

Research Paper

Investigating Parenting Styles and Relationship Obsessive-compulsive Disorder Symptoms: The Mediating Role of Alexithymia

Sepideh Tamrchi¹, Mahtab Rabiee¹, Behrouz Dolatshahi^{2*}

1. Department of Health Psychology, Faculty of Education and Psychology, Shahid Beheshti University, Tehran, Iran.

2. Department of Clinical Psychology, Substance Abuse and Dependence Research Center, School of Behavioral Sciences, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.



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ABSTRACT

Objective: Obsessive-compulsive disorder (OCD) is a common and debilitating mental disorder that can manifest in various themes. Recently, studies have identified relationship OCD (ROCD) as a subtype of OCD in which obsessions and compulsions revolve around romantic relationships comprising the relationship (relationship-centered) or the romantic partner (partner-focused). This study investigates the mediating role of alexithymia in the relationship between parenting styles and different presentations of ROCD, including relationship-centered and partner-focused.

Methods: A total of 453 participants completed partner-related obsessive-compulsive Symptoms inventory, relationship obsessive-compulsive inventory, parental authority questionnaire, and Toronto alexithymia scale-20. The data were analyzed using the SPSS software, version 26, and the Amos software, version 24.

Results: The results demonstrated that the authoritarian parenting style has a significant positive relationship with relationship-centered and partner-focused obsession compulsion (OC) symptoms at a significance level of 0.01. Furthermore, the relationship between all three types of parenting styles, including authoritative, authoritarian, and permissive, with relationship-centered and partner-focused obsessions and compulsions symptoms, was mediated by alexithymia at the 0.05 significance level. Also, the fit indices suggested that the model has an acceptable overall fitness.

Conclusion: Parenting styles are related to ROCD symptoms through the mediating role of alexithymia, and this model can facilitate the etiology of ROCD symptoms and is used to design interventions and early identification of high-risk individuals.

*** Corresponding Author:**

Behrouz Dolatshahi, Associate Professor.

Address: Department of Clinical Psychology, Substance Abuse and Dependence Research Center, School of Behavioral Sciences, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

E-mail: dolatshahee@yahoo.com

Highlights

- Relationship obsessive-compulsive disorder (ROCD) is one of the new obsessive-compulsive disorder (OCD) themes.
- Alexithymia and some dimensions of parenting style can play a role in creating ROCD symptoms.
- Parenting style through the mediating role of alexithymia can lead to ROCD symptoms.

Plain Language Summary

Parenting styles have long been known to affect various aspects of child development, including their mental health. In this research, we investigated the relationship between parenting styles and symptoms of obsessive-compulsive disorder (ROCD) with the mediation of alexithymia. ROCD is a disorder characterized by a strong need for reassurance in relationships, leading to obsessive thoughts and behaviors. On the other hand, alexithymia refers to the difficulty in identifying and expressing emotions. In this study, we sought to investigate how different parenting styles, including authoritative, permissive, and authoritarian, may influence the development of ROCD symptoms through alexithymia. The study examined a sample of adults and found that those who reported experiencing authoritarian parenting styles in childhood were more likely to show higher levels of ROCD symptoms in adulthood. Interestingly, this study also showed that alexithymia plays a mediating role in this relationship. Adults who reported higher levels of alexithymia were more likely to show symptoms of ROCD, especially if they experienced authoritarian or permissive parenting styles during childhood. These findings highlight the importance of understanding the complex interplay between parenting styles, alexithymia, and ROCD symptoms. By recognizing the role that parenting styles play in shaping people's emotional regulation and relationship behaviors, mental health professionals can conduct better interventions to address these issues. Therefore, investigating parenting styles and their impact on mental health outcomes such as ROCD symptoms and alexithymia is necessary to develop effective interventions. By understanding the underlying mechanisms involved, clinicians can better support individuals in managing their emotional well-being and improving their relationships.

Introduction

Obsessive-compulsive disorder (OCD) is a highly prevalent and chronic condition associated with substantial global disability. It is a heterogeneous disorder with various themes, including contamination, order/symmetry, doubt/checking, and abhorrent or unacceptable thoughts (Stein et al., 2019). Recently, Dorn et al. introduced relationship OCD (ROCD) as a new theme that focuses on close interpersonal relationships, such as parent-child relationships and romantic relationships (Doron et al., 2014).

