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The Mediating Role of Emotional Regulation in the Relationship Between Cognitive Ability, Worry, and Rumination and Obsessive-Compulsive in Those Who Pray with Many Doubts

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ABSTRACT

Introduction: Obsessive-compulsive disorder (OCD) is characterized by intrusive thoughts and repetitive behaviors that interfere with daily functioning. Pray with Many Doubts are a specific group of obsessive-compulsive disorder sufferers whose symptoms manifest in a religious context (doubts about purity, repetition of religious acts). This study examined the mediating role of emotion regulation in the relationship between cognitive abilities, worry, rumination, and the severity of obsessive-compulsive symptoms in this group.

Method: This descriptive-correlational study was conducted using structural equation modeling. The statistical population included worshippers of Kathisarashk in 2023, of whom 148 were selected by simple random sampling. Data were collected with five standard questionnaires (Yale-Brown Scale, PSWQ, Rumination Questionnaire, Nejati Cognitive Ability, and Gross and John Emotion Regulation) and analyzed with SPSS and Smart-PLS software.

Findings: Analysis of the results showed that worry ($\beta = 0.52$), rumination ($\beta = 0.60$), and cognitive impairment ($\beta = 0.56$) had a direct and significant effect on obsessive-compulsive disorder. Also, emotional regulation as a mediating variable moderated the relationship between worry ($\beta = 0.007$), cognitive impairment ($\beta = 0.002$), and rumination. The model fit indices (GFI = 0.95 and RMSEA = 0.058) indicated a good fit of the model to the data.

Conclusion: Dysfunctional emotion regulation is the link between cognitive deficits, repetitive thought processes, and the exacerbation of obsessions. Therapeutic interventions should focus on strengthening emotion regulation skills (such as mindfulness and distress tolerance) and correcting maladaptive metacognitive beliefs. Designing cultural-religious protocols for frequent worshippers is suggested.

Introduction

Obsessive-compulsive disorder is a complex psychological disorder characterized by two main and interconnected components: obsessions (thoughts, images, or unwanted, intrusive, and repetitive impulses that cause significant distress) and obsessive-compulsive behaviors (or repetitive mental acts that the individual feels compelled to perform in order to reduce anxiety) (Hermida-Barros et al., 2024). According to the DSM-5 diagnostic manual, the main criteria for this disorder include the persistent presence of obsessions, compulsions, or both (De Prisco et al., 2024), consuming significant time (usually more than one hour per day), and causing significant impairment in social, occupational, or other important areas of life (de Filippis et al., 2024). The clinical manifestations of this disorder are very diverse; obsessions may take the form of irrational fears of contamination, frequent doubts about the outcome of actions, taboo thoughts about religion or sexuality, or violent mental images may appear (Kim et al., 2024). In contrast, functional obsessions often include behaviors such as compulsive washing, frequent checking of locks or drawers, excessive counting, or repetitive behaviors (Provenza et al., 2024). This disorder not only affects daily functioning but can also severely disrupt interpersonal relationships, quality of life (Reis et al., 2024), and even religious rituals such as prayer or ablution, as the individual may spend hours engaged in repetitive actions (Callaghan et al., 2024).

Cognitive abilities refer to a broad range of higher-order functions of the mind, such as working memory, focused and divided attention, information processing speed, logical reasoning, decision-making, and problem-solving (Zhai et al., 2024), which form the basis of learning and adaptation to the environment. In patients with obsessive-compulsive disorder, these functions are often significantly impaired; for example, deficits in cognitive flexibility (the ability to shift attention between different tasks) can cause the individual to become stuck in a cycle of repetitive thoughts (Breit et al., 2024) and unable to engage in novel activities. Similarly, weaknesses in response inhibition (the ability to prevent unwanted behaviors) may explain compulsions, while impaired selective attention can cause the individual to focus on marginal aspects of the task rather than on relevant stimuli or environmental threats (Grubov et al., 2024). Worry, as a persistent mental preoccupation with negative future possibilities, in these patients often manifests as catastrophic predictions of events, turning even ordinary situations such as praying into a scene for anxiety (Milička et al., 2024). On the other hand, rumination (the constant and involuntary repetition of negative thoughts) not only destroys mood (Sackett et al., 2024) but also reinforces the cycle of obsession by intensifying feelings of guilt and shame. These cognitive-emotional processes, in interaction with others, undermine an individual's capacity to effectively regulate emotions and make them more vulnerable to stress (Micula et al., 2024).

