

Mindfulness, Quality of Life, and Resilience among Mothers of Children with ASD: The Mediating Role of Cognitive Emotion Regulation Strategies

Doaa Mohammed Abdul Azeem Mubarak*

Assistant Professor, Department of Psychology, College of Education, Qassim University, Buraydah City, Qassim Region, KSA, Faculty of Education, Benha University

Abstract: *Background:* The aim is to investigate the relationships between mindfulness, QoL, and resilience based on the mediating role of Cognitive Emotion Regulation strategies (CERs) data on 110 mothers were collected and analyzed.

Methods: A descriptive research with a correlational model in which the path analysis model is used to obtain the relationship between variables was used. Results indicate that Adaptive CER has a direct and significant correlation with QoL, Mindfulness, and Resilience. Non-Adaptive CER has an inverse and significant correlation with QoL, Mindfulness, and Resilience.

Results: The results of structural equation modeling indicate that all paths adaptive CERs and non-Adaptive CERs were significant. E.g. the path of mindfulness to adaptive CERs was significant, and to non-adaptive CERs was significant. The path of QoL to adaptive CERs was significant, and to non-Adaptive CERs was significant. The path of resilience to adaptive CERs was significant, and to non-Adaptive CERs was significant.

Conclusion: It can be said that when the mother has mental health components, she can provide a rich and healthy environment for the child with ASD to be able to help him/her develop.

Keywords: Mindfulness, Quality of life, and Resilience, Mothers of Children with ASD, Cognitive Emotion Regulation Strategies.

INTRODUCTION

Autism spectrum disorders (ASD) indicate a type of developmental disorder that impairs a person's social and communication skills with inadequacies in communication and verbal behaviors and the presence of abnormal patterns [1]. The diagnostic criteria for autism disorders are in two areas of interaction and social communication and repetitive and limited interests and activities. Three levels are classified. The severity of the disorder refers to the degree of impairment of the recipient's ability to communicate and desire to socialize, as well as the severity of his or her behavioral symptoms. Behavioral problems, however, are not a major feature of autism spectrum disorders; but these problems are significantly seen in these children and create problems for these people and their families [2-15].

Behavioral problems are the biggest barrier to socializing [16] and can lead to child exclusion from society, family, and school. The child's lack of understanding of the demands of school, family and peers limits his ability to learn and misses learning opportunities [17]. Compared to others, parents of

Children with ASD suffer from stress and other problems [18].

Mother has a more effective role in the child's developmental process and is a permanent member throughout his life, so, she can have a greater impact on these children. Studies have shown that, compared to other mothers, mothers of children with ASD in their developmental process have more problems and suffer from anxiety and stress, and have low self esteem [19-23].

The literature indicates that families of children with ASD suffer from high rates of parental stress, yet some families are able to be resilient and prosper in the face of these challenges [24]. Families with resilient persons can free themselves from burdens and suffering and adapt to change. They face the child's disability efficiently. Studies conducted on this category indicate that families that suffer from stress respond to crises either as the family reorganizes its ranks and becomes stronger or declines, cannot face the crisis, and adapt to the circumstances of the child's disability [25,26]. This depends on the psychological resilience of the family and its response to the crisis.

Mindfulness is among the components that can be related to psychological well-being. It is regarded as the direct observation of the mind and body in the

*Address correspondence to this author at the Assistant Professor, Department of Psychology, College of Education, Qassim University, Buraydah City, Qassim Region, KSA, Faculty of Education, Benha University; E-mail: Dm.mubarak@qu.edu.sa

present without judgment, and is more stable and developed than mere attention. Not judging cultivates mindfulness. When you are in a difficult emotional or physical situation, by not judging experiences, you become more aware of what you see and are and what you should be. The concept of mindfulness helps people slow to accept that although there are negative emotions in the life of all human beings, they are not a fixed part of the personality and life process. Accepting this empowers one to consciously respond to emotions and their motivating events, rather than involuntarily reacting, and to relate to life more effectively [27-29].