Findings suggest that ROCD symptoms are associated with functional disability and significant personal and relational distress (Doron et al., 2016; Doron et al., 2014; Melli et al., 2018; Ratzoni et al., 2021). ROCD symptoms in romantic relationships are manifested in two forms: Partner-focused and relationship-centered. Relationship-centered obsession compulsion (OC) symptoms encompass doubts and preoccupations about

an individual's feelings toward the relationship partner ("Do I love him or her enough?"), the partner's feelings toward themselves ("Does he or she love me enough?"), and the rightness of the relationship ("Is this really the "right" relationship for me?") (Doron et al., 2014). Partner-focused OC symptoms comprise doubts and preoccupations about the appearance and other perceived defects of one's relationship partner, such as intelligence, social skills, and so on (Doron et al., 2012b; Misirli & Kaynak, 2023). According to research, both types of ROCD often coexist, and similar to OCD, it is associated with compulsions, such as suppression, neutralization, comparison, and reassurance (Doron et al., 2012b; Szeplawol et al., 2016).

Although, according to research, OCD has a genetic basis (Pauls, 2010), attempts to understand factors involved in the development and maintenance of OCD have implicated varying child-related and parent-related constructs. Individual's early experiences can affect their beliefs and behaviors (Mataix-Cols et al., 2010). According to Baumrind's theory, parenting styles can be classi-

fied based on expectation and responsiveness. Expectations indicate behavioral control; parents expect mature behaviors from their children and control and monitor their actions. Responsiveness refers to warm, affectionate, and supportive parents who show emotional warmth and acceptance and involve themselves in their children's activities. Accordingly, based on these two components, Baumrind introduced three parenting styles: Permissive, authoritarian, and authoritative. A permissive parenting style includes a high level of emotional warmth and responsiveness and a low level of behavioral control. These types of parents do not have any special rules and allow their children to behave as they want. A high level of expectation and a low level of responsiveness indicate an authoritarian parenting style. These parents are strict and controlling, emphasizing obedience and conformity, and they expect their children to follow their rules without any reason. They place little value on emotional warmth. The authoritative parenting style expresses a proportional level of expectation and responsiveness. These parents have reasonable rules while providing a warm and accepting environment (Baumrind, 1971).

According to research, parenting styles are related to OCD symptoms (Goli et al., 2019; Navarro, 2023). In this regard, parenting styles characterized by overprotectiveness, precision, and strictness are associated with OC symptoms (Navarro, 2023). People with a high level of obsessive-compulsive symptoms, compared to the control group, perceived a lower level of emotional warmth from their parents (Zhang et al., 2022).

Additionally, the results of another study indicated that a low level of perceived emotional warmth from parents was associated with dimensions of hoarding symptoms in OCD (Chen et al., 2017). The only study that investigated parenting styles in ROCD as a new theme of OCD also showed that an overprotective parenting style can be associated with the development of ROCD symptoms (Trak & Inozu, 2019).

Although parenting styles can make an individual vulnerable to OC symptoms, the mechanism by which parenting style leads to the development of OC symptoms is not yet understood. According to research, childhood adversity is related to alexithymia (Ratty, 2020). Furthermore, there is a correlation between avoidant and anxious-ambivalent attachment, childhood trauma, and alexithymia (Zdankiewicz-Ścigała & Ścigała, 2020).

Therefore, alexithymia can be considered a mediating variable in this mechanism. Alexithymia refers to the difficulty in being aware of emotions. People with alexi-

thymia have difficulty identifying and describing their feelings. They have little imagination and fantasy, and their thinking is often objective (Bagby et al., 1994).

Although alexithymia was initially associated with psychosomatic and medical diseases, much research has now shown that alexithymia is associated with many psychological disorders, such as dissociative disorders, depression, anxiety, and treatment response in psychiatric disorders (Hemming et al., 2019; Pinna et al., 2020).

In the context of OCD, according to the traditional psychoanalytic approach, OC is carried out to suppress unbearable drives and emotions. Common defense mechanisms in OCD, such as suppression, dissociation, and dissociation of emotions, are associated with alexithymia (Wise et al., 1991). Alexithymia is a constant feature in people with OCD with a correlation (Üstündağ & Gökçeima, 2020).

Further, OCD is a heterogeneous disorder, and alexithymia may vary across different themes of OCD. For example, one study showed that the sexual or religious obsessions symptom dimension of OCD is the only dimension that has a positive correlation with total scores of alexithymia. In contrast, other dimensions, including hoarding, contamination/cleaning, and aggressive/checking, did not significantly correlate with total Toronto alexithymia scale (TAS) scores (Roh et al., 2011). However, alexithymia has not yet been studied in the context of ROCD. Moreover, studies on the general population have shown that alexithymia is associated with being single and even living alone (Franz et al., 2008; Kokkonen et al., 2001). Alexithymia is associated with low satisfaction in intimate relationships (El Frenn et al., 2022; Hesse & Gibbons, 2019). The results of another study have also demonstrated that patients with traumatic brain injury who exhibit characteristics of alexithymia have experienced a significant decrease in the level of satisfaction with their marital relationships (Williams & Wood, 2013). Therefore, investigating the mediating role of alexithymia can be important.

