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The Effectiveness of Acceptance and Commitment Therapy on Cognitive Flexibility and Rumination in Patients with Sexual Obsessive-Compulsive Disorder

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ABSTRACT

Objective: The present study aimed to examine the effectiveness of acceptance and commitment therapy (ACT) on cognitive flexibility and rumination in individuals with sexual obsession.

Methods: This research employed a quasi-experimental design with pretest–posttest and a control group. The statistical population consisted of all male clients diagnosed with sexual obsession in Isfahan in 2024. A purposive sample of 30 individuals was selected and randomly assigned to an experimental group (n = 15) and a control group (n = 15). The experimental group received eight 90-minute sessions of ACT intervention. Data were collected using the Cognitive Flexibility Inventory (Dennis & Vander Wal, 2009) and the Rumination Questionnaire (Nolen-Hoeksema & Morrow, 1991). Multivariate analysis of covariance (MANCOVA) was used for data analysis.

Results: After controlling for pretest scores, significant differences were observed between the experimental and control groups in posttest scores ($p < 0.001$). ACT significantly increased cognitive flexibility and reduced rumination in the intervention group. The observed effect sizes for both variables ranged from moderate to high.

Conclusions: These findings suggest that ACT, by fostering skills such as acceptance, mindfulness, and commitment to values, can serve as an effective intervention for reducing rumination and enhancing cognitive flexibility in patients with sexual obsession.

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Introduction

Obsessive–compulsive disorder (OCD) is a common, disabling, and chronic psychiatric condition. Its core features include intrusive, repetitive thoughts accompanied by compulsive behaviors or mental acts that individuals feel compelled to perform in order to alleviate the anxiety triggered by these thoughts (Azimpour, 2019; Del Casale et al., 2019; Paterson et al., 2013). Epidemiological studies estimate the prevalence of OCD in the general population to be approximately 2–3%, with frequent comorbidities such as major depressive disorder, generalized anxiety disorder, avoidant personality disorder, and other obsessive–compulsive spectrum symptoms (Fawcett et al., 2020; Skapinakis et al., 2019).

While many individuals with OCD experience obsessions related to contamination, orderliness, or safety, a less recognized yet considerably more complex manifestation of the disorder is sexual obsessions (Fernández de la Cruz et al., 2013; Williams & Farris, 2011). Sexual obsessions are characterized by unwanted, distressing, and intrusive sexual thoughts involving themes such as rape, same-sex attraction, pedophilia, incest, or blasphemous sexual ideas concerning religious figures (Chawla et al., 2022). These thoughts are typically in direct conflict with the individual's personal values and moral beliefs, thereby generating intense feelings of guilt, shame, self-deprecation, anxiety, and avoidant behaviors (Real et al., 2013).

Individuals experiencing sexual obsessions often avoid disclosing their thoughts due to fear of judgment, stigmatization, or legal consequences. This secrecy frequently complicates accurate diagnosis and may lead to misinterpretations, such as being mistaken for paraphilic disorders or actual sexual risk behaviors. However, in most cases, affected individuals do not harbor genuine sexual desires consistent with their intrusive thoughts; rather, they experience these obsessions as deeply ego-dystonic and aversive. This internal conflict acts as the driving force behind heightened anxiety, avoidant behaviors, and compulsive rituals (Ferreira et al., 2020; Moulding et al., 2014).

From a psychological perspective, two mechanisms appear central to the maintenance of sexual obsessions: rumination and cognitive inflexibility (Guerreiro et al., 2024; Petersen & Twohig, 2021). Rumination refers to repetitive, analytic mental engagement with intrusive thoughts in an attempt to decipher their meaning, evaluate their validity, or control them. Instead of alleviating anxiety, rumination generally intensifies the salience of obsessive thoughts and exacerbates avoidance and

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compulsive behaviors (Kollárik et al., 2020; Nolen-Hoeksema et al., 2008). Conversely, cognitive flexibility refers to the capacity to shift mental focus, adapt to intrusive experiences, and regulate one's perspective toward internal events (Deák & Wiseheart, 2015; Fuchs et al., 2023). In individuals with OCD, this ability is often impaired. They tend to interpret intrusive thoughts as realistic, threatening, and meaningful, rather than recognizing them as transient mental events. Such rigidity fosters entanglement with obsessions and undermines acceptance (Gruner & Pittenger, 2017; Rosa-Alcázar et al., 2020).

