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Comparing Exposure and Response Prevention and Emotion-Focused Therapy on Experiential Avoidance, Intolerance of Uncertainty, and Emotion Regulation in Patients with Obsessive-Compulsive Disorder

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ABSTRACT

Objective: Obsessive-Compulsive Disorder (OCD) is characterized by intrusive thoughts and repetitive behaviors often maintained by experiential avoidance (EA), intolerance of uncertainty (IU), and emotional dysregulation. This study aimed to compare the effectiveness of Exposure and Response Prevention (ERP) and Emotion-Focused Therapy (EFT) in reducing EA and IU and improving cognitive emotion regulation (CER) in patients with OCD.

Methods and Materials: In this quasi-experimental study, 45 patients with clinically diagnosed OCD were randomly assigned to three groups: ERP (n=15), EFT (n=15), and a control group (n=15). Participants completed the Acceptance and Action Questionnaire-II (AAQ-II), Intolerance of Uncertainty Scale (IUS-27), and the Cognitive Emotion Regulation Questionnaire (CERQ) at pretest, posttest, and 2-month follow-up. ERP was delivered over 10 sessions, and EFT over 8 sessions. Data were analyzed using repeated measures ANOVA with Bonferroni post hoc tests.

Findings: Both ERP and EFT significantly reduced experiential avoidance and intolerance of uncertainty compared to the control group ($p < 0.01$). ERP was more effective in reducing IU, while EFT led to greater improvements in adaptive CER strategies. Both therapies equally reduced maladaptive emotion regulation. Therapeutic gains were sustained at follow-up.

Conclusion: ERP and EFT are both effective interventions for addressing emotional and cognitive vulnerabilities in OCD. ERP appears more suitable for addressing intolerance of uncertainty, while EFT is more effective for enhancing adaptive emotional processing. Treatment plans tailored to individual emotional and cognitive profiles may optimize clinical outcomes.

Keywords: Emotion-focused therapy, Experiential avoidance, Intolerance of uncertainty, Emotion regulation, Obsessive-compulsive disorder.

Introduction

Obsessive-Compulsive Disorder (OCD) is a relatively common and debilitating condition. It is characterized by distressing and intrusive thoughts that compel repetitive behaviors and avoidance patterns (American Psychological Association, 2013). OCD is considered one of the most disabling psychological conditions and ranks as the fourth most common mental disorder, increasing the risk of comorbid diseases and premature mortality (Fact et al., 2020). This disorder impairs cognitive functions such as attention, thinking, memory, auditory word processing, and visual cognition (Hwang et al., 2019). The global annual prevalence of OCD ranges from 1.1% to 1.8% (APA, 2013), and this rate is reportedly increasing in developing countries like Iran (Torabi & Bahramipour-Esfahani, 2023). If left untreated, OCD typically follows a chronic course, with symptoms fluctuating in intensity over time, significantly reducing daily personal and social functioning (Jiang et al., 2021).

Studies have shown that experiential avoidance is significantly associated with anxiety and depression (Thomas & Bardin, 2020). In patients with OCD, experiential avoidance can predict the severity of obsessive-compulsive symptoms; the greater the avoidance, the more severe the symptoms (Stockton et al., 2018). Experiential avoidance refers to the unwillingness to remain in contact with unpleasant emotions, thoughts, bodily sensations, or other private experiences (Hayes et al., 1996). Research suggests that factors such as distress tolerance and suppression in experiential avoidance are linked with OCD (Twohig et al., 2006). Experiential avoidance may sustain OCD symptoms through persistent attempts to avoid unpleasant mental experiences, suggesting that modifying it via psychological intervention may offer additional therapeutic benefits (De Melo & Kumar, 2022). Jiang et al. (2022) found that cognitive fusion and experiential avoidance are key factors in maintaining OCD and can predict anxiety and depression in OCD patients. Similarly, the study by Angelakis and Gooding (2020) demonstrated a direct relationship between experiential avoidance, OCD, and suicidal ideation. Further, Angelakis and Paspottogiani (2021) suggested that reducing experiential avoidance may enhance the effectiveness of exposure-based treatments in alleviating OCD symptoms.