Pray with Many Doubts are a specific group of obsessive-compulsive patients whose disorder manifests itself primarily in a religious context (such as doubting the correctness of ablution, repeating surahs, or prolonging prayers due to frequent doubts) (Nazish et al., 2018). These individuals are usually involved in complex ruminations about possible violations of religious rules and, to relieve anxiety, resort to repetitive actions such as reciting verses repeatedly or re-experiencing ablution (Doufesh et al., 2014). Negative emotions, such as fear of divine punishment, chronic guilt, and shame about being “incomplete” in worship, play a major role in perpetuating this cycle (Suseno, 2024). Dysfunctional emotional regulation—that is, the inability to appropriately identify, process, and manage these emotions—acts as the missing link between cognitive deficits and the exacerbation of obsessive-compulsive symptoms (Doufesh et al., 2012). For example, an individual who is unable to regulate their anxiety through adaptive strategies (such as cognitive restructuring) may resort to action compulsions as a temporary solution (Aldahadha, 2024). These emotional regulation deficits may be rooted in maladaptive metacognitive beliefs (such as “Not being able to control my thoughts is a sign of weakness of faith”) or prior learning experiences (El-Hoseiny et al., 2009). Understanding these mechanisms will help therapists design targeted interventions (such as emotional resilience training or response inhibition) to interrupt the cycle of disability and obsession in these patients (Shaverdi et al., 2024).

This study was designed to investigate the pivotal role of emotional regulation as a mediating mechanism in the relationship between cognitive variability (deficits in executive functions), thought processes (worry and rumination), and the severity of obsessive-compulsive symptoms in frequent worshippers of Kashir Lashkar. The findings of the study indicate that in these patients, the inability to manage negative emotions not only directly affects the severity of obsessive-compulsive disorder but also mediates the relationship between rumination and compulsive behaviors. In other words, the more unable a person is to control their emotions, the more pronounced the negative impact of worries and repetitive thoughts on their behavior becomes. From a practical perspective, these results highlight the importance of including emotional regulation components (such as anxiety tolerance training, mindfulness, or cognitive appraisals of emotions) in treatment protocols. Also, given the religious context of this population, designing culturally-religiously sensitive interventions (such as redefining the concept of worship or correcting false beliefs about religious perfectionism) can increase the effectiveness of treatment. At a macro level, such research helps develop primary prevention programs for high-risk groups (such as students or individuals with a family history of religious obsessions) and prevents healthy religious thoughts from turning into disturbing obsessions.

Method

This research was designed with an applied purpose and with a descriptive-correlational method and based on the structural equation model. The required data were collected through standard questionnaires, which were distributed and completed using virtual space due to limited access to worshippers and cost reduction. Finally, the relationships between independent, dependent, and mediating variables were analyzed using the human-centered variance structural equation method. The statistical population of this study included all the worshippers of Kassir al-Sheikh in 2023 CE, from whom a sample of 148 people was selected using the Krejci-Morgan table and simple random sampling method. This sampling was carried out taking into account scientific criteria and with the aim of achieving results with the highest level of credibility. The questionnaires used in this study were made available to the participants after careful studies and validation of validity and reliability, so that the necessary information could be collected with high accuracy and precision. Initial analyses showed that the collected data had a normal distribution and met the necessary conditions for conducting parametric tests.

The research tools included five standard questionnaires: the 16-question worry questionnaire (PSWQ) with a Cronbach's alpha coefficient reported to be between 0.88 and 0.95, the obsessive-compulsive disorder questionnaire (OCDQ) with a Cronbach's alpha coefficient reported to be between 0.88 and 0.95, and the Yale-Brown Obsessive-Compulsive Scale with 10 questions and two subscales of obsessive thoughts and behaviors, the Rumination-Reflection Questionnaire with 24 items and two subscales, the Nejati Cognitive Ability Questionnaire with 30 questions and seven components, and the Emotion Regulation Questionnaire by Gross and John with two dimensions of reappraisal and suppression. The validity and reliability of these instruments had been confirmed in previous studies, and Likert scales were used for scoring. After being translated and reviewed by experts, these questionnaires were pretested to ensure their accuracy and precision. In addition, the questionnaires were examined for factor structure and internal consistency to ensure that the instruments used were capable of accurately measuring the desired variable. This process was carried out with the participation of professors and experts in the field of psychology and research methods to ensure the highest level of scientific validity.