Resilience is the capacity of individuals to survive and resist in difficult and high-risk situations, which not only overcomes those difficult situations, but also strengthens them during and despite it [27]. Family resilience is defined as a trait, dimension, or property of the family that helps the family to withstand failure to change and adapt to critical situations [26].

The family resilience process model, which affects quality of life and reduces stress in critical situations, was designed by Walsh. This model includes three parts: family belief system, family organizational model, and communication and problem solving. Family belief systems include values, attitudes, prejudices, and concerns. The organizational model suggests that family rules should be predictable and flexible. It also emphasizes that the family must constantly assess their level of communication and ensure that the needs of all family members are met. Communication and Problem Solving suggests that clear communication and empathy enable the family to adopt a stronger coping strategy in the face of adversity and to identify potential solutions to a problem. The purpose of the family resilience approach is to identify the factors that contribute to family resilience, and as a result, the family, in the face of changes in critical situations, acquires the ability to rebuild and balance itself after a crisis [30].

Hosseinzadeh, Z., Kakavand, A., Ahmadi [30] studied the effect of maternal mindfulness and family resilience in the relationship between behavioral problems of children with ASD and maternal psychological well-being. The statistical population included mothers of children with ASD in the age range of 3 to 16 years in Tehran, Karaj and Qazvin, from which 170 people were selected. The results of showed that the two variables of mindfulness and family resilience play a mediating role in the relationship between predictor variables (behavioral problems of

children with ASD) and criteria (maternal psychological well-being).

Problem Statement

Mother is the first instructor for her child with ASD. The child's disability affects the family entity in general, and the mother's psychological state in particular. Mothers of children with ASD suffer from many stresses because of the child. The presence of a child with ASD in the family affects the family in a significant negative way, and this depends on several factors; Including the nature of the psychological state of the parents, the economic, social and cultural level of the family, and the level of values and beliefs. Some families may not be able to accept reality and therefore search for justifications. Petcharat. & Liehr [31] found that parents were mindful and their well-being improved, and they were more accepting of their children.

Purpose

Investigating the mediating role of CERs in the relationships between mindfulness, QoL, and resilience among mothers of children with ASD.

Hypotheses

1. Maladaptive CERs will have a significant indirect correlation with mindfulness, Quality of life, and resilience.
2. Adaptive CERs will have a significant indirect correlation with mindfulness, Quality of life, and resilience.
3. CERs mediate the structural relationship between mindfulness, QoL, and resilience.

RESEARCH METHOD

The present study is a descriptive research with a correlational model in which the path analysis model is used to obtain the relationship between variables. In this method, a possible relationship between research variables and the role of mediating variable (CERs) is investigated. The study sample included mothers of children with ASD ranging in age from 8 to 12 years in Buraydah City, Qassim. A purposeful sampling method was used. In order to conduct the research, a group of 7 centers in these provinces that announced their cooperation were referred to. The questionnaires were distributed to the mothers, and they were asked in a

letter to complete the questionnaires within a week and return them to the center/school. Finally, data on 110 mothers were collected and analyzed. In this study, all children are receiving their education in autism centers and schools for at least one year, and all sample members were diagnosed with autism by a specialist before the age of seven. For data analysis, SPSS software version 20 and AMOS version 22 were used.

The Conceptual Framework

Figure 1 shows the research models

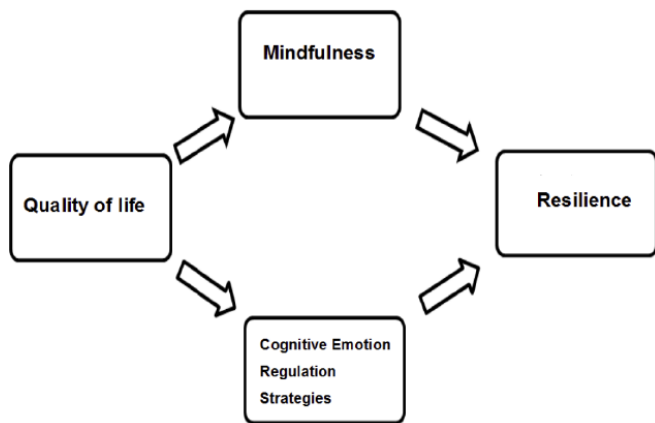


Figure 1: Hypothetical model of the mediating effect of CERs in the structural relationship between mindfulness, QoL, and resilience.

