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Original Article

Correlation between Quality of Life and Social Support in Mothers of Disabled Children: Mediation by Parenting Stress

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Abstract

Background: Raising disabled children can lead to significant strain and psychological distress within families, particularly for mothers as primary caregivers. This study aimed to explore the mediating role of parenting stress in the relationship between quality of life and social support in mothers of disabled children.
Methods: This descriptive-correlational study was conducted in 2022. The study population comprised all mothers of disabled children in Kermanshah, Iran. A purposive sampling method was utilized, selecting 379 individuals for the research sample. Data collection tools included the Quality of Life Scale, Social Support Inventory, and Parental Stress Questionnaire. The results were analyzed using SPSS version 27, AMOS version 25, and structural equation modeling (SEM).
Results: The findings revealed a significant positive correlation between social support and mothers' quality of life (r=0.37; P<0.01). Conversely, a significant negative correlation was observed between social support and parenting stress (r=-0.63; P<0.01), as well as between parenting stress and mothers' quality of life (r=-0.41; P<0.01). Moreover, the indirect pathway from social support to quality of life, mediated by parenting stress, was significant (P=0.010). The model fit results showed a good fit for our model (CFI=0.98; NFI=0.97; RMSEA=0.065).
Conclusion: The proposed model showed a good fit. Consequently, enhancing social support and reducing parenting stress may improve the quality of life for mothers of disabled children.

Keywords: Quality of life, Social support, Stress, Disabled children, Women

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1. Introduction

Children with disabilities can generally be categorized into three groups including those differentiated by their IQ and cognitive capabilities, those with behavioral disorders resulting from brain disorders and lesions, and those with sensorimotor and developmental disorders. These conditions can be diagnosed during pregnancy (for example, Down syndrome), after birth due to congenital disorders, or at developmental stages. A variety of factors can contribute to these disabilities, including genetic issues, natural disasters, warfare, and inadequate nutrition, leading to a broad spectrum of motor and cognitive impairments, blindness, and deafness (1, 2).

The birth of a child with disabilities can precipitate numerous challenges within a family. Mothers, often the primary caregivers, experience heightened physical and mental strain, bear a higher burden of responsibility and face increased mental pressure. Reports indicated they suffer more mental health issues than parents of children without disabilities (3, 4). The combined economic strain and emotional distress, along with the additional time, effort, and financial resources needed to accommodate the child's needs, can engender feelings of incompetence and helplessness (5).

The strain of raising a child with a disability can have damaging effects on a family, particularly on mothers as the primary caregivers (6). Consequently, these mothers may perceive themselves as inadequate parents, a belief that is exacerbated when their own anxiety and depression negatively impact their children's cognitive, emotional, and self-regulation abilities (7). Furthermore, the mother-child relationship and interaction may suffer, which could undermine the mother's performance, threaten her adaptability, and compromise her physical and mental health (8). Numerous studies highlighted the psychological, emotional, and social difficulties experienced by

mothers of children with disabilities (9, 10).

Quality of life is influenced by various socioeconomic factors such as family income, parental education and work hours, marital support, social media, and social support networks (11, 12). Limited financial resources, unemployment, the child's unique needs, and a lack of societal recognition and support can generate significant stress for parents, influencing their quality of life (13). Consequently, these parents may experience exhaustion and depression, which can affect their familial and professional lives and significantly diminish their overall quality of life compared to those without similar responsibilities (14).

Social support, known as a multidimensional construct, signifies the perception of support and appreciation (15). It entails receiving information, financial aid, health advice, and emotional support from individuals who are valued and appreciated within one's social networks, such as spouses, relatives, and friends (16).

The challenge of raising a disabled child can induce negative affectivity in parents, particularly mothers. Negative affectivity encompasses adverse emotions and feelings like guilt, shame, sorrow, anxiety, anger, and tension, which can affect each family member due to the crises associated with the disabled child (17). This situation serves as a stress source for mothers and their primary caretakers, impacting their mental health and adaptability. Among the types of stress experienced by mothers of disabled children, parenting stress stands out (18).