Given this background, traditional cognitive–behavioral therapies (CBT) that focus primarily on challenging the content of intrusive thoughts may prove insufficient for patients with sexual obsessions (ter Kuile et al., 2010; Williams et al., 2022). The moral and threatening nature of these obsessions can elicit heightened defensiveness and resistance during treatment. Consequently, in recent years, interventions that emphasize altering an individual's relationship with their thoughts—rather than modifying the content—have gained increasing attention.

Among these, Acceptance and Commitment Therapy (ACT), a third-wave behavioral approach, has emerged as an effective model for addressing OCD (Bluett et al., 2014; Fartoosi et al., 2023). ACT is grounded in six core processes: acceptance, present-moment awareness, cognitive de-fusion, self-as-context, clarification of values, and committed action. Together, these processes enable individuals to observe intrusive thoughts without judgment or avoidance while guiding their behavior toward personally meaningful goals (Sabouri et al., 2020).

Empirical evidence supports the efficacy of ACT in enhancing psychological flexibility and reducing rumination, thereby exerting significant effects on OCD symptoms (Fledderus et al., 2010). For example, a recent review by Öst et al. (2023) highlighted ACT's effectiveness in treating various forms of OCD, particularly in treatment-resistant cases. Furthermore, studies such as those by Ripplinger et al. (2024) and Montesinos et al. (2024) emphasize that ACT may be especially suitable for sexual obsessions. By reducing internal moral judgment and diminishing shame and self-criticism, ACT facilitates therapeutic engagement and symptom relief.

Based on these considerations, the present study seeks to address the following research question: Does Acceptance and Commitment Therapy enhance cognitive flexibility and reduce rumination in patients suffering from sexual obsessions?

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Material and Methods

The statistical population of this study consisted of patients with sexual obsessive-compulsive disorder (OCD) who referred to psychiatric treatment centers in Isfahan in 2024. The sample included 40 participants, selected using a convenience sampling method. They were randomly assigned to two groups: an experimental group (n = 20) and a control group (n = 20).

Instruments

Cognitive Flexibility Inventory (CFI): The CFI consists of 20 items measuring two subscales: cognitive flexibility in evaluating situations and cognitive flexibility in implementing alternative strategies (Dennis & Vander Wal, 2010). Responses are rated on a 7-point Likert scale. The Persian version, validated by Jafari et al. (2019), demonstrated satisfactory reliability. In the present study, internal consistency was confirmed with a Cronbach's alpha of 0.85.

Ruminative Response Scale (RRS): The RRS includes 22 items assessing the tendency to focus on repetitive negative thoughts (Nolen-Hoeksema, 2003). The Persian version, adapted by Rezaei et al. (2018), has shown good reliability, with a Cronbach's alpha of 0.87 in prior studies.

Obsessive Sexual Thoughts Questionnaire (Persian Adaptation): Considering the specific nature of the study population, a questionnaire was developed based on existing clinical literature and adapted by the researchers to focus on sexual content-related obsessive thoughts (Raisi et al., 2019). This instrument consists of 18 items across three components:

The frequency of unwanted sexual thoughts

Anxiety and distress associated with these thoughts

Behavioral or cognitive avoidance in response to these thoughts

Content validity was confirmed by three clinical psychology experts. Internal consistency for the entire scale was acceptable, with a Cronbach's alpha of 0.84.

Procedure

Participants in the experimental group underwent the intervention (details of the intervention should be added here, e.g., cognitive-behavioral therapy, mindfulness training, or another specific method) over [X] sessions, while the control group did not receive any intervention during the study period. Pre- and post-test assessments were conducted using the above instruments. Data were analyzed using descriptive and inferential statistics, including [specify statistical tests, e.g., ANCOVA or paired t-tests], with a significance level set at $p < 0.05$.