Data analysis was carried out in two parts: descriptive and inferential. In the descriptive part, indicators such as frequency, mean, and graphs were used, while in the inferential part, correlation tests, confirmatory factor analysis, and structural equation modeling with software such as SPSS and Smart PLS were used. The data collection steps included obtaining the necessary permits, visiting the target mosques, and finalizing the questionnaires. This process was designed with high scientific accuracy to ensure that the results obtained were sufficiently reliable and valid. In addition, to ensure the accuracy of the analyses, the data were examined for normal distribution, absence of outliers, and

multiple collinearity. The results of these analyses showed that the proposed model had a good fit and could explain the relationships between the variables well. Finally, the findings of this study can be used as a basis for future research in the field of psychology of religion and mental health.

Findings

In this section, demographic characteristics including gender, age, and education level of 148 people from the statistical sample were examined. In terms of gender, 54% of the respondents were male and 46% were female, indicating a slight predominance of men in the sample. Regarding age distribution, the largest age group was in the 51-60 age range with 32.7%, followed by the 41-50 age group with 30.5%, and the 31-40 age group with 20.2%. Only 3.3% of the participants were under 30 years old, and 13.3% were over 61 years old. In terms of education level, 40% of the participants had a high school diploma, 26% had a bachelor's degree, and 14% had a master's degree, indicating a higher prevalence of individuals with lower levels of education in the study sample.

Table 1 : Means and standard deviations of items related to the research variable

The item in question	Variables	Standard deviation	Average	Maximum	At least
Practical obsession	Obsessive thoughts	0/48	4/01	4/89	2/98
	Obsessive/compulsive behaviors	0/38	4/23	5/00	3/25
Concern	The nature of concern	0/54	4/04	5/00	2/91
	Concern assessment	0/17	4/11	4/98	1/99
	Theories of worry	0/21	3/45	4/99	2/41
	Anxiety treatment	0/19	4/09	4/87	3/11
Mental rumination	Mental rumination	0/52	4/06	5/00	2/94
	Reflection	0/34	4/01	4/95	2/91
Cognitive ability	Memory	0/53	4/001	5/00	2/83
	Restraint control	0/37	4/21	5/00	3/1
	Selective attention	0/13	3/19	4/98	1/89

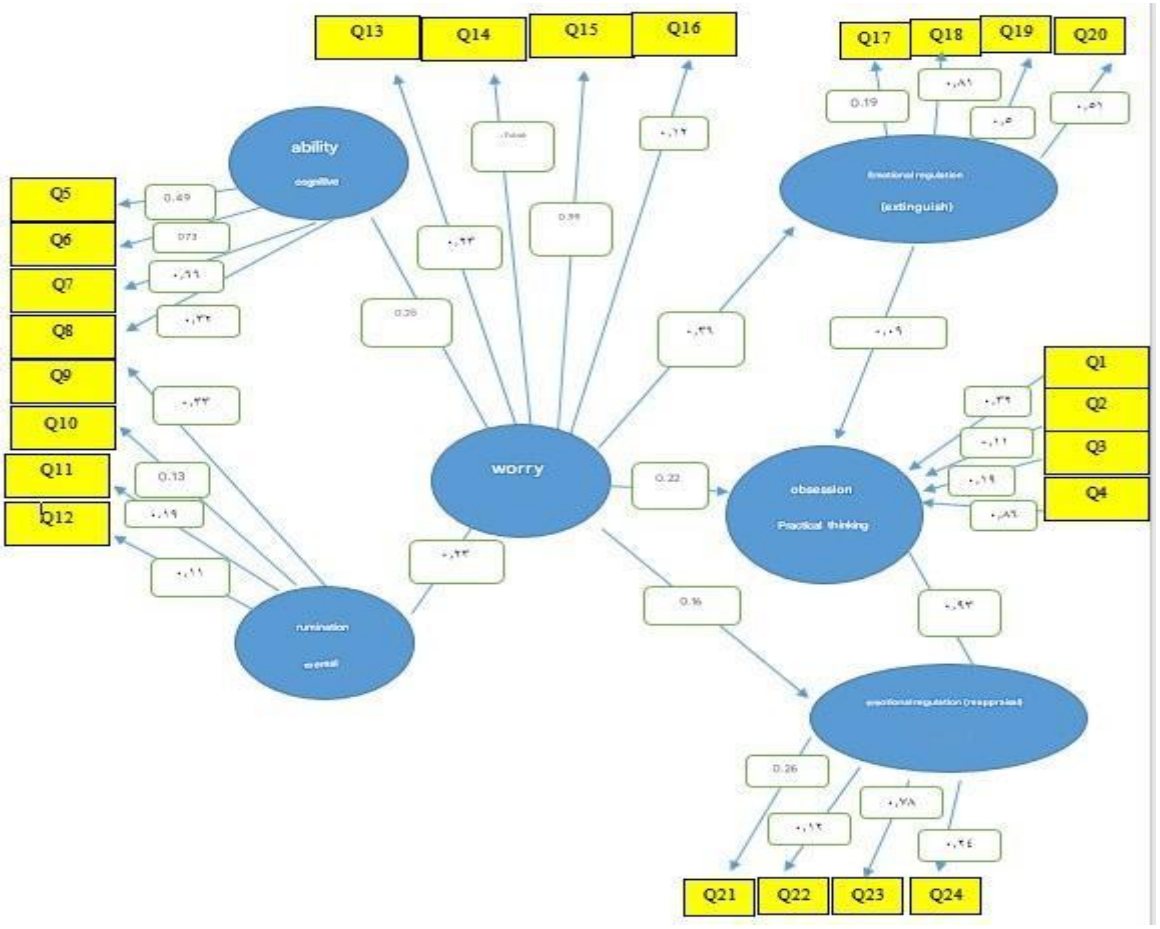
	Decision-making	0/23	3/59	4/95	2/32
	Planning	0 /37	4/19	4/73	3/23
	Sustained attention	0/33	4/12	4/98	3/01
Emotion regulation	Reassessment	0/34	4/26	5/00	3/5
	Suppression	0/41	4/05	4/95	1/60