The complications arising from a disabled child's life often disrupt the family's overall functioning, affecting the emotional stability and cognitions of individuals involved (19). These mothers commonly undergo psychological distress and struggle to constructively manage their emotions in various circumstances (20). They are also frequently overwhelmed by negative emotions, leading to issues such as low self-esteem, worries about interpersonal relationships, and diminished social function, further degrading their psychological well-being. This, in turn, intensifies mental health issues and negative emotions among mothers of disabled children (21, 22).

Given that mothers, the linchpins of family management, dedicate most of their time to raising the disabled child, it is vital to investigate the factors influencing the quality of life of these mothers. Therefore, this study aimed to explore the correlation between quality of life and social support among mothers of disabled children, considering the mediating role of parenting stress. The conceptual model of this study can be found in Figure 1.

2. Methods

This descriptive-correlational study was conducted in 2022. The statistical population comprised all mothers of children with disabilities attending disability centers in Kermanshah, Iran. The sample size was established based on the number of research variables and the statistical model applied.

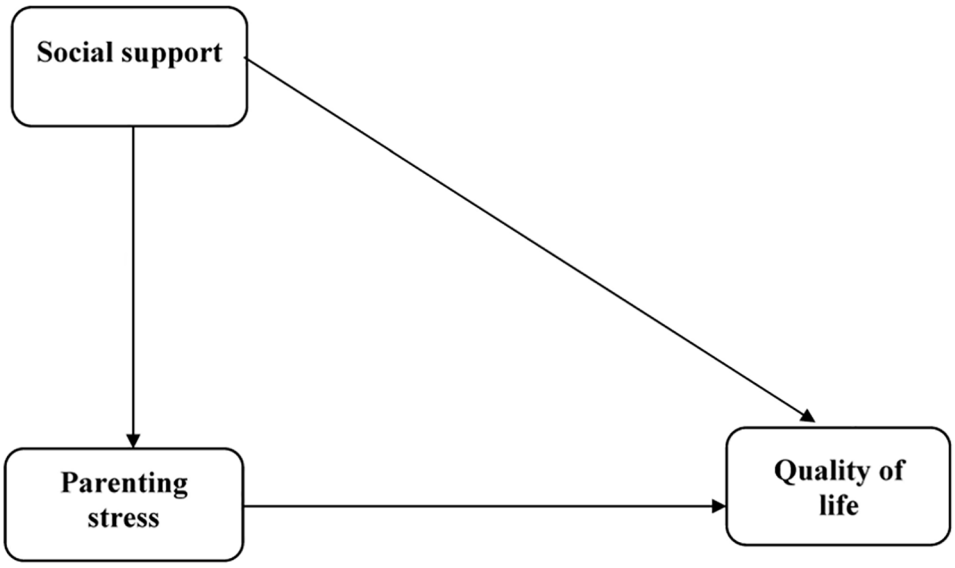

Figure 1: The figure shows the conceptual model of research.

For the structural equation modeling, the number of parameters was calculated considering the number of direct paths and variables. Given the number of paths and variables, it was determined that a sample size of 250-350 participants would be sufficient to test the proposed model and research hypotheses (23). However, to account for possible attrition, 400 participants were selected through purposive sampling and were provided with questionnaires.

Ultimately, 379 participants who completed the questionnaires were included in the study. The inclusion criteria included informed consent, completion of all questionnaire items, adequate literacy to understand the questions, and cohabitation with a spouse. In contrast, the exclusion criteria applied to those who failed to complete all the questionnaires.

2.1. Measures

Quality of Life Scale: The Quality of Life Scale, designed by Reeves and colleagues (24), consists of 16 items derived from five components including physical well-being (2 items), relationships (4 items), social activities (3 items), personal development and fulfillment (4 items), and recreational activities (3 items). These items are rated on a 7-point Likert scale, with a total score range of 16 to 112; a higher score suggests a superior quality of life. In the current study, the Persian version of the Quality of Life Scale was subjected to a content validity evaluation by ten psychological specialists, resulting in a content validity index (CVI) of 0.96 and a content validity ratio (CVR) of 0.98. Additionally, the scale's reliability was confirmed with a Cronbach's alpha of 0.95.