Data Collection Instruments

The Five-Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer & Tone, [32]). It is a 39-item scale. It is scored based on a Likert-type scale, ranging from 1 (never) to 5 (always). The English version of the scale was translated into Arabic by the researcher. Cronbach’s α ranged from 0.79 to 0.88 for the five factors. For convergent validity of FFMQ, correlation with the mindfulness scale (Elkady, [33]) was significant ($r = 0.59, p < .01$).

Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij, [34]). It is a 36-item scale. It is based on a five-point Likert-type scale, ranging from 1 (never) to 5 (always) according to 9 subscales. Cronbach’s α ranged from 0.82 to 0.90 for the nine factors. For convergent validity of CERQ, correlation with the CER scale (Eissa, & Kamel [35]) was significant ($r = 0.48, p < .01$).

Family Quality of Life Scal (FQOL; Hoffman *et al.* [36]). It is a 25 -items scale. It is based on a five-point Likert scale ranging from “Very Dissatisfied” (1) to “Very Satisfied” (5). Alpha values ranged from 0.74 to

0.86, and was 0.93 for the overall score in this study. For convergent validity of QoLs, correlation with HRQoLs (Elkady [37]) was significant ($r = 0.52, p < .01$).

Family Resilience Scale (FRS; Sixbey [38]). Its is a 54 items scale, in three subscales. Respondents are asked to rate the extent that each item describes their family based on a 4-point Likert-type scale ranging from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (4). Responses are summed, with higher scores indicating greater resilience. Test–retest reliability for each subscale, as assessed two weeks apart, ranged from 0.73 to 0.80. For convergent validity of FRS, correlation with Psychological Resilience Scale (Mohammed& Mostafa [39]) was significant ($r = 0.55, p < .01$).

RESULTS

Correlation between Variables

The results are shown in Table 1. As shown in Table 1, Adaptive CERs have a direct and significant correlation with QoL, Mindfulness, and Resilience ($r = .56, .53, \text{ and } .57, p < .01$) respectively. Non-Adaptive CERs have an inverse and significant correlation with QoL, Mindfulness, and Resilience ($r = -.33, -.42, \text{ and } -.39, p < .01$) respectively.

Table 1: Correlation between the Study Variables

Variables	1	2	3	4	5
1. Adaptive CERs			0.56**	0.53**	0.57**
2. Non-Adaptive CERs			-0.33**	-0.42**	-0.39**
3. QoL				0.43**	0.50**
4. Mindfulness					0.51**
5. Resilience					

**P < 0.01.

According to Table 2, the tested model presented a good fit. χ^2/df is chi- square divided by degrees of freedom. CFI, RMSEA, GFI, AGFI, TLI, NFI, AIC, *a relatively smaller AIC indicates a better. Figure 1 shows the final model with standard path coefficients.

As shown in Figure 2, all paths adaptive CERs and non-Adaptive CERs were significant. E.g. the path of mindfulness to adaptive CERs ($\beta = 0.24$) was significant ($P < 0.01$), and to non-adaptive CERs ($\beta = -0.23$) was significant ($P < 0.01$). The path of QoL to adaptive CERs ($\beta = 0.22$) was significant ($P < 0.01$), and to non-Adaptive CERs ($\beta = -0.33$) was significant ($P < 0.01$). The path of resilience to adaptive CERs ($\beta = 0.21$) was

significant ($P < 0.01$), and to non-Adaptive CERs ($\beta = -0.11$) was significant ($P < 0.05$).

Table 2: The Fitness of the Proposed Model

Indices	Tested Model
χ^2	918.232
df	110
P	0.0001
χ^2/df	2.47
GFI	0.91
AGFI	0.92
NFI	0.92
TLI	0.81
CFI	0.95
RMSEA	0.082
AIC	31.55

Adaptive CERs have a direct and significant correlation with QoL, Mindfulness, and Resilience ($r = .56, .53$, and $.57$ $p < .01$) respectively. Non-Adaptive CERs have an inverse and significant correlation with QoL, Mindfulness, and Resilience ($r = -.33, -.42$, and $-.39$ $p < .01$) respectively.