Although parenting styles play an essential role in the development of OCD, according to research, only one study has investigated parenting styles in the new theme of OCD by studying the impact of overprotective parenting on ROCD. Thus, there is currently no information about the relationship between other parenting styles and the development of ROCD symptoms. In addition, unlike the relationships between alexithymia with parenting styles and OC symptoms and the differences in alexithymia across OCD themes, no research has yet in-

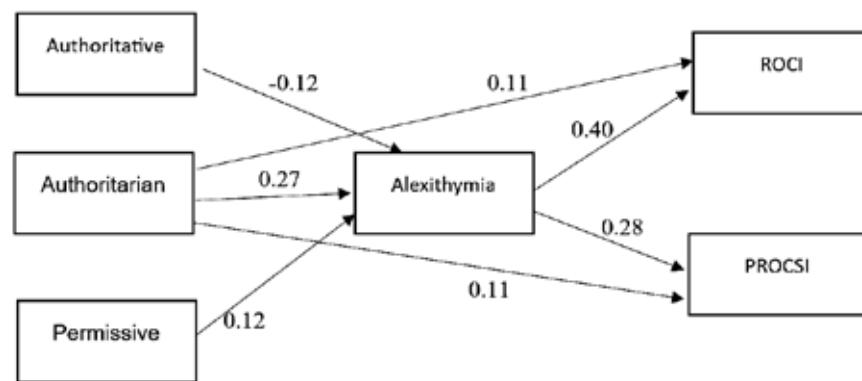


Figure 1. Basic model

investigated the mediating role of alexithymia in the relationship between parenting styles and ROCD symptoms.

By integrating studies on the relationships between parenting styles and alexithymia, alexithymia, and OCD, and alexithymia and problems in intimate relationships, we suggest that some aspects of parenting styles may be associated with increased levels of alexithymia, which in turn may be associated with increased OC symptoms and challenges in intimate relationships. Figure 1 shows the basic model.

Study instruments

Demographic questionnaire

A researcher-made questionnaire was used to evaluate the personal information of the participants, including age, gender, education, birth order, type of romantic relationship, duration of the relationship, and the number of relationship breakups.

Parental authority questionnaire

The parental authority questionnaire is a 30-item self-report scale that measures parenting style in three domains: Permissive, authoritative, and authoritarian. Buri reported a Cronbach α of 0.85 for the authoritative style, 0.87 for the authoritarian style, and 0.74 for the permissive style for this questionnaire (Doron et al., 2012a). The Iranian version has good psychometric properties (Assadi et al., 2007). For example, the content validity of this questionnaire has been reported to be adequate, based on judgments from 10 experts (Besharat et al., 2011). The Cronbach α values for this research are 0.63 for the permissive subscale, 0.89 for the authoritarian subscale, and 0.87 for the authoritative subscale.

Toronto alexithymia scale-20

The TAS-20 questionnaire is a 20-item self-report scale introduced by Bagby. It comprises three domains: Inability to identify feelings, inability to express feelings, and objective thinking. This scale is based on a Likert scale; the total score ranges from 0 to 80. This questionnaire's internal consistency coefficient (Cronbach α) is calculated at 0.81 (Bagby et al., 1994). The Iranian version of this questionnaire has good psychometric features. For example, the Cronbach α coefficients for total alexithymia and the three subscales, including difficulty in identifying emotions, difficulty in describing emotions, and externally oriented thinking, were calculated as 0.85, 0.82, 0.75, and 0.72, respectively (Besharat, 2007). This study showed that the consistency (Cronbach $\alpha=0.88$) was sufficient and acceptable.

Relationship obsessive-compulsive inventory

The relationship obsessive-compulsive inventory (ROCI) is a 12-item self-report scale that measures the intensity of obsessions and compulsions focused on romantic relationships in three areas: The person's feelings toward the partner, the partner's feelings toward themselves, and the rightness of the relationship. An acceptable level of validity and reliability has been observed for this questionnaire. For example, the average value of the internal consistency of this test has been reported as 0.9 (Doron et al., 2012b). The Iranian version of this questionnaire has good psychometric properties (Ghomanian, 2020). This study showed that the consistency (Cronbach $\alpha=0.91$) was sufficient and acceptable.

