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Effectiveness of Paradoxical Therapy on Psychological Resilience and Negative Meta-Emotions in Infertile Women with Obsessive-Compulsive Disorder

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ABSTRACT

Objective: This study aimed to evaluate the effectiveness of paradoxical therapy (PT) in improving psychological resilience and reducing negative meta-emotions among infertile women diagnosed with OCD.

Methods and Materials: A quasi-experimental design with pretest-posttest and a control group was conducted. Thirty infertile women diagnosed with OCD, recruited via convenience sampling from fertility centers in Tehran (2024), were randomly assigned to intervention (n=15) and control (n=15) groups. The intervention group received six weekly sessions (90 minutes each) of paradoxical therapy. Outcome measures included the Connor-Davidson Resilience Scale (CD-RISC) and the Negative Meta-Emotion subscale of the Mitmansgruber Meta-Emotion Scale, administered at baseline, post-intervention, and 3-month follow-up. Data were analyzed using repeated-measures ANOVA with Greenhouse-Geisser correction.

Findings: Significant group × time interactions were observed for both resilience ($F=198.4$, $p<0.001$, $\eta^2=0.686$) and negative meta-emotions ($F=31.02$, $p<0.001$, $\eta^2=0.526$). Bonferroni-adjusted comparisons showed statistically significant improvement in resilience and reduction in negative meta-emotions in the intervention group from pretest to posttest and follow-up ($p<0.001$).

Conclusion: Paradoxical therapy appears to be effective in enhancing resilience and reducing maladaptive meta-emotions in infertile women with OCD. Future studies should consider larger samples, randomized designs, and longer follow-up durations.

Keywords: Paradox Therapy, Psychological Resilience, Emotions, Infertility, Obsessive-Compulsive Disorder.

Introduction

Infertility is one of the serious and complex challenges that can have widespread impacts on individuals' psychological well-being, particularly among women (Straub & Mills, 2025). Infertility, defined as the inability to conceive after at least one year of unprotected attempts, leads to psychological stress, feelings of failure,

depression, and even anxiety (Woodward et al., 2024). Due to cultural, social, and psychological factors, infertile women are more vulnerable to psychological distress, and many of them may be pushed toward more severe psychological problems such as obsessive-compulsive disorder (OCD) (Feng et al., 2025).

Obsessive-compulsive disorder is one of the most common psychological disorders, characterized by disturbing, repetitive, and uncontrollable thoughts (obsessions) and meaningless repetitive behaviors (compulsions) (Archetti, 2024). This disorder can become significantly exacerbated in infertile women (Kashyap & Tripathi, 2025). In this group, obsessions may manifest as obsessive thoughts related to the success of pregnancy, excessive worries about infertility treatments, or reflections of feelings of failure and inadequacy (Wu et al., 2024). The inability to control these thoughts and behaviors not only affects the quality of life of infertile women but also reduces their ability to focus on the positive aspects of life and cope with challenges (Chen et al., 2024).

In this context, resilience emerges as one of the most crucial psychological factors that can help individuals cope with life's problems and challenges, playing a significant role in reducing the negative impacts of infertility and OCD (Yan et al., 2025). Resilience refers to an individual's ability to adapt to crises and maintain psychological balance in difficult situations, and among infertile women, it can assist in managing concerns arising from infertility and OCD (Araya et al., 2025). However, resilience in infertile women with OCD may be severely diminished due to continuous psychological pressure (Wang et al., 2025). These women are more prone to negative meta-emotions such as feelings of shame, guilt, and hopelessness, which disrupt the normal flow of life (Sarwar & Alimirza, 2025).

Meta-emotions involve the feelings and thoughts individuals experience about their own emotions; in other words, meta-emotions refer to emotional reactions toward other emotions (Mendonça, 2024). Negative meta-emotions such as self-blame, shame, and guilt—often observed in infertile women with OCD—can create a vicious cycle where the individual experiences negative meta-emotions because of their obsessions, which in turn intensify the obsessive symptoms (Watts et al., 2025) and further decrease resilience (Soucie et al., 2024).