Research indicates that cognitive processes underlie OCD (Brakoulias et al., 2017; Pinochiotti et al., 2021), and one of the core cognitive mechanisms is intolerance of uncertainty (IU) (Hebert & Dugas, 2019). IU is implicated in both OCD and anxiety and is often a precursor to obsessive thoughts (Einstein, 2014). It is defined as the tendency to react negatively to uncertain events or situations, regardless of their probability or consequences (Knowles et al., 2022). Past studies have reported a significant positive correlation between IU and worry, excessive responsibility, depression, and OCD (Sadeh & Bardemir, 2021). Theoretically, early OCD theorists (e.g., Rachman, 1985; Shapiro, 1965) posited that individuals with OCD are unable to feel confident in their actions, particularly in those exhibiting classic symptoms of pathological doubt and uncertainty as central clinical features (Sadeh & Bardemir, 2021). IU is also associated with other cognitive deficits in OCD such as lower trust in memory, perception, or attentional capabilities (Pascal-Vera et al., 2021). Additionally, IU has been shown to predict the severity of OCD symptoms (Toffolo et al., 2014). Witten et al. (2021) found a positive correlation between IU, health anxiety, and OCD symptoms, suggesting that IU may link OCD and health anxiety to pandemic-related threat concerns. Sperling (2022) also showed that higher IU is associated with increased anxiety, OCD symptoms, and functional impairment, indicating the need for more targeted psychotherapeutic interventions for individuals with high IU.

Evidence also points to a significant relationship between cognitive emotion regulation and psychopathological symptoms (Eichholz et al., 2020). One of the core issues in OCD is impaired emotional regulation capacity (Yap et al., 2018). Emotion regulation is defined as the mechanisms through which individuals influence their emotions—how they experience and express them. It encompasses a wide range of conscious and unconscious cognitive and behavioral strategies aimed at reducing, maintaining, or increasing emotions (Gross, 2015). Cognitive emotion regulation strategies determine which emotions are expressed, how, when, and to what extent (Del-Val et al., 2022). These strategies fall into adaptive (positive refocusing, refocus on planning, acceptance, positive reappraisal, and putting into perspective) and maladaptive (self-blame, catastrophizing, rumination, and other-blame)

categories. Adaptive emotion regulation allows individuals to function effectively in their environments and use goal-directed behaviors in distressing emotional situations (Wang et al., 2021).

Patients with OCD often resort to compulsions, neutralizing behaviors, and avoidance as maladaptive strategies to reduce emotional distress (Khosravi et al., 2020). Empirical evidence strongly supports the role of emotional dysregulation in OCD (Ferreira et al., 2021; Yap et al., 2018; Fergus & Bardin, 2014). Eichholz et al. (2020) found that individuals with more severe obsessive symptoms and beliefs also experience more difficulties in regulating emotions. Wei et al. (2020) investigated three specific strategies—rumination, suppression, and reappraisal—and found that OCD symptoms positively correlate with rumination and suppression, but negatively with reappraisal. As symptoms reduce, reappraisal becomes more frequent.

Given the increasing prevalence of OCD in Iran and its social and economic burden, implementing effective therapeutic approaches is more crucial than ever. In recent years, various treatments have been employed, including Cognitive Behavioral Therapy (CBT) (Mardani Valandani et al., 2021), Acceptance and Commitment Therapy (ACT) (Mojarradi et al., 2022), Exposure and Response Prevention (ERP) (Hashemi-Jashni et al., 2021), Metacognitive Therapy (Hosseini et al., 2021), Paradoxical Therapy (Ahmadi et al., 2020), and Emotion-Focused Therapy (EFT) (Naseri-Nia & Barjali, 2020). Identifying the most effective therapeutic approach remains a central research goal, leading to numerous comparative studies on treatment outcomes for OCD. This study also aims to evaluate and compare two major approaches: Exposure and Response Prevention and Emotion-Focused Therapy.

Reviewing previous studies shows that after pharmacotherapy, CBT—particularly ERP—is considered the first-line treatment for OCD. ERP involves systematic exposure to fear-inducing stimuli and the prevention of associated compulsive behaviors or avoidance, followed by cognitive restructuring to challenge and replace maladaptive beliefs (Thompson et al., 2021). A meta-analysis by Fernando & Sela (2021) of 24 studies from 1997 to 2018 confirmed the effectiveness of ERP in treating OCD. Hasanpour et al. (2019) found ERP effective in improving experiential avoidance and cognitive emotion regulation, although transdiagnostic therapy showed superior results in that study. Pinochiotti et al. (2020) also reported ERP's effectiveness in reducing IU, excessive responsibility, and anxiety sensitivity. However, Kashavari-Arshadi et al. (2018) found ERP ineffective in reducing experiential avoidance, indicating the need to further explore ERP's impact on experiential avoidance, IU, and cognitive emotion regulation in OCD.

