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Psychological well-being and Marital Commitment of Mothers of ADHD Children based on Cognitive-emotional Regulation: The mediating role of Communication Skills

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ABSTRACT

Purpose: The purpose of this research was to determine the mediating role of communication skills on the relationship between cognitive-emotional regulation with psychological well-being and marital commitment of mothers who have hyperactive/attention deficit children.

Methods and Materials: A cross-sectional correlational study was designed to investigate the correlation between variables. The study population consisted of mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD) attending elementary schools in Karaj during the year 2024. The study participants were recruited through convenience sampling technique. The instruments included Ryff's psychological well-being questionnaire (1989), Garnefski et al.'s cognitive regulation of emotion (2005), Adams and Jones's marital commitment (1997), and Jerabek's communication skills (2004). Descriptive statistics, such as means and standard deviations, were used to describe the data. For inferential analyses, Pearson correlation coefficients and structural equation modeling, and Sobel Statistic were used to examine the correlation between variables. Data analyses were conducted using SPSS and AMOS version 24.

Findings: The results demonstrated that positive emotion regulation strategies, mediated by communication skills, significantly predicted both psychological well-being ($\beta = 0.17$, $p = 0.001$) and marital commitment ($\beta = 0.22$, $p = 0.001$) in mothers of children with ADHD. Conversely, negative emotion regulation strategies, mediated by communication skills, significantly predicted lower psychological well-being ($\beta = -0.14$, $p = 0.001$) and marital commitment ($\beta = -0.19$, $p = 0.001$).

Conclusion: In addition, the findings indicated that communication skills mediated the relationship between positive and negative emotion regulation strategies, psychological well-being and marital commitment of mothers of children with attention deficit hyperactivity disorder.

Keywords: Cognitive-emotional Regulation, Communication Skills, psychological well-being, Marital Commitment

1. Introduction

In recent years, behavioral, emotional, and psychological issues in children have garnered significant attention from psychologists. Attention-Deficit/Hyperactivity Disorder (ADHD) is one of the most common neurodevelopmental disorders, which begins in childhood and often persists into adulthood (Riboldi et al., 2022). Clinically, this disorder is characterized by persistent symptoms of inattention, hyperactivity, and impulsivity, which can lead to functional impairments in various aspects of daily life. The symptoms of this disorder often persist into adolescence, and the associated challenges in academic, social, behavioral, and emotional domains create significant difficulties within the family system. The prevalence of ADHD has been reported as 9.5% in children and 5.2% in adults (Sedgwick-Müller et al., 2022). The presence of children with Attention-Deficit/Hyperactivity Disorder (ADHD) in families can lead to feelings of inadequacy in fulfilling parental roles, a sense of inefficacy, and numerous challenges in child-rearing, affecting all aspects of family life (Uan & Kılıç, 2020). Among family members, mothers, who typically have more interaction with these children, are likely to be the most affected. The psychological burden, stress, and pressures experienced by mothers of children with ADHD are significant concerns, often substantially reducing their happiness and overall mental and physical well-being (Barkley, 2022). Parents of children with ADHD face considerably more challenges in dealing with their children's behavioral abnormalities compared to parents of typically developing children (Hamzehpour et al., 2020). Research has shown that the difficulties experienced by children with ADHD are closely linked to the mental health of their mothers (Ghaderi Stanjin, Yousefi, & Rajaei, 2024; Nouri Jorjad, 2024). Due to the persistent and stable nature of hyperactivity and its associated behaviors, the child's interactions with siblings and parents are significantly impacted. The maladaptive behaviors of a child with ADHD often evoke anger, reduced tolerance, and feelings of helplessness in parents. These reactions, in turn, can exacerbate the child's difficulties, creating a vicious cycle. Over time, it becomes increasingly challenging to pinpoint the exact cause of these challenges (Becker et al., 2023). Among the most critical variables

requiring attention, and one of the most determining factors for mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD), is cognitive emotion regulation.

Parents play a pivotal role in shaping the core framework of their child's personality through emotional interactions. The inability of parents to regulate their own emotions can lead to emotional and behavioral dysfunctions in children. The effects of cognitive emotion regulation can be observed in the self-control of thoughts, feelings, and behaviors to achieve a goal (Beheshti et al., 2020). Findings indicate that a mother's mindset and her cognitive emotion regulation serve as potential protective mechanisms when dealing with the hostile behaviors of a child with ADHD (Shokri et al., 2023; Williams et al., 2018). One of the most significant challenges faced by mothers of children with behavioral disorders is a deficit in emotion management and regulation. In fact, a child with this disorder can act as a source of psychological stress for mothers, affecting their emotions and reducing their ability to cope with and accept the child's difficulties. Gershy and Gray (2020) demonstrated in their study that negative parental mindsets in response to the behaviors of a child with ADHD, along with the interpretation of these behaviors as hostile and low cognitive emotion regulation capacities in these mothers, lead to parenting styles characterized by higher levels of coercion and pressure on the child. Low cognitive emotion regulation in mothers of children with ADHD results in a decline in the quality of their communication skills compared to mothers who possess high self-regulation abilities in cognitive, emotional, and behavioral domains.