Partner-related obsessive-compulsive symptoms inventory

The partner-related obsessive-compulsive symptoms inventory (PROCSI) is a 24-item self-report scale that

measures the intensity of OC focused on the perceived defects of the partner in 6 areas: Appearance, social ability, creativity, emotional stability, intelligence, and overall competence. The PROC SI has good psychometric properties and correlates with measures of relationship-centered and general OC symptoms, namely depression, stress, anxiety, and relationship quality. The Iranian version of this questionnaire also has good psychometric properties. For instance, the value of composite reliability of the subscales was between 0.61 and 0.76 (Ghomian, 2020). This study showed that the consistency (Cronbach $\alpha=0.94$) was sufficient and acceptable.

Materials and Methods

This was a descriptive-correlational study based on the pathway analysis. The information of 463 participants was collected from March to May 2023. Data collection in this research was done with an online survey (Porsline). The website address was distributed on social networks, including Telegram, Instagram, and WhatsApp. Before completing the questionnaires, the participants were informed about the study's logic by the explanations at the top of the questionnaires, and then they completed the informed consent form. Completing each questionnaire took an average of 20 min and the available sampling method was used in this study. To encourage the subjects to participate in this research, they were given a selection of life skills, including stress management, problem-solving, emotion management, decision-making, self-awareness, and effective communication. Ethical codes, such as confidentiality of information, were respected.

Statistical population

The statistical population of the research included all people involved in a romantic relationship (minimum six months and maximum ten years) with the ability to access social networks.

Sample size

According to the research method, the sample size can vary from 5 to 15 observations for each measured variable or the number of items in the questionnaire, which in this study is at least 430; hence, 463 samples were taken for greater adequacy.

Sampling method

The samples were collected using the available sampling method and by distributing questionnaires on social networks (Telegram, WhatsApp, Instagram, etc.).

Inclusion criteria

The inclusion criteria comprised the following items: 1) Being over 18 years, 2) Being in only one romantic relationship at the moment (marriage, engagement, etc.), 3) Having at least six months of romantic relationship, and having a maximum ten years romantic relationship.

Exclusion criteria

The exclusion criteria included the following items: 1) Having a history of substance abuse or severe psychiatric illness, 2) Being under treatment by psychiatric drugs or psychotherapy, and 3) Having a history of hospitalization in a psychiatric hospital.

The primary sample consisted of 463 adults over 18 in a romantic relationship. Among them, 14 people were excluded from further analysis during the clinical interview due to the diagnosis of mental problems, the use of psychiatric drugs, or a history of drug use. The final sample included 449 people. Data analysis was done using the SPSS, version 26, and AMOS software, version 24. Demographic data in terms of age showed that three people (0.7%) were under 20 years old, 196 people (43.7%) were between 20 to 30 years old, 206 people (45.9%) were between 30 to 40 years old, and 44 people (9.8%) were over 40 years old. Regarding gender, 41 people (9.1%) were men and 408(90.9%) were women. In terms of birth order, 160 people (35.6%) were the first child, 106 people (23.6%) were the second child, 164 people (36.5%) were the third or last child, and finally 19 people (4.2%) were the only child. In terms of education, two people (0.4%) had an undergraduate degree, 43 people (9.6%) had a diploma or post-graduate degree, 191 people (42.5%) had a bachelor's degree, 169 people (37.6%) had a master's degree, and 44 people (9.8%) had a doctorate. Regarding the type of relationship, 205 people (45.7%) were married, 21 people (4.7%) were engaged, and 223 people (49.7%) were in a romantic friendship. Regarding the duration of the relationship, 19.93% were between 6 months to one year, 31.43% were between one to three years, and 48.43% were between three to ten years. Also, 205 people (45.7%) did not experience any breakup, while 244(54.3%) experienced it. Among them, 34.9% experienced one or two

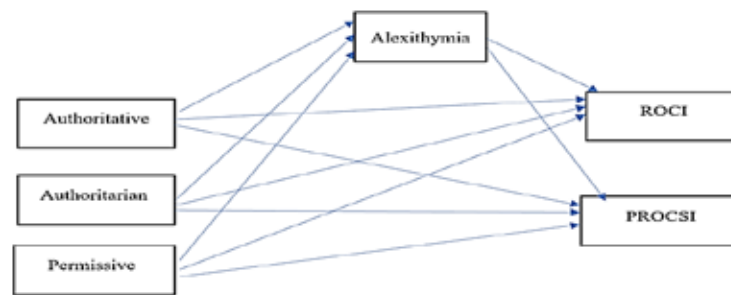


Figure 2. Final model

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breakups, and 19.4% experienced breakups more than twice.