In recent years, Emotion-Focused Therapy has also been used to treat psychological disorders such as chronic pain (Fazeli-Sani et al., 2020), borderline personality disorder (Afsar et al., 2021), rumination (Ariannejad et al., 2021), and for enhancing resilience and marital relationships (Daryaye-Lal et al., 2022). EFT has also been applied to OCD and anxiety disorders (Shaw et al., 2020; Timulak et al., 2020). EFT includes three primary stages: bonding and awareness, evocation and exploration, and emotional restructuring (Zwaag & Greenberg, 2020). The core assumption is that emotional processing and the interpersonal patterns developed and reinforced by individuals contribute to their distress (Sharabani & Greenberg, 2023). EFT empowers clients to regulate emotions and improve emotional functioning by enhancing emotional awareness. It integrates client-centered, Gestalt, and cognitive principles (Masjedi et al., 2020). Shokrollahi et al. (2021) found EFT effective in reducing experiential avoidance, anxiety sensitivity, pain catastrophizing, and enhancing cognitive emotion regulation. Timulak et al. (2022) reported that EFT positively impacted IU in anxious individuals, and Zwaag & Greenberg (2020) showed its potential for improving cognitive emotion regulation.

Various therapeutic methods have been developed to improve the emotional and psychological components of OCD. Studies indicate that medication alone is not a sufficient treatment strategy (Mohyeddini et al., 2020). Given the limitations of pharmacotherapy, it's essential to evaluate psychological interventions based on innovation, client receptivity, and sustained treatment outcomes. Therefore, identifying an effective and durable alternative to medication is imperative. Moreover, the ongoing debate between second- and third-wave psychotherapies, especially regarding the role of emotional components in third-wave therapies, remains a rich area for research (Jani et al., 2022). While ERP has achieved significant success in treating OCD, ongoing research into more effective treatments

continues to be a priority. In this regard, the present study compares ERP with Emotion-Focused Therapy in terms of their effectiveness and sustainability. Accordingly, the main research question is: Is there a significant difference between the effectiveness of

Methods and Materials

Study Design and Participants

This study is applied in terms of purpose and quasi-experimental in nature, utilizing a pretest-posttest-follow-up design with a control group. The statistical population included all individuals who responded to a public call in Babol County during autumn and winter of 2023, totaling 300 participants. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) was administered, and 248 participants scored above the clinical cut-off point (score >16), indicating probable OCD. These individuals then completed the Experiential Avoidance, Intolerance of Uncertainty, and Cognitive Emotion Regulation questionnaires. Sixty individuals met the inclusion criteria by obtaining scores above the cut-off on each scale (i.e., above 30 on Experiential Avoidance, above 60 on Intolerance of Uncertainty, below 25 on Adaptive Emotion Regulation, and above 21 on Maladaptive Emotion Regulation).

From the eligible 60 participants, a sample of 45 was selected using simple random sampling, based on inclusion and exclusion criteria, and randomly assigned to three groups of 15: two experimental groups (Exposure and Response Prevention Therapy and Emotion-Focused Therapy) and one control group. Therapeutic interventions were administered to the experimental groups, and posttests were conducted after the intervention. Two months later, a follow-up assessment was performed to evaluate treatment sustainability.

Inclusion Criteria were Residency in Babol County, Age between 20 to 45 years, A Y-BOCS score above 16, Scores indicating clinical symptoms in the Experiential Avoidance Questionnaire (≥30), Intolerance of Uncertainty Scale (≥60), and Cognitive Emotion Regulation Questionnaire (Adaptive <25; Maladaptive >21). Exclusion criteria were absence from more than two therapy sessions, Concurrent participation in other psychotherapy sessions that could interfere with the current intervention and Substance abuse.

Instruments

Exposure and Response Prevention and Emotion-Focused Therapy in improving experiential avoidance, intolerance of uncertainty, and cognitive emotion regulation in individuals with Obsessive-Compulsive Disorder?

Acceptance and Action Questionnaire – II (AAQ-II): Developed by Bond et al. (2011), this 10-item scale measures experiential avoidance and psychological inflexibility using a 7-point Likert scale (1 = "never true" to 7 = "always true"). Total scores range from 10 to 70, with higher scores indicating greater experiential avoidance and lower psychological flexibility. Cronbach's alpha was reported as 0.83 (Bond et al., 2011) and 0.81 in the Iranian study by Bagheri et al. (2023).

Intolerance of Uncertainty Scale (IUS-27): Originally developed by Freeston et al. (1994), this 27-item scale measures the degree to which individuals find uncertainty distressing, using a 5-point Likert scale (1 = "not at all characteristic" to 5 = "entirely characteristic"). Higher scores indicate greater intolerance. Cronbach's alpha was reported as 0.94 (Buhr & Dugas, 2006) and 0.71 in the Iranian study by Hosseini et al. (2022).