Another influential component in parent-child interaction is the possession of appropriate communication skills. Effective communication skills in parents can enhance social skills, improve interactions, and increase the positive functioning of children with Attention-Deficit/Hyperactivity Disorder (ADHD) (Nouri Kajouri, Pour Taleb, & Musanejad 2024; Shahabi et al., 2020). Communication skills refer to those abilities that enable individuals to engage in interpersonal interactions and the communication process. This process involves the exchange of information, thoughts, and feelings through verbal and

non-verbal messages between individuals (Hinshaw, 2018). The lack of effective communication skills, as well as the inability to regulate emotions or manage emotional states such as sadness and stress, significantly jeopardizes an individual's psychological well-being in both mental and physical health domains (Ahmadzadeh, 2022). Therefore, it is essential to assist parents in addressing the challenges related to their child's disorder and to equip them with communication skills to establish a positive and effective relationship with their child in various situations.

Psychological well-being is one of the positive concepts in mental health, referring to the absence of negative emotions and a sense of satisfaction with life. Psychological well-being encompasses a broad range of phenomena, including individuals' emotional responses, domains of satisfaction, and overall life evaluations. In essence, psychological well-being involves an individual's perception of the alignment between set goals and the functional outcomes achieved through continuous evaluations, leading to a relatively stable and internal sense of satisfaction throughout life (Safara & Salmabadi, 2021). Psychological well-being consists of several emotional and cognitive components. Individuals with high levels of well-being experience positive emotions and evaluate life events favorably. In contrast, those with low well-being tend to perceive surrounding events as unfavorable and experience more negative emotions, such as anxiety, anger, and depression. Psychological well-being aims to allow individuals to focus on the process of pursuing values that lead to personal growth, rather than avoiding pain. This focus enables individuals to feel alive and authentic (Angeline & Rathnasabapathy, 2023). Previous research has shown that mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD) have lower psychological well-being compared to mothers of typically developing children. In fact, the presence of a child with ADHD can significantly impact and disrupt the psychological well-being of mothers, leading to mental health issues such as depression, aggression, and anxiety (Piñeiro-Cossio et al., 2021; Chou et al., 2021; Sheikh Mohammadi et al., 2020).

Another component aligned with psychological well-being in mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD) is marital

commitment. The arrival of a child with special needs in a family can be perceived as an unforeseen shock to the marital relationship of the parents. This event may lead to conflicts that challenge the parents' relationship and impose significant psychological and emotional costs on them. Marital commitment is one of the strongest predictors of a successful marriage. Johnson et al. (2017) have divided marital commitment into three categories: *personal commitment*, which refers to an individual's desire and interest in continuing the marital relationship; *moral commitment*, which signifies a person's ethical loyalty to the marriage; and *structural commitment*, which pertains to the mechanisms that restrict the dissolution of the marital relationship, often leading to a sense of obligation to maintain the relationship and fear of the consequences of divorce. The challenges associated with raising a child with Attention-Deficit/Hyperactivity Disorder (ADHD) often significantly impact family functioning and impose considerable parenting stress on both mothers and fathers (Asgarzadeh et al., 2024). The presence of a child with these characteristics in a family can lead to significant changes, such as increased parental depression (particularly in mothers), heightened stress, reduced psychological well-being, and tension between parents.

In addition, in collectivist cultures like Iran, where family interdependence and social harmony are deeply valued, the psychological well-being and marital commitment of mothers are profoundly influenced by their ability to navigate familial and societal expectations. In the collectivist context, where familial roles and responsibilities are emphasized, effective communication skills especially for mothers of children with Attention Deficit/Hyperactivity Disorder (ADHD) that experience heightened stress due to the demanding nature of caregiving are essential for fostering psychological well-being and sustaining marital commitment (Sheikh Mohammadi et al., 2020). In the Iranian context, where extended family networks and community support play a vital role, the ability to communicate effectively and regulate emotions can help mothers build stronger support systems, thereby reducing feelings of isolation and enhancing marital satisfaction (Chou et al., 2021). Therefore, this study aims to explore the mediating role of communication skills in enhancing the **cognitive emotion regulation**,

psychological well-being and marital commitment of mothers of children with ADHD. Given the importance of this issue, the central question of the present study is: Do communication skills mediate the relationship between cognitive emotion regulation and psychological well-being, as well as marital commitment, in mothers of children with ADHD?