Within this framework, paradoxical therapy has emerged as an effective psychotherapeutic approach that can play an important role in improving resilience (Asadiof et al., 2024) and reducing negative meta-emotions (Sharshar, 2024) in infertile women with OCD. Paradoxical therapy is a method in which individuals

become more consciously aware of their issues and paradoxically engage in their compulsive behaviors with greater intensity, ultimately gaining control over their behaviors (Lane, 2023). This method, through deeper confrontation with the disorder and enhancing individual awareness of feelings, helps individuals adapt to their issues instead of denial or direct struggle (Saeedinejad et al., 2025).

Paradoxical therapy, rooted in Viktor Frankl's logotherapy, aims to help individuals recognize the discord between their perceptions and actual symptoms. Two key elements accelerate the therapy process: the first, paradox, involves prescribing a behavioral symptom or disease symptom intentionally. The second, program, involves assigning the client a task to recreate these symptoms at a specified time and for a specified duration. In the paradoxical scheduling technique, the same disease symptoms are prescribed to the client to be deliberately experienced at set times (Najafi Dehaghani et al., 2025). The goal of this method is to induce cognitive dissonance by assigning activities that seem to contradict the client's beliefs or expectations, leading to a change in perspective and behavior. By incorporating paradox into therapy sessions, individuals are encouraged to challenge their existing thoughts and behaviors, potentially facilitating therapeutic progress (Saeedinejad et al., 2025).

Despite the high prevalence of infertility among women and the extensive psychological consequences it has on their quality of life, psychological research in this area has predominantly focused on clinical aspects such as depression and anxiety, with less attention paid to more complex problems such as OCD and its effects on resilience and meta-emotions. Obsessive-compulsive disorder not only has a high prevalence among infertile women but can also significantly diminish their resilience and create vicious psychological cycles between obsessions and negative meta-emotions like shame, guilt, and self-blame.

Nevertheless, despite growing scientific attention to the role of meta-emotions in psychological disorders, there is still limited research specifically examining the psychological pattern of negative meta-emotions among infertile women with OCD. Furthermore, existing psychotherapeutic interventions often concentrate on symptom reduction without sufficiently addressing the simultaneous enhancement of resilience and reduction

of meta-emotions. In this regard, "paradoxical therapy" stands out as an innovative and effective method for treating OCD, showing notable efficacy in managing meta-emotions and enhancing resilience. However, a scientific gap remains in evaluating the effectiveness of this therapeutic method for infertile women with OCD.

Thus, examining the efficacy of paradoxical therapy in addressing the psychological challenges of this patient group could not only deepen scientific understanding but also lead to the design of more comprehensive and suitable therapeutic interventions for this complex psychological issue. Therefore, the present study aimed to investigate the effectiveness of Paradoxical Therapy (PTC) on resilience and negative meta-emotions in infertile women with obsessive-compulsive disorder.

Methods and Materials

The present study employed a quasi-experimental method with a pre-test, post-test, and control group design, including a three-month follow-up period. The statistical population consisted of all infertile women with obsessive-compulsive disorder (OCD) during the first quarter of 2024 in Tehran, Iran. Inclusion criteria were as follows: primary infertility due to female factors (no history of pregnancy), diagnosis of OCD confirmed by a psychologist, Iranian nationality, age between 25 and 52 years, and a minimum educational level of a high school diploma. Exclusion criteria included: absence from more than two sessions, incomplete questionnaire responses, withdrawal from participation, lack of commitment to intervention assignments, and simultaneous participation in other counseling or psychotherapy programs.

Sample Size

The study sample included 30 infertile women with OCD, selected through non-random convenience sampling (based on sample size determination using the G*Power 3 software, considering the parameters: effect size = 0.36; alpha level = 0.05; power = 0.95). The sample size was set at 15 participants for each of the experimental and control groups, totaling 30

participants. The participants were randomly assigned to the experimental and control groups.