Cognitive Emotion Regulation Questionnaire – Short Form (CERQ-SF): Developed by Garnefski et al. (2006), this 18-item scale assesses cognitive strategies used after experiencing stressful life events. It contains 9 subscales categorized into adaptive strategies (e.g., positive refocusing, reappraisal, planning) with scores ranging from 8 to 40, and maladaptive strategies (e.g., rumination, catastrophizing, self-blame) with scores ranging from 10 to 50. Responses are rated on a 5-point Likert scale. Cronbach's alpha was reported as 0.91 for adaptive and 0.87 for maladaptive strategies (Garnefski et al., 2006), and 0.86 and 0.80 respectively in an Iranian study (Mohammadi & Fouladchang, 2019).

Yale-Brown Obsessive-Compulsive Scale (Y-BOCS): Developed by Goodman et al. (1989), this 10-item scale assesses the severity of OCD symptoms. Each item is scored on a 5-point Likert scale (0 to 4), with scores above 16 indicating moderate to severe OCD. Cronbach's alpha was reported as 0.91 (Goodman et al., 1989) and 0.84 in the Iranian study by Bagheri et al. (2022).

Procedure

Both library and field methods were employed. The library method involved reviewing scholarly databases such as SID, Magiran, Google Scholar, Emerald, and

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PubMed to gather relevant literature, books, articles, and theses on the variables studied. The field method included recruitment of 300 participants via public call in Babol County in fall and winter of 2023. After initial screening with the Y-BOCS, 248 participants qualified. From them, 60 met all questionnaire cut-off points, and 45 were selected via simple random sampling and divided into three equal groups of 15.

The Exposure and Response Prevention (ERP) group received ten 90-minute sessions conducted by the researcher, while the Emotion-Focused Therapy (EFT) group received eight 90-minute sessions administered by a certified EFT therapist. The control group received no intervention. Posttest evaluations were conducted at the end of the interventions, and a two-month follow-up was performed to assess long-term treatment effects.

Table 1.

ERP Intervention Summary

Session	Title	Content
1	Introduction to ERP and rapport building	Introducing treatment logic, establishing session rules, and signing treatment contracts
2	Habituation in session	Mental preparation for imagined exposure
3	Imaginal exposure to intrusive thoughts	Early exposure and stopping compulsive behaviors
4-7	ERP techniques	Teaching and practicing ERP methods
8	Homework review and cognitive work	5-column thought log review, 7-column thought form, pros and cons of intrusive thoughts
9	Behavioral experiments	Cognitive restructuring via behavioral tests, probability estimation, and Socratic questioning
10	Consolidation and closure	Reviewing techniques, re-assessing with research questionnaires, expressing gratitude

Table 2.

EFT Intervention Summary

Session	Content
1	Building rapport and commitment, conceptualizing symptoms, emotional evaluation
2	Identifying dysfunctional interactional cycles and core emotions, emotional journaling and cognitive forms
3	Explaining how irrational thoughts affect emotional disturbance, identifying OCD-related styles
4	Developing awareness, recognizing cognitive-emotional processes and needs
5	Muscle relaxation, identifying emotional schemas, guided imagery, and "hot seat" techniques
6	Accessing unmet needs, validating unexpressed or avoided emotions, expanding the self
7	Enhancing emotional processing, revisiting unresolved feelings, emotional resolution tailored to OCD
8	Creating new solutions, transferring emotional control to real-life problem-solving

Data Analysis

Descriptive statistics such as mean and standard deviation were used. For inferential analysis, mixed ANOVA (repeated measures two-way ANOVA) was applied using SPSS version 26 to analyze the differences across time and groups.

Findings and Results

The results of the one-way ANOVA showed no significant difference between the groups in terms of age ($F = 0.874$, $p > 0.05$). The Chi-square test revealed no significant difference among the groups in terms of education level ($\chi^2 = 3.85$, $p > 0.05$), nor in gender distribution ($\chi^2 = 0.833$, $p > 0.05$), indicating that the groups were homogeneous in demographic characteristics. Descriptive indices for the variables of experiential avoidance, intolerance of uncertainty, and cognitive emotion regulation (adaptive and maladaptive) across the two experimental groups and the control group at pretest, posttest, and follow-up stages are presented in Table 3.

Table 3.