2. Methods and Materials

2.1. Study Design and Participants

A cross-sectional correlational study was designed to investigate the correlation between variables. The study population consisted of mothers of children with Attention-Deficit/Hyperactivity Disorder (ADHD) attending elementary schools in Karaj during the year 2024. The study participants were recruited through convenience sampling technique from ADHD rehabilitation, educational, and therapeutic centers (Participants were recruited from the Mofid, Alborz, Vesal, and Rasta centers) in Karaj, Iran between January and March 2024. Given the number of variables and potential missing data, a sample size of 400 individuals was determined. After excluding incomplete questionnaires and outliers, 210 questionnaires were fully completed and analyzed, including 78 mothers of girls and 132 mothers of boys. The inclusion criteria for the study were a diagnosis of ADHD based on the child's medical records and a diagnostic interview conducted by a psychologist, the child living with the mother, the absence of comorbid disorders, and no use of psychotropic medications such as anxiolytics and antidepressants. The exclusion criteria were withdrawal from completing the questionnaires and incomplete responses.

Upon the approval of the Karaj ADHD educational, and therapeutic centers, the study was conducted at affiliated rehabilitation, educational, and therapeutic centers. Potential participants were contacted via telephone to explain the objectives of the study and invite them to participate in the study. The study participants were provided with comprehensive instructions on how to complete the questionnaires, either in person or electronically, as per their preference. The researcher was available to answer questions and provide assistance to ensure accurate completion of the questionnaires.

2.2. Measures

2.2.1. Ryff's Psychological Well-Being Scale (RPWBS)

This questionnaire was developed by Ryff (1989), and the short 18-item version was used in this study. The items are scored on a six-point Likert scale, ranging from "strongly agree" (score 6) to "strongly disagree" (score 1). Therefore, the total score ranges from 18 to 108, with higher scores indicating greater psychological well-being and vice versa. The scale assesses six factors: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. In Iran, Khanjani et al. (2014) assessed its internal consistency using Cronbach's alpha for the components of self-acceptance, environmental mastery, positive relations with others, purpose in life, personal growth, and autonomy, obtaining values of 0.51, 0.76, 0.75, 0.53, 0.73, and 0.72, respectively. Additionally, the overall Cronbach's alpha was 0.71. In the present study, the overall reliability using Cronbach's alpha was 0.76.

2.2.2. Cognitive Emotion Regulation Questionnaire (CERQ)

This scale was developed by Garnefski et al. (2006). The questionnaire consists of 36 items and is two-dimensional, designed to identify cognitive coping strategies individuals use after experiencing negative events or situations. The items are scored on a 5-point Likert scale (always, often, usually, sometimes, never), ranging from 1 to 5, with higher scores indicating greater use of the strategy. The total score ranges from 36 to 180. In Iran, Yousefi (2006) reported satisfactory reliability and validity for this questionnaire. The reliability of each subscale is as follows: positive cognitive emotion regulation (0.81) and negative cognitive emotion regulation (0.77). Additionally, the overall reliability of the questionnaire, calculated using Cronbach's alpha, was reported as 0.82. In the present study, the reliability of the positive cognitive emotion regulation subscale was 0.79, the negative cognitive emotion regulation subscale was 0.76, and the overall reliability was 0.74.

2.2.3. Marital Commitment Questionnaire (MCQ)

This questionnaire, consisting of 44 items, was developed by Adams and Jones (1997). It comprises three components: commitment to the spouse,

commitment to the marriage, and feelings of commitment. The items are scored on a Likert scale ranging from "strongly disagree" to "strongly agree," with scores from 1 to 5. The total score ranges from 1 to 172. [Shahsian, Bahrami, and Mohebi \(2008\)](#) confirmed the validity of this questionnaire. They reported its reliability based on Cronbach's alpha as 0.85 and its test-retest coefficient as 0.86. In the present study, the reliability was reported as 0.81.