The results of structural equation modeling indicate that all paths adaptive and non-Adaptive CERs were significant. E.g. the path of mindfulness to adaptive CERs ($\beta = 0.24$) was significant ($P < 0.01$), and to non-adaptive CERs ($\beta = -0.23$) was significant ($P < 0.01$). The path of QoL to adaptive CERs ($\beta = 0.22$) was significant ($P < 0.01$), and to non-Adaptive CERs ($\beta = -0.33$) was significant ($P < 0.01$). The path of resilience to adaptive CERs ($\beta = 0.21$) was significant ($P < 0.01$), and to non-Adaptive CERs ($\beta = -0.11$) was significant ($P < 0.05$).

Since the mother has the highest role in the child's upbringing and spends most of his/her childhood time with the mother, establishing a good relationship with the child can help him/her grow further. Because mothers generally interact more with the child than other family members, they experience more problems and stress than other family members.

DISCUSSION

The aim is to investigate the relationships between mindfulness, QoL, and resilience based on the mediating role of CER strategies. Results indicate that

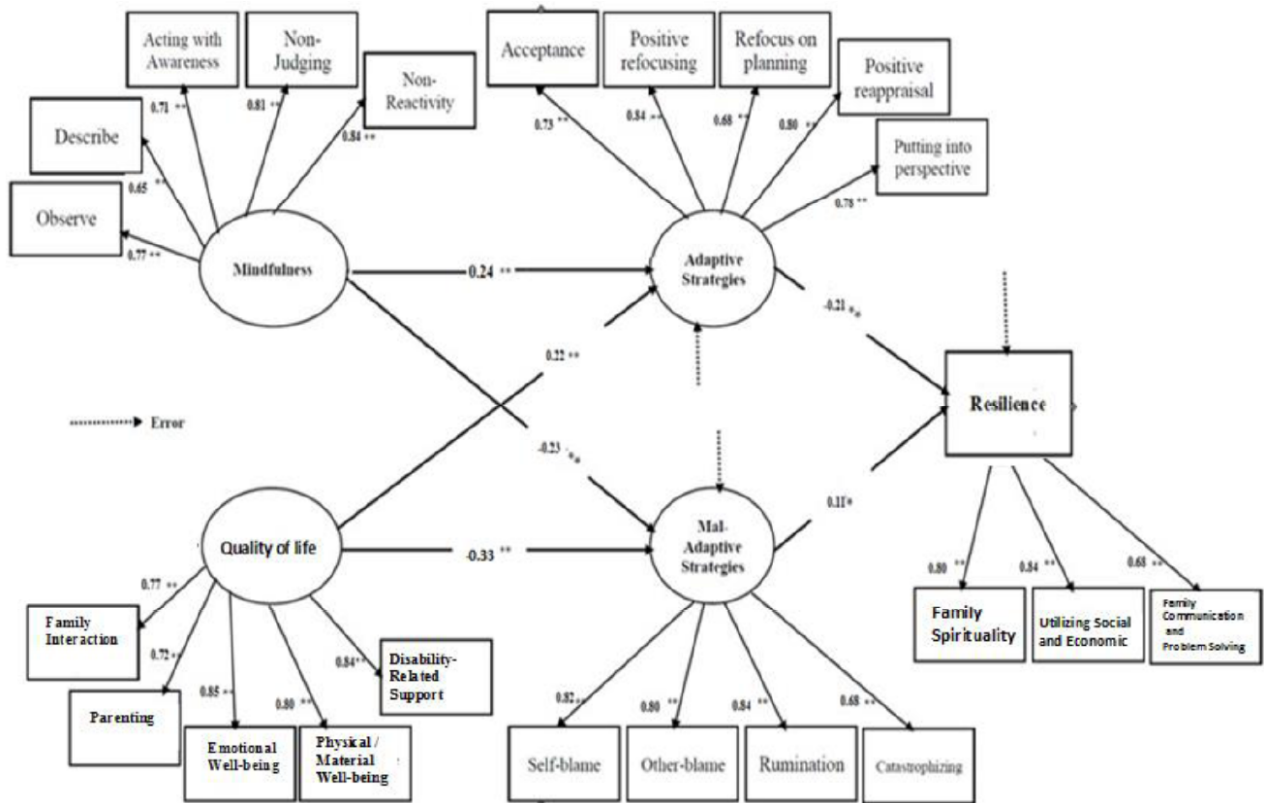


Figure 2: Standardized coefficients of the proposed model of structural relationships between mindfulness, QoL, and resilience based on the mediating role of CERs.

Mindfulness is different from self-awareness. Self-awareness is only the knowledge of inner feelings and states; but mindfulness involves both knowing the inner feelings and knowing the surroundings [28]. Research conducted in recent decades has shown that mindfulness has an effective role in increasing psychological well-being and reducing mental disorders [27-29]. Research has shown that increasing mindfulness is associated with a reduction in negative psychological and emotional symptoms and thus an increase in life satisfaction, happiness and optimism in parents of children with ASD.

The effectiveness of mindfulness interventions on reducing stress and increasing the mental health of the parents of ASD children was evaluated. These interventions had positive and long-term effects on the level of stress and mental health of these parents and improving the child's own behavior.

The results of this study go in the same line with other studies. For example, in studies that examined the possibility of predicting psychological well-being based on resilience, data analysis showed that psychological well-being can be explained to a high extent through resilience [39-40].

Quality of family life [41-42] is the result of health due to the increased influence of the rules of the multiple psychological system. These feelings and ability to live a quality life help the mother and family to use effective and better strategies for educating and developing a child with ASD. According to the results, since mindfulness is positively related to Quality of family life, it can be concluded that mothers with more mindfulness are likely to be more efficient without bias and with a clear focus on external events. As a result, it can be effective in increasing the efficiency of these mothers in dealing with children with autism spectrum disorders, which at the same time, this increase in the efficiency of the mother also affects the further development of their child, which is probably a trend in Launching a positive feedback and more efficient cycle in the mother-child relationship will have an impact.