Scores above 21 for ROCI and above 17 for PROCSI indicate significant OCD problems. In this study, 154 people (34.2%) had scores above the cut-off point in ROCI, and 232 people (51.6%) had scores above the cut-off point in PROCSI. According to the dimensional approach to pathology, the analysis was performed on the entire sample (not only those with a high score on the ROCI and PROCSI scales). The length of the emotional relationship of the participants in this research was considered between 6 months and ten years, and they were in only one emotional relationship.

Statistical analysis

The statistical analysis was performed using the SPSS software, version 26, and the AMOS software, version 24. In the first step, after extracting demographic information, each variable's Mean±SD, and correlation coefficients were checked separately. The significance value in this research was considered $P \leq 0.05$, and the significance of the relationship between demographic variables and OCD was investigated.

Then, using the Amos software, the overall fitness indices of the initial model were examined via the chi-square (CMIN), degrees of freedom, relative chi-square (CMIN/DF), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and root mean square error of approximation (RMSEA). Then, after removing non-significant paths and adding covariance paths, the model's fitness was confirmed. Finally, the significance of the indirect paths of the model was also checked through bootstrap.

Results

First, using the t-tests of independent groups and the one-way analysis of variance, the difference between ROCI and PROCSI levels in demographic variables was examined. Table 1 shows the results.

The results showed no significant difference between men's and women's scores for ROCI. The same result was repeated for PROCSI. Regarding the level of education, the results showed that people with different educational levels have no significant difference in ROCI and PROCSI scores. Additionally, in comparing the three groups, the type of relationship did not create a significant difference in the relationship-focused scale. However, in two-by-two comparisons, the results showed that married people had lower ROCI scores than people in romantic friendships. Still, no significant difference was observed between married and engaged individuals. Table 2 shows the Mean±SD, and correlation coefficients between the research variables.

According to Table 2, at a significance level of 0.01, relationship-centered OC symptoms, partner-focused OC symptoms, and alexithymia have a positive relationship with authoritarian parenting and a negative relationship with permissive parenting. Before analyzing the structural equations, the assumptions were checked. The normality of the data distribution was confirmed based on the skewness and kurtosis values of the variables being between -3 and +3. The non-collinearity of predictor variables was established based on a variance inflation factor of less than ten and a tolerance higher than 0.1. The results of the Durbin-Watson test were 2.08 for ROCI and 2.01 for PROCSI, indicating that the errors were independent. Figure 2 shows the final models after examining the fit indices standardized estimation.

Figure 2 shows the fitted model. Accordingly, the relationship of all parenting styles through the mediating variable of alexithymia with both types of relationship-centered and partner-focused OC symptoms is significant. In direct relationships, only authoritarian parenting has a significant correlation with ROCI and PROCSI.

In addition, as shown in Figure 2, among the standardized effect coefficients, the highest one is assigned to the path between alexithymia and ROCI (0.4). In contrast, the lowest ones are given to the paths between authori-

Table 1. The difference between relationship obsessive-compulsive inventory and partner-related obsessive-compulsive symptoms inventory in demographic variables

| Outcome | Variables | Type | Mean±SD | Sig. |
|---------|-------------------|--------------------------|-------------|------|
| ROCI | Gender | Men | 16.21±7.8 | 0.88 |
| | | Women | 17.18±10.77 | |
| PROCSI | | Men | 23.12±13.12 | 0.87 |
| | | Women | 21.46±17.3 | |
| ROCI | Marital status | Married | 15.6±10.6 | 0.15 |
| | | Engaged | 15.04±10.3 | |
| | | Romantic friendship | 18.6±10.2 | |
| PROCSI | | Married | 20.8±17.2 | 0.16 |
| | | Engaged | 20.03±19.08 | |
| | | Romantic friendship | 22.4±16.5 | |
| ROCI | Educational level | Undergraduate degree | 11.5±16.2 | 0.44 |
| | | Diploma or post-graduate | 17.4±10.7 | |
| | | Bachelor's degree | 17.18±10.6 | |
| | | Master's degree | 17.2±10.44 | |
| | | PhD | 16.11±10.3 | |
| | | Undergraduate degree | 28.5±40.3 | |
| PROCSI | | Diploma or post-graduate | 21.4±14.5 | 0.71 |
| | | Bachelor | 22.2±17.11 | |
| | | Master's degree | 22.06±17.2 | |
| | | PhD | 17.02±16.33 | |

Abbreviations: ROCI: Relationship obsessive-compulsive inventory; PROCSI: Partner-related obsessive-compulsive symptoms inventory; SD: Standard deviation.

tarian parenting and ROCI (0.11) and between authoritative parenting and PROCSI (0.11).