Measurement Tools

Connor-Davidson Resilience Scale (CD-RISC): This questionnaire was developed by [Connor & Davidson, \(2003\)](#). It consists of 25 items scored on a Likert scale ranging from 0 (not true at all) to 5 (always true). The questionnaire measures five subscales: perception of personal competence, trust in one's instincts and emotional tolerance, positive acceptance of change and secure relationships, control, and spiritual influences. Higher scores indicate greater resilience. [Arias González et al., \(2015\)](#) reported the reliability of the tool using Cronbach's alpha as 0.91, and the content validity was 0.84, indicating good validity. In a study by [Ahangarzadeh & Rasoli, \(2015\)](#), Cronbach's alpha was reported as 0.82, and content validity as 0.98, demonstrating acceptable validity and reliability ([MamSharifi et al., 2022](#)). In the present study, Cronbach's alpha for the questionnaire was 0.91.

Meta-Emotion Scale (Araya et al.) by Mitmansgruber: This self-report scale, developed by [Mitmansgruber et al., \(2009\)](#), measures positive and negative meta-emotions. It consists of 28 items scored on a six-point Likert scale (1 = not at all true to 6 = completely true). The scale encompasses six subcomponents: anger, humiliation/shame, extreme suppression (negative meta-emotions), and compassion and interest (positive meta-emotions), with Cronbach's alpha coefficients reported as 0.76, 0.77, 0.83, 0.82, and 0.85, respectively, and 0.87 for the total scale ([Mitmansgruber et al., 2009](#)). Factor analysis confirmed the two-factor structure (positive and negative meta-emotions), and all item loadings exceeded 0.40. [Benassi et al., \(2022\)](#) reported Cronbach's alpha as 0.78 for the entire scale in Iran. In the present study, Cronbach's alpha for the scale was reported as 0.81. Notably, only the negative meta-emotion subscale was used, and its Cronbach's alpha was 0.832.

Paradoxical Therapy

In this study, paradoxical therapy referred to a 6-session, 90-minute intervention based on the protocol used in the research by ([Taghilo et al., 2023](#)).

Table 1*Summary of Paradoxical Therapy Sessions (Taghilou et al., 2023)*

Session	Objective	Content
First	Introduction, setting goals, and pre-test	Social interview phase: welcoming, standard introductory points (marital status, duration of marriage, employment status, and discussion of specific family and social issues if needed). Problem interview phase: reasons for referral and detailed description of problems/disorders by the client and companions, explaining the treatment plan by the therapist, setting treatment goals, and assigning paradoxical scheduling tasks.
Second	Behavioral analysis	Detailed review of task execution from the previous session; challenges faced; assessment of changes by the client; decision to continue previous tasks alone or with new paradoxical scheduling tasks addressing other symptoms.
Third	Behavioral analysis	Detailed review of task execution; assessment of progress; continuation of previous tasks with reduced frequency; if necessary, prescribing the first complementary technique (the client is instructed not to attempt to reduce symptoms).
Fourth	Behavioral analysis	Continued assessment of task implementation; monitoring therapeutic progress; if needed, prescribing the second complementary technique according to the PTC model principle (no active effort to reduce symptoms).
Fifth	Behavioral analysis	Continued task review; assessment of therapeutic progress; decision on ending therapy if goals have been achieved or continuing sessions if necessary.
Sixth	Termination and post-test	Final task review, overall summary of all sessions, answering questions, session closure, and administration of the post-test.

Procedure

The execution procedure was as follows: after selecting the sample based on the inclusion criteria, the participants completed the study questionnaires. Then, paradoxical therapy was conducted by the researchers at one of the counseling centers in Tehran (a center equipped with appropriate space, facilities, and educational equipment). All participants who agreed to cooperate completed the questionnaires in group settings during all three phases—pre-test, post-test, and follow-up—without any time limitations for completion. The intervention was implemented in the form of six 90-minute group sessions (one session per week). Ethical considerations included confidentiality of collected data, obtaining informed consent from participants, non-disclosure of participants' information to third parties, and establishing a reassuring atmosphere.