The results obtained from data analysis [43] showed that mindfulness had a positive and significant effect on QoL of mothers of children with ASD.

CONCLUSION

It can be said that when the mother has mental health components, she can provide a rich and healthy environment for the child with ASD to be able to help

him/her develop. The presence of a child with special needs in the family affects the family structure in general, and the nature of relations between its members, especially mothers; where these children need more care and attention than their normal peers. In addition to the mother's lack of awareness of the child's nature, characteristics and needs. All of these factors would create psychological pressures for the mother that affect their mental health on the one hand, and on the other hand affect meeting the needs of the rest of the members. This suffering continues throughout the life of the family, so paying attention to mindfulness, quality of life, and resilience among mothers of children with ASD through the mediating role of cognitive emotion regulation strategies helps mothers to overcome the difficulties, obstacles, adversities and hardships they are exposed to.

LIMITATIONS AND RECOMMENDATIONS

This study is not without limitations. Resilience was used by Family Resilience Scale. And only one member of the family (i.e. mother) gave answer. Although this is consistent with most research assessing parental and family outcomes among children with disabilities, although father and mother did not differ, future research should make efforts to include a range of individuals from the family system. Second, survey was used to collect data. Future researchers should use different methods such as personal interview or telephone interview to collect data. Instead of focusing solely on educating the child with ASDs, it is better to pay attention to his / her family, because the developmental disability of one member challenges the whole family system. It is suggested that in future researches, considering that the research design is descriptive-correlational type, experimental researches should be conducted in this field. Improving the mental health of the mother as the core of the family may also improve other relationships in the family.

CONFLICT OF INTEREST

The author declares no conflicts of interest.

FUNDING

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

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Received on 10-06-2022

Accepted on 04-07-2022

Published on 15-07-2022

<https://doi.org/10.6000/2292-2598.2022.10.03.3>