2.2.4. Communication Skills Questionnaire (CSQ)

This questionnaire was developed by [Jerabek \(2004\)](#) and consists of 34 items. Responses are based on a 5-point Likert scale ranging from 1 (never) to 5 (always). The questionnaire includes five subscales: listening, emotion regulation, message understanding, insight, and assertiveness. Participants receive a total score ranging from 36 to 170. Scores between 36 and 80 indicate low communication skills, scores between 80 and 120 indicate moderate communication skills, and scores between 120 and 170 indicate high communication skills. The construct validity of this questionnaire was examined by [Hossein Chari and Fadakar \(2007\)](#) using factor analysis, and the reliability of the subscales was reported using the test-retest method. The reliability coefficients for the subscales

Table 1

Descriptive Findings of the Research Scales

Statistical Index	Mean	SD	Skewness	Kurtosis
Positive Cognitive Emotion Regulation Strategies	62.39	10.58	-0.39	-0.88
Negative Cognitive Emotion Regulation Strategies	41.35	6.88	0.48	-0.09
Communication Skills	108.63	13.12	0.37	-0.45
Psychological Well-being	58.25	7.22	-0.03	0.94
Marital Commitment	140.15	17.85	0.55	-0.37

The mean and standard deviation of the research variables are presented in the table above. The skewness and kurtosis values indicate that the variables are normally distributed. One of the assumptions of path analysis modeling is the multivariate normality of the data. To assess this, Mardia's multivariate kurtosis

were as follows: verbal understanding (0.73), non-verbal understanding (0.76), emotion regulation (0.78), listening (0.69), and insight (0.77). The overall reliability of the questionnaire, assessed using Cronbach's alpha and split-half methods in a sample of 733 Iranian students, was reported as 0.71 and 0.69, respectively. In the present study, the reliability of the questionnaire, calculated using Cronbach's alpha, was 0.72.

2.3. Data Analysis

This study employed a descriptive and inferential statistical analysis. Descriptive statistics, such as means and standard deviations, were used to describe the data. For inferential analyses, Pearson correlation coefficients and structural equation modeling, and Sobel Statistic were used to examine the correlation between variables. Data analyses were conducted using SPSS and AMOS version 24. Figure 1 presents the conceptual framework of the study.

3. Findings and Results

The mean age and standard deviation of the participants were 31.55 ± 7.16 years. In terms of educational qualifications, 31% of the sample held a high school diploma, 49% held a bachelor's degree, and 20% held a master's degree.

coefficient was used in the AMOS software. The Mardia's coefficient for the current study's data was 3.16, indicating that the assumption of multivariate normality is satisfied. For assessing univariate normality, a general guideline suggests that if skewness and kurtosis values fall outside the range of (-2, 2), the data are not normally distributed. Based on

the data in Table (1), it is evident that the skewness and kurtosis indices for all variables fall within the range of (-2, 2), confirming their normal distribution.

Table 2

Tolerance and Variance Inflation Factor (VIF) Indices for Assessing the Absence of Multicollinearity Among Independent Variables

Predictor Variables	Tolerance	Variance Inflation Factor (VIF)
Positive Cognitive Emotion Regulation Strategies	0.97	1.09
Negative Cognitive Emotion Regulation Strategies	0.97	1.09
Communication Skills	0.94	1.13

The Table 2 presents the tolerance and VIF values for the predictor variables. Tolerance values above 0.10 and VIF values below 10 indicate the absence of multicollinearity among the independent variables, confirming that multicollinearity is not a concern in this study. In the Table 2, since the tolerance values are

close to 1, none of the predictor variables exhibit multicollinearity with other predictor variables. Additionally, the variance inflation factor (VIF) values are less than 2, further confirming the absence of multicollinearity among the predictor variables.

Table 3

Correlation Matrix of Research Variables

Variables	1	2	3	4	5
Positive Emotion Regulation	1				
Negative Emotion Regulation	-0.57**	1			
Communication Skills	0.41**	-0.35**	1		
Psychological Well-being	0.25**	0.07	0.42**	1	
Marital Commitment	0.22**	0.10	0.56**	0.38**	1

Note: ** indicates significance at the 0.01 level.

Table 3 presents the correlation coefficients between the research variables. The results show significant relationships between positive emotion regulation, communication skills, psychological well-being, and marital commitment, while negative emotion regulation shows a significant negative correlation with positive emotion regulation and communication skills.

To address the main research question—**whether the model explaining marital commitment and psychological well-being, considering cognitive**

emotion regulation strategies and the mediating role of communication skills, fits the empirical data—path analysis was conducted using AMOS version 24. The findings demonstrated that the **R²** value for marital commitment in the research model is **0.38**, indicating that the exogenous and mediating variables can predict **38%** of the variance in marital commitment. The **R²** value for psychological well-being is **0.25**, indicating that the exogenous and mediating variables can predict **25%** of the variance in psychological well-being.