Analysis

Data were analyzed using repeated measures analysis of variance (ANOVA) with SPSS version 26.

Findings and Results

The mean reported age for the study sample, by groups, was 34.4 ± 5.84 for the intervention group and 34.9 ± 5.04 for the control group. The minimum age of participants was 30 years and the maximum was 43 years. Additionally, the mean duration of marriage was 6.20 ± 1.89 years for the intervention group and 5.46 ± 2.26 years for the control group, with a minimum of 4 years and a maximum of 10 years reported. Regarding education levels, in the intervention group: 37.5% had a high school diploma, 7.5% had an associate degree, 27.5% had a bachelor's degree, 20% had a master's degree, and 7.5% had a doctoral degree. In the control group: 35% had a high school diploma, 2.5% an associate degree, 30% a bachelor's degree, 17.5% a master's degree, and 15% a doctoral degree. Moreover, since the significance level was greater than 0.05, no significant differences were found between the two groups in terms of age, education level, or duration of marriage. Descriptive findings across the three stages of the study for the two groups are presented in Table 2.

Table 2*Descriptive Statistics of Variables*

Variable	Group	Pre-test Mean \pm SD	Post-test Mean \pm SD	Follow-up Mean \pm SD
Psychological Resilience	Paradoxical Therapy	46.3 \pm 5.12	54.7 \pm 7.76	55.3 \pm 7.98
	Control	47.6 \pm 6.02	45.8 \pm 5.36	45 \pm 5.01
Negative Meta-Emotion	Paradoxical Therapy	67.3 \pm 6.94	60.9 \pm 4.34	59.3 \pm 4.09
	Control	66.8 \pm 5.66	67.6 \pm 6.83	68 \pm 7.21

As shown in Table 2, the mean scores of resilience and negative meta-emotions in the intervention and control groups are presented. At the pre-test stage, the two groups did not differ significantly. However, after the

intervention, the intervention group showed a remarkable improvement compared to the control group, and this difference was maintained at follow-up. To examine the equality of the covariance matrix, Box's

M test was used, which yielded the results (Box's $M = 88.8$, $F = 13.06$, $p < 0.01$), indicating that the assumption of homogeneity of covariance matrices was not met. Nevertheless, given the equality of group sizes, this violation could be overlooked (Raeisi et al., 2017).

Mauchly's Test of Sphericity for the study variables showed (Mauchly's $W = 0.055$, $\chi^2 = 78.1$, $p < 0.01$), indicating that the sphericity assumption was violated.

Therefore, the Greenhouse-Geisser correction was applied for repeated measures ANOVA. The homogeneity of variance for the resilience variable ($F = 1.9$, $p > 0.05$) and negative meta-emotion ($F = 2.07$, $p > 0.05$) was confirmed. Subsequently, the results of the repeated measures ANOVA 3×2 for comparing the two groups across three stages (pre-test, post-test, and follow-up) are presented.

Table 3

MANOVA Significance Test Results in the Studied Groups

Test Name	SS	Df	MS	F	P-value	Eta ²
Psychological Resilience & Negative Meta-Emotion	1049.2	5	209.8	26.001	0.001	0.481
Greenhouse-Geisser	1049.2	1.79	584.2	26.001	0.001	0.481
Huynh-Feldt	1049.2	1.98	529.9	26.001	0.001	0.481
Upper Bound	1049.2	1	1049.2	26.001	0.001	0.481

The results of Table 3 indicate a significant difference between the study groups regarding at least one of the dependent variables. Eta squared shows that the difference between the two groups is significant overall,

accounting for 48.1% of the variance, indicating strong statistical and generalizable significance. Thus, the detailed results for simple and interactive effects are reported in Table 4.