Descriptive Statistics of Study Variables

Variable	Group	Exposure-Response Prevention	Emotion-Focused Therapy	Control
		Mean	SD	Mean
Experiential Avoidance	Pretest	44.93	7.186	44.4

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	Posttest	36.53	8.7	36.73
	Follow-up	36.67	8.508	37.27
Intolerance of Uncertainty	Pretest	96.13	16.326	97.93
	Posttest	71.13	11.344	87.47
	Follow-up	70.07	12.876	89.27
Adaptive Cognitive Emotion Regulation	Pretest	22.8	2.455	23.33
	Posttest	29.73	7.146	36.4
	Follow-up	31.33	7.335	36.67
Maladaptive Cognitive Emotion Regulation	Pretest	25.33	5.01	26.8
	Posttest	17.6	2.64	16.4
	Follow-up	17.4	2.473	16.13

Descriptive statistics in Table 3 show pretest, posttest, and follow-up measurements for all variables. To assess the normality of the data, the Shapiro–Wilk test was used. All significance values indicated that the variables were normally distributed across groups (p > 0.05). To evaluate the homogeneity of variances, Levene's test was used, confirming equal variances for all variables at each test stage. The Box's M test was used to assess the homogeneity of covariance matrices, and its results confirmed homogeneity for experiential avoidance, intolerance of uncertainty, and emotion regulation (p>0.05). However, Bartlett's test of sphericity showed significant inter-correlations among variable dimensions (p< 0.05), and the assumption of sphericity was not met (p< 0.05); therefore, Greenhouse-Geisser correction was applied in further analyses.

Table 4.

Multivariate Test Results for Between-Group Differences in Study Variables

Variable	Source	Wilks' Lambda	F	***p*-value**	Partial Eta^2
Experiential Avoidance	Test	0.762	6.405	0.004	0.238
	Test × Group Interaction	0.649	4.948	0.001	0.194
Intolerance of Uncertainty	Test	0.744	7.044	0.002	0.256
	Test × Group Interaction	0.721	3.640	0.009	0.151
Adaptive Cognitive ER	Test	0.684	9.488	0.001	0.316
	Test × Group Interaction	0.673	4.486	0.003	0.180
Maladaptive Cognitive ER	Test	0.999	0.020	0.980	0.001
	Test × Group Interaction	0.668	4.575	0.002	0.182

As shown in Table 4, the Wilks' Lambda multivariate test revealed significant effects of test phase and group interaction for experiential avoidance, intolerance of uncertainty, and adaptive cognitive emotion regulation (p < 0.05). Only maladaptive cognitive regulation did not show a significant main effect for the test phase but did show significance in the group interaction. The detailed repeated measures ANOVA results for the total score and subcomponents of intolerance of uncertainty are presented in Table 5.

Table 5.

Repeated Measures ANOVA – Within- and Between-Group Differences in Study Variables

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta^2
Experiential Avoidance	Test	208.178	1.089	191.239	9.236	0.003	0.180
	Group	1628.133	2	814.067	11.011	0.001	0.344
	Test × Group	513.156	2.177	235.701	11.383	0.001	0.352
Intolerance of Uncertainty	Test	3652.044	1.160	3146.990	21.564	0.001	0.339
	Group	8978.978	2	4489.489	9.380	0.001	0.309
	Test × Group	3858.844	2.321	1662.596	11.392	0.001	0.352
Adaptive Cognitive ER	Test	1235.2	1.257	983.029	39.225	0.001	0.483
	Group	3119.244	2	1559.622	27.957	0.001	0.571
	Test × Group	1155.556	2.513	459.822	18.348	0.001	0.466
Maladaptive Cognitive ER	Test	949.881	1.231	771.777	60.553	0.001	0.590
	Group	1252.726	2	626.363	19.434	0.001	0.481
	Test × Group	808.607	2.462	328.496	25.774	0.001	0.551

There were statistically significant differences across the three groups (ERP, EFT, and control) for all study variables—including experiential avoidance, intolerance of uncertainty, and both forms of emotion regulation—based on time (test phase), group membership, and their interaction ($p < 0.05$). The effect sizes (Eta^2) ranged from medium to large, indicating substantial practical significance.

Table 6.