Table 4
Model Fit Indices of the Research

Fit Indices	χ^2/df	GFI	PCFI	PNFI	CFI	IFI	RMSEA
Research Model	1.957	0.932	0.789	0.787	0.912	0.931	0.063

*Acceptable thresholds for indices: PCFI, PNFI (> 0.5), CFI, GFI, IFI (> 0.9), RMSEA (< 0.08), CMIN/DF (< 3 = good, < 5 = acceptable) *

The results of the Table 4 indicate that the fit indices of the model generally demonstrate a favorable condition, and thus, testing the research hypotheses is justified. In

the following section, the standardized path coefficients of the research model are presented in Figure (1) and Table 5.

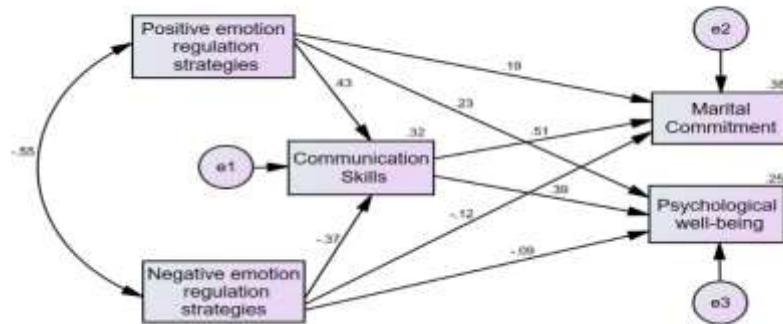


Figure 1. The Research Model in Standardized Coefficients

Table 5

Coefficients and Significance of Direct Effects of Research Variables

Dependent Variable	Independent Variable	Effect Type	Unstandardized Coefficient	Standardized Coefficient (β)	t-value	p-value
Psychological Well-being	Positive Emotion Regulation Strategies	Direct	0.33	0.23	3.37	0.001
Psychological Well-being	Negative Emotion Regulation Strategies	Direct	-0.19	-0.09	-1.21	0.094
Psychological Well-being	Communication Skills	Direct	0.74	0.39	5.16	0.001
Marital Commitment	Positive Emotion Regulation Strategies	Direct	0.44	0.19	3.24	0.001
Marital Commitment	Negative Emotion Regulation Strategies	Direct	-0.17	-0.12	-1.34	0.085
Marital Commitment	Communication Skills	Direct	0.81	0.51	6.02	0.001
Communication Skills	Positive Emotion Regulation Strategies	Direct	0.94	0.43	5.26	0.001
Communication Skills	Negative Emotion Regulation Strategies	Direct	-0.55	-0.37	-5.10	0.001

As shown in Table 5 and Figure 1, all standardized direct coefficients were significant at the 95% confidence level. Specifically, positive cognitive emotion regulation strategies significantly predicted psychological well-being ($\beta = 0.23$, $t = 3.37$), communication skills significantly predicted psychological well-being ($\beta = 0.39$, $t = 5.16$), positive cognitive emotion regulation strategies significantly predicted marital commitment ($\beta = 0.19$, $t = 3.24$), communication skills significantly predicted marital

commitment ($\beta = 0.51$, $t = 6.02$), positive cognitive emotion regulation strategies significantly predicted communication skills ($\beta = 0.43$, $t = 5.26$), and negative cognitive emotion regulation strategies significantly and negatively predicted communication skills ($\beta = -0.37$, $t = -5.10$). However, negative cognitive emotion regulation strategies did not significantly predict either psychological well-being or marital commitment among mothers of children with ADHD.

Table 6

Coefficients and Significance of Indirect Effects

Dependent Variable	Independent Variable	Effect Type	Unstandardized Coefficient	Standardized Coefficient (β)	Sobel Statistic	p-value
Psychological Well-being	Positive Emotion Regulation Strategies	Mediated by Communication Skills	0.69	0.17	2.43	0.001
Psychological Well-being	Negative Emotion Regulation Strategies	Mediated by Communication Skills	-0.41	-0.14	-2.27	0.001
Marital Commitment	Positive Emotion Regulation Strategies	Mediated by Communication Skills	0.76	0.22	2.63	0.001
Marital Commitment	Negative Emotion Regulation Strategies	Mediated by Communication Skills	-0.45	-0.19	-2.49	0.001

Table 6 indicates that positive emotion regulation strategies, mediated by communication skills, significantly predicted both psychological well-being ($\beta = 0.17$, $p = 0.001$) and marital commitment ($\beta = 0.22$, $p = 0.001$) in mothers of children with ADHD. Conversely, negative emotion regulation strategies, mediated by communication skills, significantly predicted lower psychological well-being ($\beta = -0.14$, $p = 0.001$) and marital commitment ($\beta = -0.19$, $p = 0.001$).

