indirect Effect (N=202)

Indirect Path	Effect	Standardised Effect	LLCI	ULCI
Anxiety	.49	.49	.38	.59

The indirect effects indicate that anxiety significantly mediates the effect of the predictor, stress, on the outcome, depression, among caregivers of children with intellectual disabilities.

Discussion

There is considerable literature on the mental health outcomes of caregivers of children with intellectual disabilities; however, limited research exists in Pakistan, particularly regarding comparisons of mental health outcomes such as stress, anxiety, and depression. This study aims to address this gap in the literature, encourage further research, and provide practical implications for caregivers of children with intellectual disabilities.

The first hypothesis of the study posits that there is likely to be a significant and positive association between depression, anxiety, and stress among parents of children with intellectual disabilities in Pakistan. The correlational analysis supported this hypothesis, revealing a

significant and positive association between stress, anxiety, and depression among these parents in Pakistan. These findings align with a previous study conducted in India, which reported high levels of depressive and anxiety symptoms among parents of children with intellectual disabilities (Sharma et al., 2021). The psychological distress observed may be linked to factors such as low socioeconomic status, perceived care burden, and lack of psychological support. Additionally, the cultural context of Pakistan, where mental health stigma is prevalent and awareness of neurodevelopmental disorders is limited, may exacerbate these issues. Society often judges caregivers, particularly parents, for having children with intellectual disabilities, leading to social isolation and further psychological distress due to both the child's challenging behaviors and societal attitudes.

The second hypothesis of the study suggests that anxiety likely mediates the relationship between stress and depression among caregivers of children with intellectual disabilities in Pakistan. This hypothesis was confirmed using Hayes Process 4.1, Model 4, which demonstrated that anxiety significantly mediated the effect of stress on depression in Pakistan. These results are consistent with a similar study conducted in China, which highlighted the mediating role of anxiety symptoms between stress and depressive symptoms among adults (Zhang et al., 2022). Although limited studies have explored the mediating role of anxiety between stress and depression among caregivers of children with intellectual disabilities, research conducted in Pakistan on parents of children with neurodevelopmental disorders indicates that anxiety positively and significantly mediates this relationship. Factors such as lack of community support, financial difficulties, and the child's challenging behaviors were identified as contributors to psychological distress among caregivers (Fatima et al., 2025; Zahid et al., 2025; Tareen et al., 2025). Chronic stress from caring for children with highly dependent behaviors can trigger anxiety, characterized by negative thoughts and emotional exhaustion, which may subsequently lead to depressive symptoms. Furthermore, the cultural context of Pakistan, where awareness of intellectual disabilities and mental health issues related to neurodevelopmental disorders is limited, may worsen the situation for caregivers, contributing to psychological distress.

Conclusion

The study concluded a significant positive relationship between stress, anxiety, and depression among caregivers of children with intellectual disabilities in Pakistan. Moreover, Hayes Process 4.1, Model 4, depicts the significant mediating role of anxiety between the independent variable, stress, and the dependent variable, depression, among caregivers of children with intellectual disabilities in Pakistan. The study, therefore, fulfilled its hallmark by contributing to the literature, filling the literature gap, and providing valuable implications for caregivers.

Limitations and Recommendations

The study has several limitations. First, the small sample size makes it difficult to generalize the findings to all parents of children with intellectual disabilities in Pakistan. Future studies should aim for a larger and more representative sample. Second, the cross-sectional design limits the ability to observe changes over time. A longitudinal approach is recommended to better understand the evolving mental health challenges faced by these parents. Third, the sample had an imbalance in the number of female and male caregivers, which may affect the generalizability of the results. Future studies should strive for a more balanced demographic representation. Fourth, the uneven distribution of caregivers' education levels hindered the use of ANOVA analysis. Future research should address this imbalance to enable more comprehensive statistical analyses.

Implications

This study underscores the need for targeted interventions, such as awareness programs led by mental health professionals through seminars, workshops, and webinars. These programs should not only target parents of children with intellectual disabilities but also include parents of typically developing children and unmarried individuals to build a stronger support network. It is crucial to encourage parents to seek professional mental health support and engage in therapy to manage their challenges effectively. Parents should be provided with guidelines on managing their child's dependent behaviour, emphasizing that intellectual disabilities are a developmental difference, not a fault. Practical strategies, such as creating structured routines and using visual cues, can help children with intellectual disabilities thrive. Additionally, there is a need to establish more affordable special education institutions, as current options are limited or prohibitively expensive. The government should also implement programs aimed at improving the mental health and well-being of both children with intellectual disabilities and their parents.

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