Additionally, the model's fitness was investigated to examine the central hypothesis of the research as follows: Alexithymia plays a mediating role in the relationship between parenting styles and ROCD. The model adequacy indices used to assess the model's fitness include CMIN, degrees of freedom, CMIN/DF, GFI, AGFI, and RMSEA, reported in both the initial and final models (Table 3).

Table 4 shows the pathway analysis results of the mediating role of alexithymia in the relationship between parenting styles and ROCD. The Bootstrap test was used to check indirect relationships.

As shown in Table 4, among the direct coefficients, only the authoritarian parenting style has a significant positive relationship with ROCD and PROCSI. Additionally, based on the results and level of confidence, the mediating role of alexithymia in the relationship between parenting styles and both types of ROCD was found to be significant in indirect relationships. In this research, the number of bootstrap samples used was 5000.

Table 2. Mean±SD, and correlation coefficients between the variables

| Variables | Mean±SD | Authoritarian | Permissive | Authoritative | Alexithymia | ROCI | PROCSI |
|---------------|------------|---------------|------------|---------------|-------------|--------|--------|
| Authoritarian | 32.2±8.4 | 1 | | | | | |
| Permissive | 26.7±5.3 | -0.66*** | 1 | | | | |
| Authoritative | 28.15±7.7 | -0.65*** | 0.54** | 1 | | | |
| Alexithymia | 49.16±13.5 | 0.27** | -0.13** | -0.23*** | 1 | | |
| ROCI | 17.09±10.5 | 0.22** | -0.06 | -0.17** | 0.44** | 1 | |
| PROCSI | 21.6±16.9 | 0.19** | -0.06 | -0.13*** | 0.32** | 0.69** | 1 |

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Abbreviations: ROCI: Relationship obsessive-compulsive inventory; PROCSI: Partner-related obsessive-compulsive symptoms inventory; SD: Standard deviation.

**Significant at 0.01.

Discussion

This study investigated the relationship between parenting styles and ROCD, focusing on the mediating role of alexithymia. The findings confirmed all the indirect paths in the model, supporting the central hypothesis of the research regarding the mediating role of alexithymia in the relationship between parenting styles (permissive, authoritative, and authoritarian) and both types of ROCD (relationship-centered and partner-focused). In addition, in direct relationships, only authoritarian parenting has a significant correlation with ROCI and PROCSI. Meanwhile, compared to other parenting styles, the authoritarian parenting style had the highest standardized effect coefficient through alexithymia, with both types of relationship-centered (0.11) and partner-focused (0.07) OC symptoms. These findings are consistent with previous research, which has shown a link between parenting styles and alexithymia (Cuzzocrea et al., 2015; Huang et al., 2022; Janik McErlean & Lim, 2020; Kalantar Hormozi et al., 2022; Karjough et al., 2022) and the research showed that alexithymia varies among different themes of OCD (Roh et al., 2011).

To explain these findings, the family environment during childhood may contribute to the development of alexithymia (Thorberg et al., 2011). As in the authoritative parenting style, emotions are encouraged in a positive family environment, and parent-child verbal communication enables children to represent emotions and adopt cognitive and emotional regulation strategies. On the other hand, in apathetic or harsh caregiving, insecure attachment can form, where emotional expression is limited. There is a lack of promotion of mentalization and effective management of emotions (Pozza et al., 2015), leading to the utilization of maladaptive strategies such as emotion suppression (Janik McErlean & Lim, 2020). Research has demonstrated that having overprotective parents or a lack of support is associated with increased alexithymia (Kooiman et al., 2004; Thorberg et al., 2011). For instance, in a permissive parenting style, parents do not provide enough reflection on their child's emotions and behaviors (Kawabata et al., 2011), which may result in these individuals being deficient in identifying their emotions, and consequently, alexithymia can develop. On the other hand, in an authoritarian parenting style, verbal expression and sharing of emotions are

Table 3. Model adequacy indices

| Indices | CMIN | DF | CMIN/DF | GFI | AGFI | RMSEA |
|------------------|--------|----|---------|------|-------|-------|
| Initial model | 768.77 | 4 | 192.79 | 0.65 | 0.81- | 0.65 |
| Final model | 5.1 | 4 | 1.2 | 0.99 | 0.98 | 0.02 |
| Acceptable limit | | | <2 | >0.9 | >0.9 | <0.05 |

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Abbreviations: CMIN: Chi-square; CMIN/DF: Degrees of freedom: Relative chi-square; GFI: Goodness-of-fit index; AGFI: Adjusted goodness-of-fit index; RMSEA: Root mean square error of approximation.