Table 4

Repeated Measures ANOVA 3×2 Results for the Effect of Paradoxical Therapy on Resilience and Negative Meta-Emotions in Infertile Women with OCD

Variable	Source	SS	Df	MS	F	P-value	Eta ²
Psychological Resilience	Between Groups	2083.3	1	2083.3	31.02	0.001	0.526
	Error	1880.5	28	67.1			
	Within Groups	Factor	19830.4	2.45	8087.4	247.3	0.001
	Factor \times Group	2504.8	2.45	1021.5	198.4	0.001	0.686
Negative Meta-Emotion	Between Groups	811.2	1	811.2	9.82	0.004	0.260
	Error	2312.6	28	82.5			
	Within Groups	Factor	20020.7	2.71	7391.9	12.2	0.001
	Factor \times Group	1712.3	2.71	631.9	31.02	0.001	0.526

The results of Table 4 show that the main effect of the group was significant for resilience ($F = 247.3$, $p < 0.05$, $\eta^2 = 0.662$) and for negative meta-emotions ($F = 232.06$, $p < 0.05$, $\eta^2 = 0.89$), indicating that there were significant differences between the two groups in terms of resilience and negative meta-emotions. Similarly, the main effect of time (pre-test, post-test, and follow-up)

was significant for resilience ($F = 198.4$, $p < 0.05$, $\eta^2 = 0.686$) and negative meta-emotions ($F = 12.2$, $p < 0.05$, $\eta^2 = 0.310$). In other words, resilience and negative meta-emotions scores varied significantly across the three measurement times considering different groups. Next, Bonferroni post hoc tests were conducted to explore the differences across times, as shown in Table 5.

Table 5

Bonferroni Post Hoc Test for Comparison of Resilience and Negative Meta-Emotions Across Three Stages

Variable	Stage I	Stage J	Mean Difference (I-J)	P-value
Psychological Resilience	Pre-test	Post-test	8.86*	0.001
	Pre-test	Follow-up	9.34*	0.001
Negative Meta-Emotion	Pre-test	Post-test	7.75*	0.001
	Pre-test	Follow-up	5.06*	0.001

Based on Table 5, it can be seen that overall resilience scores for infertile women with OCD significantly increased from pre-test to post-test and follow-up, while negative meta-emotions decreased. This indicates the effectiveness of paradoxical therapy in improving resilience and reducing negative meta-emotions among infertile women with OCD. For resilience, significant differences were found between pre-test and post-test ($p < 0.05$, $d = 8.86$) and pre-test and follow-up ($p < 0.05$, $d = 9.34$). For negative meta-emotions, significant differences were found between pre-test and post-test ($p < 0.05$, $d = 7.75$) and between pre-test and follow-up ($p < 0.05$, $d = 5.06$).

Discussion and Conclusion

The present study was conducted to determine the effectiveness of paradoxical therapy (PTC) on resilience and negative meta-emotions in infertile women with obsessive-compulsive disorder (OCD). The research findings showed that paradoxical therapy was effective in increasing psychological resilience. This result is consistent with the findings of researchers such as (Asadiof et al., 2024; Lane, 2023 and Saeedinejad et al., 2025).

In explaining this finding, it can be said that the paradoxical therapy method, by encouraging individuals to engage more deeply with their obsessions, to accept their feelings and thoughts, and to perform paradoxical behaviors to break negative mental cycles, can strengthen psychological resilience (Asadiof et al., 2024). Through this approach, women with OCD learn to manage their obsessive thoughts rather than resist or suppress them, and to view life and their capabilities from a new perspective. This process not only helps individuals to free themselves from negative cycles of obsession and associated meta-emotions, but also enables them to enhance their mental and emotional strength to better cope with challenges (Saeedinejad et al., 2025).

Additionally, it can be said that paradoxical therapy, as an innovative and effective approach, creates a unique and different mechanism for strengthening psychological resilience that has produced remarkable results among infertile women with OCD. This treatment is based on creating a contradiction between the individual's unconscious behaviors and thoughts and

allows the patient to let obsessive thoughts exist more prominently instead of attempting to escape them.