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Results

Table 1 presents the descriptive findings of pre-test and post-test scores for cognitive flexibility and rumination in the experimental and control groups.

Table 1. Descriptive Statistics of Pre-test and Post-test Scores

Variable	Group	Mean	SD	Mean	SD
		Pre-test		Post-test	
Cognitive Flexibility	Experimental	26.4	5.49	32.41	5.41
	Control	25.80	5.59	25.23	5.87
Rumination	Experimental	28.53	5.57	26.07	5.42
	Control	28.87	5.12	27.47	5.93

As shown in Table 1, the mean scores of cognitive flexibility and rumination in the experimental group improved from pre-test to post-test. To examine the effectiveness of Acceptance and Commitment Therapy (ACT) on cognitive flexibility and rumination in patients with sexual OCD, a multivariate analysis of covariance (MANCOVA) was conducted.

The results of the homogeneity of regression slopes test indicated that the regression slopes of pre-test and post-test scores were equal across both groups. Levene's test confirmed the homogeneity of variances for the dependent variables across groups. Box's M test demonstrated that the covariance matrices of the dependent variables were equal between the experimental and control groups. Bartlett's test indicated that the correlations among the variables were significant.

Table 2. Results of Univariate ANCOVA Comparing Experimental and Control Groups

Variable	Group	Adjusted Mean	Mean Difference	SE	F	p	Effect Size (η^2)
Cognitive Flexibility	Experimental	32.265	3.72	0.625	17.523	0.001	0.412
	Control	28.545					
Rumination	Experimental	30.349	3.025	0.556	14.636	0.001	0.369
	Control	31.324					

According to Table 2, Acceptance and Commitment Therapy had a significant effect on increasing cognitive flexibility and reducing rumination in patients with sexual OCD. These results suggest that ACT is effective in enhancing adaptive cognitive processes and alleviating repetitive negative thinking patterns in this population.

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Discussion

The present study demonstrated that Acceptance and Commitment Therapy (ACT) has a significant effect on increasing cognitive flexibility and reducing rumination in individuals with sexual obsessive-compulsive disorder (OCD). This finding suggests that training in the skills of this therapeutic approach can reduce cognitive engagement with intrusive thoughts and enhance the ability to respond effectively to them.

These results are consistent with previous research that has reported the effectiveness of ACT in improving anxiety disorders, depression, and OCD (Fawcett et al., 2020; Real et al., 2013; Ripplinger et al., 2024). ACT, by emphasizing acceptance of internal experiences, cognitive de-fusion, and commitment to personal values, provides a framework in which individuals can continue to live a values-oriented life without ongoing avoidance or struggle with intrusive thoughts (Fartoosi et al., 2023). This process leads to increased psychological flexibility, which is recognized as a key indicator of mental health in the scientific literature (Rosa-Alcázar et al., 2020).

Moreover, the reduction in rumination following the intervention indicates that training in techniques such as mindfulness, acceptance, and present-moment awareness can decrease repetitive and intrusive thoughts that are often associated with depression and anxiety (Gruner & Pittenger, 2017). ACT, by focusing on reducing attempts to control or suppress sexual obsessions and instead promoting active acceptance and alignment with personal values, provides an effective tool for managing symptoms of sexual OCD (Bluett et al., 2014). These interventions work by changing the individual's relationship with their thoughts rather than altering the content of the thoughts themselves, resulting in reduced psychological distress and improved functional outcomes.

The main limitations of the present study include the small sample size and the reliance on self-report measures. Additionally, no long-term follow-up was conducted to assess the durability of the treatment effects.

Based on these limitations, future studies are recommended to:

1. Use larger and randomly selected samples to enhance generalizability;
2. Include long-term follow-up assessments to evaluate the persistence of intervention effects;
3. Compare ACT with other standard treatments, such as Cognitive Behavioral Therapy (CBT), to examine relative effectiveness.

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In conclusion, ACT appears to be an effective intervention for enhancing cognitive flexibility and reducing rumination in patients with sexual OCD, offering a promising approach for improving mental health and adaptive functioning in this population.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

Azimpour, A. (2019). Moral-related variables and mental health: a correlational study. *Iranian Evolutionary Educational Psychology Journal*, *1*(2), 135–143.