4. Discussion and Conclusion

This study examined whether communication skills mediate the relationship between cognitive emotion regulation, psychological well-being, and marital

commitment in mothers of children with ADHD. Results confirmed a mediating role for communication skills, aligning with findings by Hamzhepour et al. (2020), Ghaderi Stanjin et al. (2024), Shokri et al. (2023), and Asgarzadeh et al. (2024). Raising a hyperactive child can diminish maternal well-being, as supported by Hamzhepour et al. (2020), who highlight the greater challenges faced by parents of children with ADHD compared to those with typically developing children. Cho et al. (2016) further link maternal well-being to these challenges. The persistent behavioral issues associated with hyperactivity significantly impact family interactions, increasing the vulnerability of mothers, often primary caregivers, to mental health challenges.

Mothers of children with maladaptive behaviors, particularly those with ADHD, often experience stress

that can lead to physical and psychological illnesses and reduced well-being. Challenges in interpersonal relationships, exacerbated by limited paternal involvement (Garshi & Gargi, 2020), further threaten maternal mental health. This diminished well-being stems from a combination of negative emotionality and ineffective emotional regulation, with maladaptive strategies contributing to psychological problems through mechanisms like attention bias and unpredictability (Pinheiro-Cassio et al., 2021). Developing parental self-regulation, specifically cognitive emotion regulation, is crucial for improving parent-child relationships and maternal psychological well-being. Mothers with strong emotional regulation are better equipped to handle their maternal responsibilities. Conversely, emotional instability, common among mothers of children with behavioral disorders, results in inappropriate anger, emptiness, mood swings, and heightened reactivity, ultimately leading to behavioral instability, poor emotional control, and impaired relationships (Shokri et al., 2023).

Effective cognitive emotion regulation enables mothers to respond to their children's behavior calmly and positively, breaking cycles of inappropriate parent-child interactions by fostering problem-solving rather than helpless or reactive responses. However, raising a child with ADHD can strain marital relationships, leading to avoidance, demand/withdrawal communication patterns, and decreased marital commitment. This spousal detachment can negatively impact the child's ADHD symptoms by modeling unhealthy communication. Conversely, strong spousal partnership, companionship, and affection can positively influence the child's symptoms (Asgarzadeh et al., 2024). Parents who communicate effectively and offer supportive behavior are attuned to their children's negative emotions, accepting them and guiding children in identifying and managing them. This fosters greater social competence, reduces internalizing and externalizing problems, and yields positive outcomes for both parent and child. Conversely, parents lacking strong communication skills may criticize or punish children for expressing negative emotions, inadvertently hindering emotional development. Indeed, effective parental communication enhances social skills and improves

functioning in children with ADHD. Deficient communication skills and difficulty with emotional regulation significantly threaten psychological well-being. While raising a hyperactive child can negatively affect mothers' mental health, positive strategies and communication skills can lessen this impact (Sheikh Mohammadi et al., 2020).

Cognitive emotion regulation skills are crucial for healthy communication and relationships. Effective emotion management fosters stronger interpersonal connections, promoting personal growth, social support, psychological well-being, and marital commitment. Furthermore, effective communication enhances well-being and mental health by facilitating connection and improving quality of life. For mothers of children with ADHD, who often face significant stress, strong communication skills cultivate satisfaction, competence, self-respect, and coping abilities, thereby lessening the caregiving burden. Therefore, developing emotion regulation and communication skills in these mothers is vital for their psychological well-being, family relationships, and overall family functioning. Interventions targeting these skills can alleviate the challenges of raising a child with ADHD and create a healthier, more supportive family environment.

This study's focus on mothers of children with ADHD limits its generalizability. Future research should include mothers of typically developing children and fathers for comparison. Considering the importance of positive cognitive emotion regulation and communication skills for the well-being and marital commitment of mothers of children with ADHD, clinical training programs should be developed to foster these skills. Such interventions could mitigate challenges and improve overall well-being and family dynamics.

Authors' Contributions

One author significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement



Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Each participant received an informed consent form to understand the study's objectives.