Table 1 shows the mean and standard deviation of the items related to the research variables. In the obsessive-compulsive variable, the mean of obsessive thoughts was 4.01 (standard deviation = 0.48), and obsessive behaviors was 4.23 (standard deviation = 0.38). Concern in various dimensions, such as the nature of worry (mean = 4.04, standard deviation = 0.54) and treatment worry (mean = 4.09, standard deviation = 0.19), was investigated. Mental rumination, with a mean of 4.06 (standard deviation = 0.52), and reflection, with a mean of 4.01 (standard deviation = 0.34), were reported. In cognitive ability, the highest mean was related to inhibitory control (4.21, standard deviation = 0.37), and the lowest mean was related to selective attention (3.19, standard deviation = 0.13). Adjustment was also analyzed in two dimensions: reappraisal (mean = 4.26, standard deviation = 0.34) and suppression (mean = 4.05, standard deviation = 0.41).

To ensure the normality of the data distribution, the Kolmogorov-Smirnov test was used. In this test, the null hypothesis, based on the normality of the data distribution, was examined at a 5% error level. The results showed that the test statistic values for all independent variables, including worry (0.059), cognitive ability (0.079), rumination (0.034), and obsessive-compulsive (0.071), were greater than or equal to 0.05. These findings confirm that the data distribution is normal and that parametric methods can be used for further analyses. Additionally, the reliability of the research instrument was assessed using Cronbach's alpha coefficient. The values obtained for all items, including obsessive thoughts (0.95), obsessive behaviors (0.94), and rumination (0.92), were above the minimum standard of 0.7, indicating high reliability of the questionnaires used.

Pearson correlation analysis showed that there was a significant relationship between all the main variables of the study. In particular, obsessive-compulsive had a direct and significant correlation with worry (0.76), rumination (0.34), and cognitive ability (0.45). To examine these relationships more precisely, regression models were used. The results of the first model showed that worry had a significant effect on obsessive-compulsive ($\beta = 0.52$, $p < 0.01$). The second model also confirmed the positive effect of rumination on obsessive-compulsive ($\beta = 0.60$, $p < 0.01$). The third model indicated that cognitive ability also significantly affects obsessive-compulsive ($\beta = 0.56$, $p < 0.01$). Furthermore, the fourth model showed that emotional regulation plays an important role in predicting obsessive-compulsive ($\beta = 0.59$, $p < 0.01$). In all models, the F-statistic and the corresponding significance level ($p < 0.01$) indicated a good fit of the models.

Confirmatory factor analysis (CFA) was used to examine the factor structure of the questionnaire. The results showed that all items, including obsessive thoughts, obsessive behaviors, and rumination, were included in the model with significant factor loadings ($p < 0.01$) and appropriate standardized values. Additionally, the model fit indices, including RMSEA and CFI, indicated a good fit of the model to the data.