Bonferroni Post Hoc Tests – Group and Time Comparisons

Comparison	Mean Difference	SE	Sig.
ERP vs. EFT	-0.067	1.813	1.000
ERP vs. Control	-7.400*	1.813	0.001
EFT vs. Control	-7.333*	1.813	0.001
Comparison	Mean Difference	SE	Sig.
Pretest vs. Posttest	2.844*	0.876	0.007
Pretest vs. Follow-up	2.356*	0.831	0.021
Posttest vs. Follow-up	-0.489	0.211	0.077
Comparison	Mean Difference	SE	Sig.
ERP vs. EFT	-12.444*	4.612	0.030
ERP vs. Control	-19.756*	4.612	0.001
EFT vs. Control	-7.311	4.612	0.361
Comparison	Mean Difference	SE	Sig.
Pretest vs. Posttest	11.044*	2.215	0.001
Pretest vs. Follow-up	11.022*	2.404	0.001
Posttest vs. Follow-up	-0.022	0.776	1.000
Comparison	Mean Difference	SE	Sig.
ERP vs. EFT	-4.178*	1.575	0.034
ERP vs. Control	7.444*	1.575	0.001
EFT vs. Control	11.622*	1.575	0.001
Comparison	Mean Difference	SE	Sig.
Pretest vs. Posttest	-6.133*	0.949	0.001
Pretest vs. Follow-up	-6.667*	1.016	0.001
Posttest vs. Follow-up	-0.533	0.409	0.597
Comparison	Mean Difference	SE	Sig.
ERP vs. EFT	0.333	1.197	1.000
ERP vs. Control	-6.289*	1.197	0.001
EFT vs. Control	-6.622*	1.197	0.001
Comparison	Mean Difference	SE	Sig.
Pretest vs. Posttest	5.756*	0.692	0.001
Pretest vs. Follow-up	5.489*	0.703	0.001
Posttest vs. Follow-up	-0.267	0.270	0.989

ERP was significantly more effective than the control group in reducing experiential avoidance, but no difference was observed between ERP and EFT in this regard. The reduction in experiential avoidance was maintained at follow-up, confirming the durability of therapeutic effects. ERP was significantly more effective than EFT in reducing total intolerance of uncertainty ($p = 0.030$), though no significant difference was found in the subcomponent "ambiguity distress." Both treatments maintained their effects at follow-up with no significant decline, suggesting stable outcomes over time. EFT was more effective than ERP in enhancing adaptive cognitive emotion regulation ($p = 0.034$). Both ERP and EFT were equally effective in reducing maladaptive emotion regulation, and both outperformed the control group. For both emotion regulation variables, improvements remained stable from posttest to follow-up.

Discussion and Conclusion

The results showed that the mean difference in experiential avoidance between the Exposure and Response Prevention (ERP) group and the Emotion-Focused Therapy (EFT) group was not statistically significant. This suggests that the effectiveness of ERP and EFT in reducing experiential avoidance in individuals with Obsessive-Compulsive Disorder (OCD) is comparable. Both experimental groups demonstrated significant reductions in experiential avoidance and its subcomponents from pretest to posttest and from pretest to follow-up. However, no significant differences were observed between the posttest and follow-up,

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indicating that the therapeutic effects were sustained over time. These findings align with previous research conducted by Jelinek et al. (2024), Fersin (2022), Dutta (2019), Angelakis & Paschtojianni (2021), Matz et al. (2015), Ong et al. (2020), Reid et al. (2017), Puss (2014), O'Brien et al. (2019), Nisha & Manjula (2014), and Smith & Johnson (2018).

In explaining this finding, it appears that both ERP and EFT have comparable effects on experiential avoidance due to their shared therapeutic goals and underlying mechanisms. Despite employing different strategies, both approaches emphasize confronting and reducing avoidance of distressing experiences. In ERP, patients are gradually and systematically exposed to anxiety-provoking stimuli, learning to tolerate obsessive thoughts without engaging in compulsive behaviors (Nisha & Manjula, 2014). Similarly, EFT encourages clients to approach rather than avoid unpleasant emotions, facilitating emotional processing and acceptance, thus reducing avoidance and anxiety (Smith & Johnson, 2018).

Both interventions promote adaptive emotional engagement. ERP achieves this through repeated real-life exposure, while EFT uses emotional processing and reappraisal techniques to alter one's relationship with internal experiences. While their mechanisms differ, the end result is a significant reduction in experiential avoidance, which contributes to the alleviation of OCD symptoms. According to the structured protocols employed in this study, ERP focused primarily on behavior modification and confrontation with feared stimuli, whereas EFT emphasized emotional awareness and inner experience processing. ERP's practical techniques such as exposure exercises and response prevention directly target compulsive behaviors. Conversely, EFT assists patients in confronting their emotional avoidance and encourages direct engagement with emotional experiences.