References

- Adams, J. M., & Jones, W. H. (1997). The conceptualization of marital commitment: An integrative analysis. *Journal of personality and social psychology*, 72(5), 1177. doi:10.1037/0022-3514.72.5.1177.
- Ahmadzadeh, T., Sharifi, T., Ahmadi, R., & Ghazanfari, A. (2022). Effectiveness of emotion regulation training on communication skills, social adjustment and emotional wellbeing among adolescent girls of Gachsaran city with two months follow-up. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 11(1), 143-154.
- Angeline, J., & Rathnasabapathy, M. (2023). Understanding women's suffering and psychological well-being: exploring biopsychosocial factors in mothers of children with ADHD—a case study. *Frontiers in Public Health*, 11, 1279499. doi:10.3389/fpubh.2023.1279499.
- Keshavarz, S. (2024). Psychological well-being and Marital Commitment of Mothers of ADHD Children based on Cognitive-emotional Regulation: The mediating role of Communication Skills. *Iranian Journal of Neurodevelopmental Disorders*, 3(3), 127-138. <https://doi.org/10.22034/spr.2024.423748.1876>
- Barkley, R. A. (2022). *Treating ADHD in children and adolescents: What every clinician needs to know*. Guilford Publications.
- Becker, S. P., Willcutt, E. G., Leopold, D. R., Fredrick, J. W., Smith, Z. R., Jacobson, L. A., ... & Barkley, R. A. (2023). Report of a work group on sluggish cognitive tempo: Key research directions and a consensus change in terminology to cognitive disengagement syndrome. *Journal of the American Academy of Child & Adolescent Psychiatry*, 62(6), 629-645. doi: 10.1016/j.jaac.2022.07.821.
- Beheshti, A., Chavanon, M. L., & Christiansen, H. (2020). Emotion dysregulation in adults with attention deficit hyperactivity disorder: a meta-analysis. *BMC psychiatry*, 20(1), 120. doi:10.1186/s12888-020-2442-7.
- Chou, W. J., Hsiao, R. C., Chang, C. C., & Yen, C. F. (2021). Predictors of depressive symptoms in caregivers of children with attention-deficit/hyperactivity disorder: a one-year follow-up study. *International Journal of Environmental Research and Public Health*, 18(16), 8835. doi:10.3390/ijerph18168835.
- Otero, M. C., Wells, J. L., Chen, K. H., Brown, C. L., Connelly, D. E., Levenson, R. W., & Fredrickson, B. L. (2020). Behavioural indices of positivity resonance associated with long-term marital satisfaction. *Emotion*, 20(7), 1225. doi:10.1037/emo0000634.
- Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire—development of a short 18-item version (CERQ-short). *Personality and individual differences*, 41(6), 1045-1053. doi:10.1016/j.paid.2006.04.010.
- Gersh, N., & Gray, S. A. (2020). Parental emotion regulation and mentalization in families of children with ADHD. *Journal of attention disorders*, 24(14), 2084-2099. doi:10.1177/1087054718762486.
- Ghaderi Stanjin, M., Yousefi, N., & Rajaei, Z. (2024). How does a mother's change affect her hyperactive child? Analyzing changes in children's behavioral disorders and hyperactivity using cognitive-behavioral group intervention for parents. *Journal of Modern Advances in Psychology, Educational Sciences, and Education*, 17(73), 69-86.
- Hamzehpour, R., Hamidia, A., Kheirkhah, F., Javadian, S., Azad Forouz, S., & Soleimani Nezhad, M. (2020). Prevalence of Mood Disorders in Mothers Of Children with Attention Deficit Hyperactivity Disorder. *Journal of Mazandaran University of Medical Sciences*, 30(184), 142-147.