Final structural equation model :1 Figure

The results of the final structural equation model show that the model has adequate validity based on the fit indices. The chi-square ratio to the degree of freedom (2.49), which is less than the permissible limit of 3, indicates an acceptable fit of the model. The GFI index, with a value of 0.95 (higher than 0.9), indicates that the model adequately explains the variances and covariances. Also, RMSEA (0.058), which is less than 0.09, indicates the high accuracy of the model in predicting the data. Other fit indices such as CFI (0.98), NFI (0.97), NNFI (0.98), and IFI (0.98) are all above 0.9, indicating that the model has a good fit with the data. Finally, these results confirm that the factor structure of the study is consistent with the theoretical foundations and that the research questions are well aligned with the constructs under investigation.

Path coefficients for testing hypotheses : 2 Table

Origin	Destination	Collinearity	B	T	SIG	Values	Confidence interval	Size
Cognitive ability	Practical obsession	1/43	0.56	18/64	0/001	2/5	5/97	347/67
Concern	Practical obsession	1/13	0.52	9/68	0/001	0/11	0.87	93/84
Cognitive	Mental	1/09	0.73	11/17	0/001	0/43	0.96	67/71

Path coefficients for testing hypotheses : 2 Table								
Origin	**Destination**	**Collinearity**	**B**	**T**	**SIG**	**Values**	**Confidence interval**	**Size**
ability	rumination							
Concern	Mental rumination	1/05	0/69	12/14	0/001	0/41	0.91	98/41
Mental rumination	Practical obsession	1/09	0/60	21/86	0/001	0/22	0.98	477/97

Table 2 shows the path coefficients and statistical results for examining the relationship between variables, including the effect of cognitive ability and worry on obsessive-compulsive and rumination, with significant values (Sig = 0.000) and standardized coefficients (B) and non-linearity. All paths are statistically significant, with values of high T and a positive confidence interval, indicating a strong relationship between the variables. In particular, mental rumination has the greatest effect on obsessive-compulsive (B = 0.60, T = 21.86).

Table 3: Indirect effect

Indirect route	**B**	**T**	**SIG**	**Confidence interval**	**Size**
Obsession → Setting Excited → Concern	0.007	3/76	0.004	0.056	0/43
Obsession → Setting Excited → Cognitive ability	0.002	5/77	0/001	0/189	0.023
Obsession → Setting Excited → Mental rumination	---	---	---	---	---

According to Table 3, worry has an effect on practical obsession with a coefficient of 0.52, rumination with a coefficient of 0.60, cognitive ability with a coefficient of 0.56, and emotional regulation with a coefficient of 0.59.

Indicators : Table 4 $R2$ and $Q2$ And the importance matrix - performance of the internal research model

Variable	$R2$	$Q2$	**Total effect**	**Performance**
Cognitive ability	---	---	- 0.241	2/61
Concern	0.756	0.445	0.354	72/13
Mental rumination	---	---	0.557	73/56

The indicators show favorable performance for the internal model.

Discussion and Conclusion

The aim of the present study was to The Mediating Role of Emotional Regulation in the Relationship Between Cognitive Ability, Worry, and Rumination and Obsessive-Compulsive in Those Who Pray with Many Doubts. The first finding of the study showed that worry had an effect on obsessive-compulsive through the mediation of emotion regulation. This finding is consistent with previous research in this field, and in explaining this finding, it can be stated that this relationship can be explained by considering the vital role of emotion regulation in processing and managing emotional reactions. When a person is faced with repeated worries, they are unable to adjust their emotions (Hermida-Barros et al., 2024). This state gradually leads to obsessive thoughts and behaviors. From a theoretical perspective, these findings are consistent with psychological models that emphasize the dynamic interaction between cognition and emotion in the formation of psychological disorders (Kim et al., 2024). Worry, due to its debilitating nature, drains a person's cognitive resources and reduces their capacity to effectively manage emotions. As a result, when the emotion regulation system is disrupted, negative emotions such as anxiety and fear are experienced uncontrollably, increasing the likelihood of obsessive responses (Callaghan et al., 2024). In addition, the inability to regulate emotions can lead to cognitive avoidance or repetitive behaviors that are a core feature of obsessions. On the other hand, this process may create a vicious cycle in which the obsession itself causes increased anxiety and further disruption in emotional regulation (Milička et al., 2024). The findings highlight the importance of therapeutic interventions that simultaneously focus on reducing worry and strengthening emotion regulation skills. Overall, the present study suggests that worry provides a favorable environment for the formation and persistence of obsessions, not only directly but also through the weakening of emotion regulation functions.