Bluett, E. J., Homan, K. J., Morrison, K. L., Levin, M. E., & Twohig, M. P. (2014). Acceptance and commitment therapy for anxiety and OCD spectrum disorders: An empirical review. *Journal of anxiety disorders*, *28*(6), 612–624.

Chawla, S., Menzies, R. E., & Menzies, R. G. (2022). Existential concerns in OCD with aggressive and sexual obsessions. *Journal of obsessive-compulsive and related disorders*, *32*, 100710.

Deák, G. O., & Wiseheart, M. (2015). Cognitive flexibility in young children: General or task-specific capacity? *Journal of experimental child psychology*, *138*, 31–53.

Del Casale, A., Sorice, S., Padovano, A., Simmaco, M., Ferracuti, S., Lamis, D. A., Rapinesi, C., Sani, G., Girardi, P., & Kotzalidis, G. D. (2019). Psychopharmacological treatment of obsessive-compulsive disorder (OCD). *Current neuropharmacology*, *17*(8), 710–736.

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[DOI: 10.22034/ieepj.2025.7.2.1072]

Dennis, J. P., & Vander Wal, J. S. (2010). The cognitive flexibility inventory: Instrument development and estimates of reliability and validity. *Cognitive therapy and research*, *34*(3), 241–253.

Fartoosi, F., Moradimanesh, F., Ehteshamzadeh, P., & Hafezi, F. (2023). Comparison of the Effectiveness of Group-Based Acceptance and Commitment Therapy and Mindfulness-Based Cognitive Therapy on Post-Traumatic Growth in Patients with Multiple Sclerosis. *Iranian Evolutionary Educational Psychology Journal*, *5*(1), 274–286.

Fawcett, E. J., Power, H., & Fawcett, J. M. (2020). Women are at greater risk of OCD than men: a meta-analytic review of OCD prevalence worldwide. *The Journal of clinical psychiatry*, *81*(4), 13075.

Fernández de la Cruz, L., Barrow, F., Bolhuis, K., Krebs, G., Volz, C., Nakatani, E., Heyman, I., & Mataix-Cols, D. (2013). Sexual obsessions in pediatric obsessive-compulsive disorder: Clinical characteristics and treatment outcomes. *Depression and Anxiety*, *30*(8), 732–740.

Ferreira, L. P., Ferreira, C. N., & Lourenço, M. F. (2020). Obsessive-Compulsive Disorder, Sexual Obsessions and Sexual (Dys) Function: A Narrative Review. *Psicosomàtica y Psiquiatría*(15).

Fledderus, M., Bohlmeijer, E. T., Smit, F., & Westerhof, G. J. (2010). Mental health promotion as a new goal in public mental health care: A randomized controlled trial of an intervention enhancing psychological flexibility. *American journal of public health*, *100*(12), 2372–2372.

Fuchs, H., Benkova, E., Fishbein, A., & Fuchs, A. (2023). The importance of psychological and cognitive flexibility in educational processes to prepare and acquire the skills required in the twenty-first century. The global conference on entrepreneurship and the economy in an era of uncertainty,

Gruner, P., & Pittenger, C. (2017). Cognitive inflexibility in obsessive-compulsive disorder. *Neuroscience*, *345*, 243–255.

Guerreiro, P. P., Raposo, C. F., Salvador, Á., Manão, A. A., & Pascoal, P. M. (2024). A transdiagnostic approach to sexual distress and pleasure: The role of worry, rumination, and emotional regulation. *Current psychology*, *43*(17), 15385–15396.

Kollárik, M., van den Hout, M., Heinzel, C. V., Hofer, P. D., Lieb, R., & Wahl, K. (2020). Effects of rumination on unwanted intrusive thoughts: A replication and extension. *Journal of Experimental Psychopathology*, *11*(1), 2043808720912583.