Social Support Inventory: Developed by Sherbourne and Stewart (25), the Social Support Inventory gauges perceived social support through 19 specific items that measure four aspects of social support: tangible support, affection, emotional/informational support, and positive social interaction. The inventory is scored on a 5-point Likert scale, with potential scores ranging from 19 to 95. Sherbourne and Stewart (24) reported a Cronbach's alpha of 0.97 for this inventory. Musavinasab and colleagues (26) indicated that the internal and external reliabilities of the Persian version of the Social Support Inventory were 0.85 and 0.83, respectively. The inventory's content validity was confirmed with a CVI of 0.94 and a CVR of 0.96. In this study, the reliability was determined using internal consistency (Cronbach's alpha coefficient), resulting in a value of 0.86.

Parental Stress Questionnaire: This 36-item questionnaire, designed by Abidin (27), assesses the level of stress within the parent-child system. It includes the following subscales: compromise, child's realm, temperament, attachment, acceptance, extravagance, reinforcement, neglect/attention, spousal relations, parents' realm, depression, sense of competence, role limitations, parental health, social isolation, and living stress. Items are rated on a 5-point Likert scale, where 1 denotes "completely agree" and 5 signifies "completely disagree"; a higher score corresponds to increased parental stress. Babakri and colleagues (28) reported a reliability coefficient of 0.89 for the Persian version of the Parental Stress Questionnaire. The questionnaire's content validity was confirmed with a CVI of 0.90 and a CVR of 0.89. In our study, the reliability of the Parental Stress Questionnaire was confirmed with a Cronbach's alpha of 0.86.

2.2. Statistical Analysis

Descriptive statistics, namely the mean and standard deviation, as well as the Pearson correlation matrix, were utilized for data analysis. The assumption of normality was established based on skewness and kurtosis values for each variable. The Incremental Fit Index (IFI), Relative Fit Index (RFI), Tucker–Lewis Index (TLI), Normed Fit Index (NFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA) indices were used to assess the fit of the model to the data. The proposed model was evaluated through structural equation modeling in SPSS version 27 and AMOS version 25.

3. Results

The participants in this study comprised 379 mothers of disabled children, with an age range of 41.28±6.74 years. In terms of education, 112 (29.55%) women had a middle school education, 181 (47.76%) had a high school education, and 89 (22.69%) had received a university education. Of the participants, 227 (59.89%) identified as housewives, while 97 (40.11%) were employed. Table 1 provides the mean, standard deviation (SD), skewness, and kurtosis values for all variables.

Table 1: Mean, standard deviation (SD), skewness, and kurtosis of research variables

Variables	Mean	SD	Skewness	Kurtosis
Quality of life	77.28	25.63	-0.80	-0.25
Social support	37.92	7.64	-0.81	0.21
Parenting stress	71.19	23.87	0.63	0.02

Table 2: Correlation coefficient between the research variables

Variables	Quality of life	Social support	Parenting stress
Quality of life	1		
Social support	0.37**	1	
Parenting stress	-0.41**	-0.63**	1

**P<0.01

Table 2 details the correlation coefficient between the research variables. The results indicated a significant correlation between quality of life and social support (r=0.37), as well as parenting stress (r=-0.41). Parenting stress and social support showed a negative and significant correlation (r=-0.63).

Figure 2 illustrates the proposed model for explaining the quality of life, based on social support and parenting stress. The results confirmed a good fit for the research model ($\chi 2$=98.01, $\chi 2$/df=2.57, IFI=0.98, RFI=0.95, TLI=0.97, CFI=0.98, NFI=0.97, and RMSEA=0.065).