Table 4. Direct and indirect path coefficients

| Pathways | Unstandardized Estimation | Standardized Estimation | Sig. |
|--|---------------------------|-------------------------|-------|
| Authoritative ----- alexithymia | -0.21 | -0.12 | 0.04 |
| Authoritarian ----- alexithymia | 0.43 | 0.27 | 0 |
| Permissive ----- alexithymia | 0.3 | 0.12 | 0.04 |
| Authoritarian ---- ROCI | 0.14 | 0.11 | 0.01 |
| Authoritarian ---- PROCSI | 0.25 | 0.11 | 0.01 |
| Alexithymia ---- ROCI | 0.31 | 0.40 | 0 |
| Alexithymia ---- PROCSI | 0.36 | 0.28 | 0 |
| Authoritarian ---- alexithymia ---- ROCI | 0.13 | 0.11 | 0.00 |
| Authoritarian ---- alexithymia ---- PROCSI | 0.15 | 0.07 | 0.000 |
| Permissive ---- alexithymia ---- ROCI | 0.09 | 0.04 | 0.05 |
| Permissive ---- alexithymia ---- PROCSI | 0.11 | 0.03 | 0.04 |
| Authoritative ---- alexithymia ---- ROCI | -0.06 | -0.05 | 0.04 |
| Authoritative ---- alexithymia ---- PROCSI | -0.07 | -0.03 | 0.03 |

ROCI: Relationship obsessive-compulsive inventory; PROCSI: Partner-related obsessive-compulsive symptoms inventory.

usually suppressed. As a result, this can cause individuals to have little awareness of their emotions, which can provide a basis for developing alexithymia (Lemche et al., 2004; Pellerone et al., 2017). According to the attachment theory (Bowlby, 1979), a good enough primary caregiver is necessary to foster the development of correct internal working models in the child and enhance their ability to communicate effectively and regulate emotions. Verbal communication and receiving feedback from caregivers play a crucial role in developing and regulating emotional function. In an environment where the sharing of feelings is suppressed or ignored, emotional awareness is low, which opens the way for developing alexithymia. On the other hand, the need to reduce negative emotions and appraisals in alexithymia may lead to a strong tendency to control OCD (Carleton, 2016). Therefore, being afraid of emotions and attempting to avoid them may unintentionally make them more threatening, leading to emotional control through ineffective strategies, such as reassurance seeking. Additionally, one of the characteristics of alexithymia is a tendency toward objective thinking, which can lead to symptoms similar to OCD, as individuals with OCD also struggle to differentiate between imaginary and real

mental events, which can intensify the distress associated with unpleasant thoughts (Robinson & Freeston, 2014).

In ROCD as a new theme of OCD, the deficiency in identifying and expressing emotions, which is one aspect of alexithymia, may lead to an increase in misunderstandings during romantic relationships and a decrease in the level of satisfaction with those relationships (Besharat et al., 2014). In addition, the disturbance in empathy and avoidance of intimacy, which are other aspects of alexithymia, may cause a person to struggle in understanding and responding to their partner's emotions, as well as experiencing difficulty in expressing intimate feelings such as love and affection towards their partner. As a result, it is expected that individuals with alexithymia experience lower levels of satisfaction in romantic relationships and encounter more problems in their relationships (ROCD symptoms) (Besharat et al., 2014; Pérusse et al., 2012). People who cannot identify their emotions may feel uncertain about their feelings. These individuals may be unable to correctly identify their own or their partner's feelings and, as a result, may ask others to reassure them about the validity of their feelings and their partner's emotions. This may provide a basis for ROCD symptoms.

The second part of this research hypothesis examined the direct relationship between parenting styles and ROCD. In this case, the hypothesis of a positive relationship between authoritarian parenting style and relationship-centered and partner-focused OC symptoms was confirmed, which is consistent with previous research showing a relationship between parenting styles and OC symptoms (Bilge et al., 2022; Navarro, 2023; Sudhir et al., 2021; Timpano et al., 2010).

When parents adopt an authoritarian parenting style, they may contribute to the development of maladaptive beliefs in their children, such as an increased sense of responsibility, overestimation of threats, hypervigilant behaviors, and perfectionism. These maladaptive beliefs, in turn, may contribute to the development of OCD (Hazel & McNally, 2016). For example, children with authoritarian parents may learn to overcontrol their behaviors to please their parents and avoid their controlling or mandatory behaviors. This excessive self-control is continually reinforced, expected, and maintained through authoritarian parental actions. As a result, the child may adopt this control mindset to deal with any perceived threats, including automatic thoughts, uncertainty, and emotional distress. Similar to a child who learns self-control to avoid the uncertainty of what might happen if they do not follow the unrealistic, controlling, and inflexible rules and expectations imposed by authoritarian practices, individuals with OCD also attempt to neutralize their obsessions (Timpano et al., 2010).