- Hinshaw, S. P. (2018). Attention deficit hyperactivity disorder (ADHD): controversy, developmental mechanisms, and multiple levels of analysis. *Annual review of clinical psychology*, 14(1), 291-316. doi:10.1146/annurev-clinpsy-050817-084917.
- Hossein Chari, M., & Fadakar, M. M. (2005). The impact of university on communication skills based on a comparison of high school and university students. *Journal of Daneshvar Behavior*, 12(15), 21-32.
- Jansen, S. L., van der Putten, A. A., & Vlaskamp, C. (2017). Parents' experiences of collaborating with professionals in the support of their child with profound intellectual and multiple disabilities: A multiple case study. *Journal of Intellectual Disabilities*, 21(1), 53-67. doi:10.1177/1744629516641843.
- Jerabek, I. (2004). Communication skills Inventory-revised. Body-mind QeenDom. Khanjani, M., Shahidi, S., Fathabadi, J., Mazaheri, M. A., & Shokri, O. (2014). Factor structure and psychometric properties of the short form (18-item) of Ryff's Psychological Well-being Scale among male and female students. *Andishe va Raftar*, 8(32), 27-36.
- Nourani-Jourjade, S. R., Mashhadi, A., Bigdeli, I., & Rasoolzade-Tabatabai, S. K. (2024). The Mediating Role of Emotion Regulation on the Relation between ADHD Symptoms, Cognitive Disengagement Syndrome and Symptoms of Anxiety and Depression among College Students. *International Journal of Behavioral Sciences*, 18(2), 52-59. doi: 10.30491/IJBS.2024.425393.2048.
- Nourkojouri, F., Pourtaleb, N., & MusaNejad, E. (2024). Effectiveness of Play Therapy based on Executive Functions on Attention Deficit and Impulsivity of Students with Attention Deficit Hyperactivity Disorder. *Psychology of Exceptional Individuals*, 14(54), 169-203. <https://doi.org/10.22054/jpe.2024.73705.2573>
- Piñeiro-Cossio, J., Fernández-Martínez, A., Nuviala, A., Pérez-Ordás, R. (2021). Psychological Wellbeing in Physical Education and School Sports: A Systematic Review. *International Journal of Environmental Research and Public Health*, 18(3), 864- 882. doi: 10.3390/ijerph18030864
- Riboldi, I., Crocamo, C., Callovini, T., Capogrosso, C. A., Piacenti, S., Calabrese, A., ... & Carrà, G. (2022). Testing the impact of depressive and anxiety features on the association between attention-deficit/hyperactivity disorder symptoms and academic performance among university students: a mediation analysis. *BrainSciences*, 12(9), 1155. doi: 10.3390/brainsci12091155.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57(6), 1069-1081. doi: 10.1037/0022-3514.57.6.1069.
- Safara, M., & Salmabadi, M. (2021). Psychological well-being in the elderly: The role of self-compassion and alexithymia. *Journal of Aging Psychology*, 7(1), 83-92. <https://doi.org/10.22126/JAP.2021.6289.1515>
- Sedgwick-Müller, J. A., Müller-Sedgwick, U., Adamou, M., Catani, M., Champ, R., Gudjónsson, G., ... & Asherson, P. (2022). University students with attention deficit hyperactivity disorder (ADHD): a consensus statement from the UK Adult ADHD Network (UKAAN). *BMC psychiatry*, 22(1), 292. doi:10.1186/s12888-022-03898-z.
- Ghiasian, M. S., Shahabi, H., & Ahmadkhani, M. R. (2020). Study of Communication Skills in Children with Attention Deficit/Hyperactivity Disorder in Shahrekord. *The Buckingham Journal of Language and Linguistics*, 12, 39-54. doi:10.5750/bjll.v12i.1873.
- Shahsiah, M., Bahrami, F., & Mohebi, S. (2009). The relationship between sexual satisfaction and marital commitment among couples in Shahreza. *Journal of Fundamentals of Mental Health*, 43(3), 233-238. <https://doi.org/10.22038/JFMH.2009.1556>
- Keshavarz, S. (2024). Psychological well-being and Marital Commitment of Mothers of ADHD Children based on Cognitive-emotional Regulation: The mediating role of Communication Skills. *Iranian Journal of Neurodevelopmental Disorders*, 3(3), 127-138. <https://doi.org/10.22054/jpe.2021.55835.2250>
- Shokri, A., Kazemi, R., Narimani, M., & Taklavi, S. (2023). Comparison of the effectiveness of mindfulness-based cognitive therapy and cognitive emotion regulation training on psychological well-being of mothers with aggressive students. *Journal of School Psychology*, 12(1), 83-70. <https://doi.org/10.22098/JSP.2023.2232>
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5, No. 7). Boston, MA: Pearson.



Uran, P., & Kılıç, B. G. (2020). Family functioning, comorbidities, and behavioral profiles of children with ADHD and disruptive mood dysregulation disorder. *Journal of Attention Disorders*, 24(9), 1285-1294. doi: 10.1177/1087054715588949.

Williams, W. C., Morelli, S. A., Ong, D. C., & Zaki, J. (2018). Interpersonal emotion regulation: Implications for affiliation, perceived support, relationships, and well-being. *Journal of personality and social psychology*, 115(2), 224. doi: 10.1037/pspi0000132.

Yousefi, F. (2006). Investigating cognitive emotion regulation strategies with depression and anxiety among gifted middle school students. *Journal of Research in Exceptional Children*, 6(4), 871-892.