Table 3 presents path coefficient estimates for the exploration of direct and indirect paths. The findings revealed a significant correlation between social support and quality of life among mothers with disabled children (β=0.26, P=0.001). The correlation between social support and parenting stress was negative and significant (β=-0.69, P=0.001). Furthermore, the correlation between parenting stress and quality of life among mothers with disabled children was also negative and significant (β=-0.23, P=0.003). According to Table 3, the indirect path from social support to quality of life was significant when mediated by parenting stress (β=0.19, P=0.010).

4. Discussion

The purpose of this study is to examine the

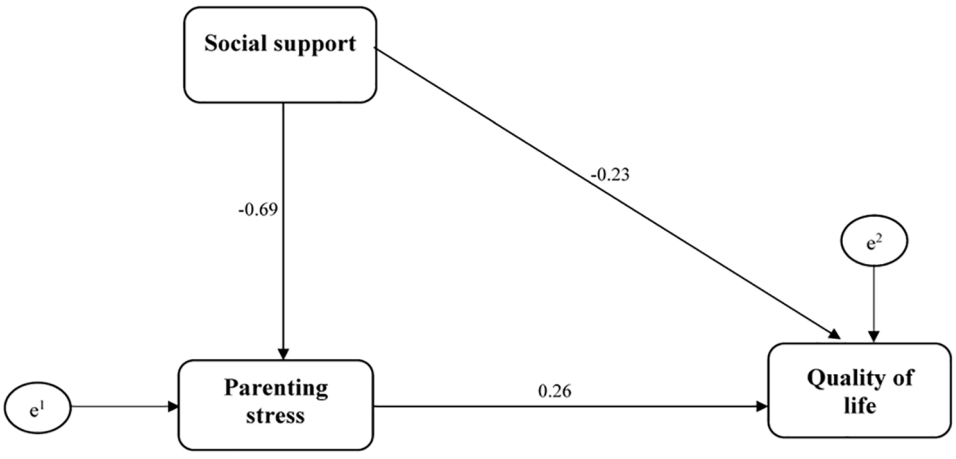

Figure 2: The figure shows the proposed model to explain the mediating role of parenting stress in the correlation between the quality of life and social support.

Table 3: Path coefficients of direct and indirect correlation between studied variables

Path	Proposed model	
	β	P
Social support → Quality of life	0.26	0.001
Social support → Parenting stress	-0.69	0.001
Parenting stress → Quality of life	-0.23	0.003
Social support → Quality of life through parenting stress	0.19	0.010

mediating role of parenting stress in the relationship between quality of life and social support among mothers of children with disabilities. The initial findings revealed a significant correlation between social support and quality of life. This aligns with research by Nasiri and Abdolmaleki (29), which reported a connection between perceived social support (from family and significant others) and various dimensions of quality of life, particularly physical and mental health, in women. Similarly, Nohara and Miyagi (30) found that family support could enhance health conditions and quality of life in expectant mothers.

Moreover, Zeng and colleagues (31) discovered a correlation between family support and quality of life among parents of children with autism. This finding suggests that when mothers of children with disabilities receive consultation, empathy, and problem-solving orientation from their family members, they are better equipped to manage the stress that arises from their children's challenges, ultimately improving their mental health and quality of life.

Our results confirm a positive and significant correlation between family support and the mental health-related quality of life of mothers of children with disabilities, a finding consistent with previous study (32). These results suggested that increased family support encourages mothers to engage in problem-solving approaches, which in turn promote their mental health and quality of life.

Bellin and colleagues (32) also noted that social support improves quality of life. Individuals who maintain close relationships with their family members are more likely to discuss their problems and seek advice. Furthermore, the emotional support provided by family members not only guides but also reduces stress and emphasize the importance of a strong support system.