Regarding the context of ROCD, according to evidence, authoritarian parents may contribute to the development of beliefs related to perfectionism and a fear of making mistakes in children (Chen et al., 2022), which are essential predictors of ROCD (Doron et al., 2014). For example, the fear of making a mistake causes these people to constantly switch between thoughts of separation (“If I break up with him, I’ll lose someone special”) and thoughts of being hurt by the relationship (“If I stay in this relationship, I cannot stop thinking about the possibility of getting hurt”) (Doron et al., 2014). Moreover, authoritarian parents may cause their children to have unreasonable expectations about their romantic relationship with their partner. These unjustified expectations of romantic relationships may provide ROCD symptoms.

Furthermore, the behaviors of parents with an authoritarian parenting style can indicate a lack of trust and confidence in their children’s decisions and behaviors (Barber, 1996). Feelings of distrust may cause these individuals to doubt the validity of their choices in adulthood, thus providing a basis for the development

of ROCD symptoms. Additionally, an authoritarian parenting style is associated with the development of insecure attachment styles, such as avoidance and anxiety (Akhtar, 2012; Mahasneh et al., 2013). According to studies, insecure attachments are associated with ROCD (Doron et al., 2014; Kabiri et al., 2017). People with an anxious attachment style are highly sensitive to real or imagined relationship threats, making them vulnerable to relationship-related obsessions. Hyperactive strategies (persistent and repeated efforts to receive the love of a partner) may provide the basis for creating compulsive behaviors, such as reassurance seeking and checking in the context of romantic relationships. On the other hand, people with an avoidant attachment style tend to project their negative characteristics onto others (Doron et al., 2009). As a result, individuals with an avoidant attachment style become highly sensitive to any small flaws in their partner, and their disturbing thoughts become focused on these flaws and characteristics of their emotional partner, which can increase and provide the basis for ROCD (Doron et al., 2014).

Due to the suppression of emotional expression in authoritarian parenting styles, children may experience alexithymia in the future. This inability to recognize their and others’ emotions may lead individuals to doubt the validity and accuracy of their own and their partner’s feelings in a romantic relationship, thus providing the basis for ROCD symptoms, such as seeking reassurance from others. These are the reasons why an authoritarian parenting style can be associated with ROCD symptoms.

Conclusion

Despite the limitations, this research demonstrated the mediating role of alexithymia in the impact of parenting styles on the development of partner-focused and relationship-centered OC symptoms. As a result, researchers in the field of interpersonal problems and couple therapists can use the results of this study to improve interpersonal relationships and resolve couple problems. Moreover, understanding psychosocial factors can facilitate treatment and aid in developing intervention strategies for at-risk children.

Study limitations:

Although this research showed the mediating role of alexithymia in the relationship between parenting styles and ROCD, there are some limitations. First, this research was conducted in an Islamic country, and people with specific sexual orientations, such as lesbians, etc., were not investigated. Second, some individuals may

have been in more than one romantic relationship at the time of the study and hide it. Third, the participation rate of men in this research was much lower than that of women, which can have clinical implications. Fourth, since the current research is cross-sectional and based on a self-report questionnaire, it was not possible to make causal inferences. Therefore, future research must confirm the current findings using other data collection methods, such as behavioral observation, interviews, third-party reporting, and longitudinal research. It is also possible that other variables contribute to or mediate the relationship between parenting styles and OCD, and these should be investigated. Furthermore, it is recommended that this study be replicated in other Iranian sub-cultures and other cultures outside of Iran with different age groups, such as teenagers, to enable comparison with the results of the present study.

Ethical Considerations

Compliance with ethical guidelines

Written informed consent (about participation in the study) was received from all patients before the beginning of the study. The scales used in this research were all filled anonymously, and a numeric code was used. This project was assessed and certified by the Ethics Committees of the [University of Social Welfare and Rehabilitation Sciences](#) (Code: IR.USWR.REC.1400.067).

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Authors' contributions

Conceptualization and study design: Behrouz Dolatshahi and Sepideh Tamrchi; Data acquisition, analysis, and interpretation: Mahtab Rabiee and Sepideh Tamrchi; Writing the original draft: All authors; Review and editing: Behrouz Dolatshahi; Final approval: All authors.

Conflict of interest

The authors declared no conflict of interest.

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