The results indicated a statistically significant difference in the mean total score of intolerance of uncertainty and its subcomponents—except for "distressing ambiguity"—between the Exposure and Response Prevention (ERP) group and the Emotion-Focused Therapy (EFT) group. Specifically, ERP led to a significantly greater reduction in overall intolerance of uncertainty and most of its dimensions compared to EFT. However, no significant difference was found between the two interventions in reducing scores related to distress caused by ambiguity. This suggests that ERP may be more effective than EFT in reducing intolerance of uncertainty among patients with Obsessive-Compulsive Disorder (OCD). Furthermore, both treatment groups showed significant reductions in mean scores from pretest to posttest and from pretest to follow-up. The absence of significant differences between posttest and follow-up scores indicates that the therapeutic effects remained stable over time. Therefore, it can be concluded that the effects of both ERP and EFT on intolerance of uncertainty in OCD patients are durable.

These findings are consistent with several prior studies, including those of Foa & Goldstein (1978), Wilhelm et al. (2015), and Foa & McLean (2016), which have demonstrated the efficacy of ERP in reducing anxiety and maladaptive interpretations through repeated exposure to feared stimuli and prevention of compulsive responses. In contrast, studies such as Greenberg & Watson (1993) and Timulak & McElvaney (2016) have highlighted the value of EFT, which indirectly alleviates OCD symptoms by emphasizing emotional processing and reducing maladaptive behaviors. These differences indicate that the two approaches may function complementarily rather than competitively.

Foa and Goldstein (1978) described ERP as a systematic intervention based on repeated exposure to anxiety-provoking stimuli and the prevention of compulsive behaviors. Its primary aim is to help patients gradually recognize that perceived threats are unfounded, thereby reducing their anxiety. Wilhelm et al. (2015) further emphasized the compatibility of ERP with cognitive-behavioral models, demonstrating its effectiveness in symptom reduction. Foa and McLean (2016) also highlighted ERP's role in reducing distorted interpretations and alleviating OCD symptoms.

On the other hand, Greenberg and Watson (1993) emphasized that EFT is rooted in emotional awareness and regulation, focusing on establishing a supportive therapeutic alliance and facilitating emotional change. Greenberg (2007) noted that EFT encourages patients to directly experience and process emotions rather than suppress them. Similarly, Timulak and McElvaney (2016) showed that EFT helps individuals confront and manage deep-seated emotions such as fear and anxiety.

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In comparison, Hazel and McNally (2016) underscored ERP's effectiveness in symptom reduction, while Salkovskis (1985) and Rachman (1997) analyzed OCD from a cognitive-behavioral perspective, stressing the importance of reducing compulsions and modifying maladaptive behavior. Ellison and Wiseman (2004) examined how EFT can reduce compulsive behaviors and improve emotional self-awareness. Overall, while ERP directly targets distorted interpretations and intolerance of uncertainty, EFT may indirectly reduce symptoms and serve as a complementary intervention.

ERP, by design, is a structured approach tailored specifically for OCD, focusing on gradually confronting feared stimuli and resisting compulsive rituals. This repeated exposure helps patients realize the irrationality of their fears, leading to anxiety reduction (Foa & Goldstein, 1978). A key strength of ERP lies in its ability to target maladaptive interpretations of intrusive thoughts, a core issue in OCD. According to early cognitive models, OCD patients often misinterpret the significance of intrusive thoughts, which exacerbates their symptoms (Wilhelm et al., 2015). ERP aims to correct these interpretations by eliminating avoidance behaviors and promoting emotional tolerance through structured exposure (Foa & McLean, 2016). Numerous studies have confirmed ERP's effectiveness in reducing OCD symptoms and intolerance of uncertainty (Hazel & McNally, 2016).

In contrast, EFT focuses on emotional processing and regulation, fostering a compassionate therapeutic relationship and facilitating emotional change (Greenberg et al., 1993). It helps patients attend to, experience, and regulate emotions such as fear and anxiety (Greenberg, 2007; Timulak & McElvaney, 2016). By cultivating emotional awareness and regulation, EFT may indirectly contribute to reductions in compulsive behaviors (Ellison et al., 2004). While EFT is effective in managing emotions, its impact on intolerance of uncertainty may be more subtle and indirect.

In the domain of reducing intolerance of uncertainty, Exposure and Response Prevention (ERP) therapy appears to be more effective than Emotion-Focused Therapy (EFT), primarily due to its direct emphasis on confronting feared stimuli and correcting maladaptive interpretations of obsessive thoughts. ERP creates conditions in which the patient gradually faces their fears while refraining from engaging in compulsive behaviors, which contributes to a decrease in both maladaptive cognitions and anxiety (Foa & Goldstein, 1978). Through repeated exposure, the individual learns that the feared outcomes are not real, leading to a reduced need for reassurance and compulsive behaviors (Wilhelm et al., 2015). In contrast, EFT, by focusing on emotional processing and enhancing emotional self-awareness, may indirectly reduce intolerance of uncertainty. However, its primary focus is on managing emotions rather than directly addressing uncertainty, and therefore it may require complementary approaches such as ERP to fully target this construct.