This paradoxical exposure significantly reduces psychological resistance to obsessions and fosters a sense of inner control over feelings and behaviors (Lane, 2023).

Psychological resilience enhancement through paradoxical therapy is achieved as individuals explore their beliefs and emotions and learn to respond creatively to challenges, gradually developing greater acceptance toward their situation. Such confrontation helps reduce psychological pressure from negative meta-emotions such as guilt and shame and strengthens individuals' problem-solving and stress-management abilities. Paradoxical therapy serves as an effective tool for breaking the vicious cycles of OCD, as it drives individuals towards acceptance of reality and the psychological reconstruction of their self-narratives (Asadiof et al., 2024).

The results also indicated that paradoxical therapy (PTC) was effective in reducing negative meta-emotions in infertile women with OCD. This result aligns with the findings of researchers such as (Sharshar, 2024; Saeedinejad et al., 2024; and Najafi Dehaghani et al., 2025).

In explaining this finding, it can be said that paradoxical therapy (PTC) is an innovative psychotherapeutic approach that significantly reduces negative meta-emotions in infertile women with OCD. Negative meta-emotions such as shame, guilt, embarrassment, and hopelessness are highly prominent among these women due to the combination of obsessive-compulsive disorder and the stress of infertility, creating a vicious cycle that further exacerbates obsessions and negative feelings (Saeedinejad et al., 2024).

Paradoxical therapy, through its conceptual and practical methods, helps women to confront rather than directly fight or suppress their obsessive thoughts and feelings. This process allows patients to gradually view their negative emotions as manageable experiences rather than overwhelming threats.

By targeting the inconsistency between thoughts and emotional reactions, paradoxical therapy enables infertile women with OCD to break destructive emotional cycles and achieve a sense of psychological relief (Sharshar, 2024). One of the critical mechanisms of

paradoxical therapy in reducing negative meta-emotions is encouraging individuals to accept rather than deny or reject their emotional experiences, and to create new meanings for those emotions. In infertile women with OCD, emotions such as guilt and shame are often exacerbated by efforts to suppress or hide them; these efforts not only fail to improve the situation but also intensify the negative meta-emotions and decrease psychological resilience (Najafi Dehaghani et al., 2025).

Paradoxical therapy, by encouraging individuals to consciously focus on feelings of guilt or shame, helps redefine these emotions and remove them from the domain of psychological threat. Through this process, women learn to manage the frequency and intensity of facing negative meta-emotions and move away from destructive psychological cycles toward acceptance and growth. This treatment leads to a shift in their psychological state towards greater calmness, emotional stability, and healing, ultimately improving their quality of life (Saeedinejad et al., 2024)

The results of this study showed that psychological resilience and negative meta-emotions in the intervention group were significantly better than the control group at both the post-test and follow-up stages. The intervention largely succeeded in increasing psychological resilience and reducing negative meta-emotions among these women. Therefore, paradoxical therapy can be applied to enhance psychological resilience and reduce negative meta-emotions in infertile women with OCD. Among the limitations of the present study was the evaluation of the research variables through self-report questionnaires, which might lack sufficient accuracy due to the participants' adverse emotional conditions. Another limitation was the use of a non-random sampling method and the absence of a long-term follow-up period. It is recommended that future research use clinical interviews and diagnostic tools to obtain more accurate results. Moreover, employing random sampling methods and including long-term follow-up phases in future studies is also advised.

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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

In accordance with 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.