In times of crisis, both environmental and personal factors can influence health outcomes. One significant factor is family support, which is considered an environmental support variable. When individuals lack family support, they are more likely to experience psychological consequences such as stress. Family support plays a crucial role in reducing stress, and the absence of such support during stressful situations can place individuals under immense mental strain, making them highly vulnerable to stress-related outcomes. Conversely, when families provide support by not abandoning the person and understanding their sorrows and circumstances, it enables the individuals to effectively deal with their problems and accept their conditions (16). Acceptance and sympathy from family members can reduce negative thoughts, feelings of isolation, and rumination, thereby mitigating the progression of stress. Families that maintain unrestricted, open, and frequent communication among their members facilitate the easy expression of emotions, consultation in decision-making, and freedom in expressing opinions and making choices. Such families experience enhanced communication and interactions, making them more resilient and adaptable to incidents and risks. The personal and environmental characteristics, along with their demands and resources, influence the nature of maternal stress, which in turn enhances understanding and responses to stress and promotes a higher quality of life (18). The results of the study and the proposed model indicated that when family support and important individuals are simultaneously included in the model, family support emerges as a stronger predictor of quality of life, both indirectly (by reducing stress) and directly.

Another notable finding is the significant correlation between parenting stress in mothers of disabled children and their quality of life. As expected, higher levels of parenting stress are associated with a decrease in quality of life. This finding is consistent with the results of previous studies (33, 34). The explanation for this correlation lies in the impact of parenting stress on relationships, transcendental awareness, personal meaning creation, critical thinking, and expanded consciousness. These factors can enhance psychological satisfaction and well-being. Parenting stress also serves as a framework for identifying and organizing skills, providing valuable guidance, and instilling necessary beliefs and values. Depending on how parents handle this stress, it can promote adaptability and resilience, thereby influencing their overall quality of life. However, parenting stress can also increase negative affectivity and reduce positive affectivity, which can negatively impact marital satisfaction and make it challenging to cope with difficult problems. Consequently, parenting stress alone can diminish the quality of life (34). Therefore, parenting stress leads to a decrease in the quality of life for mothers of disabled

children, as it intensifies negative emotions and hinders their ability to cope with the demanding circumstances associated with raising these children (33).

The results also showed that parenting stress mediated the correlation between social support and quality of life. The literature review yielded no studies for comparison. Specifically, there was a significant correlation between social support and quality of life. Indirectly, social support addresses parenting stress in mothers of disabled children, thus improving their quality of life. According to the results, parenting stress mediated the correlation between social support and quality of life.

4.1. Limitation

This study had certain limitations, including a restricted statistical population consisting only of mothers of disabled children in Kermanshah, Iran. Therefore, caution should be exercised when generalizing the results to other mothers of disabled children in different cities with diverse cultural and economic backgrounds. Further analysis using different samples is recommended for generalizing the findings. Future studies should consider analyzing these variables while considering the paternal role to ensure the applicability of the results to fathers.

5. Conclusion

The proposed model exhibited a good fit. It is suggested that authorities and caregivers of disabled children prioritize holding workshops on educational and life skills. The results also highlighted the need for experts to pay attention to and establish the foundations for psychological and social support for mothers of disabled children. Developing and providing family-based educational interventions, including teaching coping methods for the challenges associated with raising a disabled child, can help reduce parenting stress in mothers and improve the quality of life for these families. Healthcare providers should not only address the problems faced by children with disabilities but also consider the difficulties experienced by mothers, such as parenting stress and reduced quality of life. They should provide parents with the necessary solutions to cope with these challenges.

Ethical Approval

The study was approved by the Ethical Committee of Islamic Azad University-Ahvaz Branch with the code of IR.IAU.AHVAZ.REC.1401.180. Also, written informed consent was obtained from the participants.

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Authors' Contribution

SD: Study concept and design, acquisition of data, analysis and interpretation of data, and statistical analysis. FH: Study concept and design, acquisition of data, analysis and interpretation of data, and statistical analysis, administrative, technical, and material support, study supervision, critical revision of the manuscript for important intellectual content. SB: Administrative, technical, and material support, study supervision, critical revision of the manuscript for important intellectual content. SB: Administrative, technical, and material support, study supervision. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

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