A comparison of the session content in EFT and ERP suggests that ERP demonstrates greater efficacy in reducing intolerance of uncertainty among individuals with Obsessive-Compulsive Disorder (OCD). ERP directly addresses obsessive-compulsive cycles and avoidance behaviors through structured and targeted techniques. From sessions three to seven, ERP guides patients through imaginal and in vivo exposure, helping them face anxiety-inducing situations and resist avoidance responses. This habituation process reduces anxiety stemming from uncertainty and gradually improves tolerance of ambiguity. In sessions eight and nine, cognitive strategies such as Socratic questioning and probability estimation are employed to challenge and restructure dysfunctional beliefs regarding uncertainty. This evidence-based structure and direct engagement with the core mechanisms of uncertainty position ERP as a focused and efficient approach for reducing intolerance of uncertainty.

By contrast, EFT emphasizes emotional identification and processing, emotional reconstruction, and awareness of emotional needs. While this approach may contribute to alleviating certain OCD symptoms, its effects on intolerance of uncertainty are likely more indirect and may require a longer time to manifest. For instance, sessions five to seven in EFT focus on unresolved emotions and processing them through techniques like guided imagery and the "empty chair" method. These methods are effective in improving overall emotional health, yet they do not target uncertainty as directly as ERP does. Consequently, ERP, by providing practical tools, structured exercises, and cognitive restructuring focused on uncertainty, tends to yield more immediate and tangible reductions in intolerance of uncertainty. These differences in

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therapeutic focus and methodology underscore why ERP is likely more effective for addressing this specific dimension of OCD than EFT.

According to the researcher, while both therapies have distinct advantages, ERP appears more effective in reducing intolerance of uncertainty due to its direct and targeted approach toward feared stimuli and cognitive distortions. ERP specifically aids in reducing anxiety, the need for reassurance, and compulsive behaviors. Meanwhile, EFT, by emphasizing emotional awareness and processing, may function more as a complementary intervention to ERP in this context.

The results also revealed a significant difference in the mean scores of adaptive cognitive emotion regulation between the ERP and EFT groups. While no significant differences were found in the increase of acceptance or maladaptive cognitive emotion regulation, the EFT group demonstrated a significantly greater improvement in adaptive strategies. Therefore, Hypothesis 9 is supported, indicating that EFT is more effective than ERP in enhancing adaptive cognitive emotion regulation in OCD patients. These effects remained stable over time, as no significant differences were found between posttest and follow-up measurements. Thus, it can be concluded that the effects of both ERP and EFT on cognitive emotion regulation in OCD patients are durable.

Several studies support these findings. Research aligned with the present hypothesis includes studies by Savage et al. (2018), Pouyannasab et al. (2024), Jani et al. (2023), and Amanlou et al. (2024), all of which confirm the effectiveness of EFT in improving emotion regulation, reducing cognitive distortions, and enhancing cognitive fusion in various psychological disorders. These studies align with the present findings, highlighting the superior impact of EFT in comparison to other therapeutic approaches.

Limitations

The large number of questionnaire items may have caused fatigue among participants. Moreover, the self-report nature of the instruments might have introduced social desirability bias. Given the cross-sectional design of the study, it was not possible to assess the long-term effects of the interventions beyond the current follow-up period. Although exclusion criteria included factors such as substance abuse and repeated absence from sessions, other external variables—such as family support, stress levels, and psychological or environmental influences—were not controlled, and may have impacted the results.

The age range of participants (20 to 45 years) may also limit the generalizability of the findings. Individuals outside this range, such as adolescents or older adults, might respond differently to the interventions. Additionally, the exclusion criteria were defined in such a way that individuals with specific characteristics (e.g., those undergoing concurrent psychotherapy or with a history of substance use) were omitted from the study. This may limit the applicability of the findings to certain subgroups of OCD patients only.

Considering the cross-sectional nature of this study, future research is recommended to employ longer follow-up periods to evaluate the stability and durability of treatment outcomes. Long-term evaluations would provide valuable insights into the sustained effectiveness of the interventions. Furthermore, to better account for external variables such as family support, stress levels, and other contextual or psychological factors, it is suggested that these be included as moderating or covariate variables in future analyses. To control for the confounding effects of previous therapy experiences, future studies should either recruit participants with no prior exposure to similar interventions or conduct subgroup analyses to compare the outcomes between therapy-naïve and previously treated individuals.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

By the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

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