The second finding of the study showed that cognitive ability mediated the effect of emotion regulation on obsessions, which was consistent with existing research in this field. In explaining this finding, it can be stated that people with higher cognitive abilities are better able to regulate their emotions and, as a result, are less likely to be trapped by obsessive thoughts and behaviors (Provenza et al., 2024). Emotion regulation acts as a key coping mechanism that, on the one hand, is influenced by cognitive capacities such as mental flexibility, problem-solving, and attentional control, and on the other hand, can prevent the exacerbation of obsessions by reducing anxiety, rumination, and emotional reactivity. When an individual is able to effectively process information and manage negative emotions, they are less likely to become trapped in obsessive-compulsive cycles (Breit et al., 2024). From this perspective, cognitive ability not only directly but also indirectly, by facilitating emotion regulation, is effective in reducing obsessions. This relationship can explain why some people, despite a genetic predisposition or environmental factors for obsessions, do not experience severe symptoms because cognitive and emotion regulation skills act as protective factors (Milička et al., 2024). Therefore, strengthening these abilities in therapeutic interventions, especially in cognitive-behavioral approaches, can be an effective strategy for reducing obsessions.

The third and final finding of the present study showed that rumination had a mediated effect on obsessions through emotion regulation, which was consistent with existing research in this area. In explaining these results, it can be said that rumination (the constant repetition of negative thoughts and excessive focus on problems) can itself be a precursor to obsessions, but this relationship is largely influenced by the individual's ability to regulate their emotions. People who fall into the trap of rumination, if they cannot control negative emotions such as anxiety, despair, or manage fear in adaptive ways, are more susceptible to the intensification of obsessive thoughts and behaviors. In contrast, if a person can use effective coping strategies such as positive reinforcement, acceptance, or problem-solving, even if rumination is present, the likelihood or intensity of the obsession decreases (Callaghan et al., 2024). This mechanism explains why some people do not develop clinical obsessive-compulsive disorder despite experiencing frequent ruminations (Milička et al., 2024), while in others, these thoughts quickly turn into obsessions. Therefore, emotion regulation as a protective factor modifies the negative effects of rumination and thus plays a key role in preventing or reducing

symptoms of obsessions or compulsions (Sackett et al., 2024). These findings emphasize the importance of interventions that simultaneously focus on reducing rumination and strengthening emotion regulation skills, such as cognitive-behavioral therapies and mindfulness-based therapies.

In general, it can be concluded that the present study showed that emotional regulation, as a key mediating mechanism, mediates the relationship between cognitive-emotional variables (worry, cognitive ability, and rumination) and obsessive-compulsive. The findings suggest that worry and rumination, by weakening emotional regulation, pave the way for the exacerbation of obsessive-compulsive disorder, while cognitive ability has a protective effect by strengthening this mechanism. These results emphasize the dynamic role of cognitive and emotional interaction in the formation of obsessions and indicate that impaired emotional regulation can create a vicious cycle of obsessive thoughts and behaviors. Therefore, effective therapeutic interventions should include a combination of strategies to reduce worry and rumination while strengthening emotion regulation skills and cognitive abilities. Such an approach can help break the cycle of obsessions and promote the mental health of obsessive worshippers.

This study faced some limitations, including difficulty in obtaining information related to the research topic and a lack of appropriate resources in the field of obsessions among worshippers with high levels of jealousy, which has not been comprehensively investigated in previous studies. Also, finding precise criteria for measuring the degree of obsessive tendencies among worshippers was challenging, and the research relied on self-reports. However, the results suggest that understanding the worries and ruminations of the Muslim community and improving their cognitive abilities can lead to a reduction in obsessive doubts and more mindful worshippers, which is the main goal of mosques and religious centers. Self-regulation is also associated with increased concentration and reduced obsessive-compulsive behavior, which was confirmed in this study through indicators such as worry, rumination, and cognitive ability. Holding training courses to reduce obsessions for worshippers and paying attention to strategies to reduce negative thoughts and modify mental rumination can be effective in improving this situation. On the other hand, neglecting one's cognitive abilities may exacerbate obsessions, so providing cognitive strategies to reduce obsessions is essential. In future research, a local criterion can be designed to measure the degree of obsessive tendencies among Iranian Shiite worshippers, because this concept is not observed in other Islamic traditions. Also, it is suggested to examine the relationship between obsessive-compulsive disorder in adolescents and doubt in prayer, as both usually begin in adolescence.

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