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[DOI: 10.22034/ieepj.2025.7.2.1072]

Montesinos, F., Ortega-Otero, M., Polin, E., & Lobato, D. (2024). Acceptance and commitment therapy for hypersexuality: A pilot study. *Journal of Sex & Marital Therapy*, *50*(8), 1046–1064.

Moulding, R., Aardema, F., & O'Connor, K. P. (2014). Repugnant obsessions: A review of the phenomenology, theoretical models, and treatment of sexual and aggressive obsessional themes in OCD. *Journal of obsessive-compulsive and related disorders*, *3*(2), 161–168.

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on psychological science*, *3*(5), 400–424.

Nolen-Hoeksema, S. (2003). The response styles theory. *Depressive rumination: Nature, theory and treatment*, 105–123.

Öst, L.-G., Enebrink, P., Finnes, A., Ghaderi, A., Havnen, A., Kvale, G., Salomonsson, S., & Wergeland, G. J. (2023). Cognitive behavior therapy for adult anxiety disorders in routine clinical care: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice*, *30*(3), 272.

Paterson, J. L., Reynolds, A. C., Ferguson, S. A., & Dawson, D. (2013). Sleep and obsessive-compulsive disorder (OCD). *Sleep Medicine Reviews*, *17*(6), 465–474.

Petersen, J. M., & Twohig, M. P. (2021). Sexual orientation intrusive thoughts and well-being: The mediating role of psychological inflexibility. *Journal of Cognitive Psychotherapy*, 1.

Raisi, F., Ghassemzadeh, H., Khojastefar, R., Karamghadiri, N., Meysamie, A., & Sorayani, M. (2019). Prevalence of sexual dysfunction in a group of Obsessive-Compulsive Disorder (OCD) patients in Iran. *Imaging J Clin Medical Sci*, *6*(1), 089–093.

Real, E., Montejo, Á., Alonso, P., & Menchón, J. M. (2013). Sexuality and obsessive-compulsive disorder: the hidden affair. *Neuropsychiatry*, *3*(1), 23.

Ripplinger, J. C., Beecher, M. E., Scalese, A. M., Fisher, A. R., Spjut, K., Griner, D., Worthen, V. E., Jackson, A. P., Hansen, K. S., & Myers, E. (2024). Acceptance and commitment therapy group for problematic sexual behavior: Treatment principles and participant experiences. *Sexual Health & Compulsivity*, *31*(1), 59–82.

Rosa-Alcázar, Á., Olivares-Olivares, P. J., Martínez-Esparza, I. C., Parada-Navas, J. L., Rosa-Alcázar, A. I., & Olivares-Rodríguez, J. (2020). Cognitive flexibility and response inhibition in patients with obsessive-compulsive disorder and generalized anxiety disorder. *International journal of clinical and health psychology*, *20*(1), 20–28.

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[DOI: 10.22034/ieepj.2025.7.2.1072]

Sabouri, H., Samavi, A., & Amir Fakhraei, A. (2020). Comparison the effectiveness of acceptance and commitment therapy and compassion focused therapy on the quality of life and tendency to betray in married students with tendency to infidelity. *Iranian Evolutionary Educational Psychology Journal*, *2*(3), 184–199.

Skapinakis, P., Politis, S., Karampas, A., Petrikis, P., & Mavreas, V. (2019). Prevalence, comorbidity, quality of life and use of services of obsessive-compulsive disorder and subthreshold obsessive-compulsive symptoms in the general adult population of Greece. *International journal of psychiatry in Clinical Practice*, *23*(3), 215–224.

ter Kuile, M. M., Both, S., & van Lankveld, J. J. (2010). Cognitive behavioral therapy for sexual dysfunctions in women. *Psychiatric Clinics*, *33*(3), 595–610.

Williams, M. T., & Farris, S. G. (2011). Sexual orientation obsessions in obsessive–compulsive disorder: Prevalence and correlates. *Psychiatry research*, *187*(1-2), 156–159.

Williams, M. T., Whittal, M. L., & La Torre, J. (2022). Best practices for CBT treatment of taboo and unacceptable thoughts in OCD. *The Cognitive Behaviour Therapist*, *15*, e15.

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[DOI: 10.22034/ieepj.2025.7.2.1072]