References

- Ahangarzadeh, R. S., & Rasoli, M. (2015). Psychometric properties of the Persian version of. <https://sid.ir/paper/191179/en>
- Araya, B. M., Velez, M. P., Alemu, K., Dyer, S., Andualem, H. T., & Aldersey, H. M. (2025). The complex lived experience of women with infertility in Ethiopia: An interpretative phenomenologic analysis. *International Journal of Gynecology & Obstetrics*, 169(3), 926-936. <https://doi.org/10.1002/ijgo.70001>
- Archetti, C. (2024). Infertility as trauma: Understanding the lived experience of involuntary childlessness. *Culture, Medicine, and Psychiatry*, 48(4), 940-960. <https://doi.org/10.1007/s11013-024-09871-7>
- Arias González, V. B., Crespo Sierra, M. T., Arias Martínez, B., Martínez-Molina, A., & Ponce, F. P. (2015). An in-depth psychometric analysis of the Connor-Davidson Resilience Scale: calibration with Rasch-Andrich model. *Health and quality of life outcomes*, 13(1), 154. <https://doi.org/10.1186/s12955-015-0345-y>
- Asadiof, F., Safarpour, B., Barabadi, S., Karkargh, F. K., Janbozorgi, A., Khayayi, R., Delshadi, M., & Haghani, K. (2024). Exploring the comparative efficacy of reality and paradox therapy in treating post-traumatic stress disorder in traumatized adolescents: an analytical review. *Contemp. Readings L. & Soc. Just.*, 16, 645. <https://heinonline.org/HOL/LandingPage?handle=hein.journals/conreadslj16&div=51&id=&page=>

- Benassi, E., Bello, A., Camia, M., & Scorza, M. (2022). Quality of life and its relationship to maternal experience and resilience during COVID-19 lockdown in children with specific learning disabilities. *European Journal of Special Needs Education*, 37(4), 632-647. <https://doi.org/10.1080/08856257.2021.1940005>
- Chen, X., Hao, X., Xie, L., & Liu, X. (2024). A bidirectional causal relationship study between mental disorders and male and female infertility. *Frontiers in Psychiatry*, 15, 1378224. <https://doi.org/10.3389/fpsy.2024.1378224>
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, 18(2), 76-82. <https://doi.org/10.1002/da.10113>
- Feng, J., Wu, Q., Liang, Y., Liang, Y., & Bin, Q. (2025). Epidemiological characteristics of infertility, 1990–2021, and 15-year forecasts: an analysis based on the global burden of disease study 2021. *Reproductive Health*, 22(1), 26. <https://doi.org/10.1186/s12978-025-01966-7>
- Kashyap, S., & Tripathi, P. (2025). ‘Are you pregnant? If not, why not?’: artificial reproductive technology and the trauma of infertility. *Medical Humanities*, 51(1), 102-111. <https://doi.org/10.1136/medhum-2023-012690>
- Lane, O. (2023). *A mixed methods systematic review of factors impacting help-seeking in OCD, and an empirical study of psychological flexibility and resilience in care seeking and non-care seeking voice hearers exposed to trauma* [Cardiff University]. <https://orca.cardiff.ac.uk/id/eprint/162851>
- MamSharifi, P., Khansari, S. S. A., Najafi, K., Farokhi, S., & Aminpour, M. (2022). The mediating role of problem solving strategies in the relationship between metacognitive beliefs and cognitive emotion regulation strategies with resilience in the Covid-19 era. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 11(4), 205-216. <https://DOR:20.1001.1.2383353.1401.11.4.20.3>
- Mendonça, D. (2024). Meta-emotions. In *A Deweyan Philosophical Take on Emotions: A Layered Theory* (pp. 57-73). Springer. https://doi.org/10.1007/978-3-031-63199-3_4
- Mitmansgruber, H., Beck, T. N., Höfer, S., & Schübler, G. (2009). When you don't like what you feel: Experiential avoidance, mindfulness and meta-emotion in emotion regulation. *Personality and individual differences*, 46(4), 448-453. <https://doi.org/10.1016/j.paid.2008.11.013>
- Najafi Dehaghani, J., Zanganeh Motlaq, F., & Esmailzadeh, Z. (2025). The Effectiveness of Paradox Therapy on Distress Tolerance and Experiential Avoidance of Conflicted Women Referring to Counseling Centers. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 13(12), 81-90. <http://frooyesh.ir/article-1-5578-en.html>
- Raeisi, A., Ostovar, A., Vahdat, K., Rezaei, P., Darabi, H., Moshtaghi, D., & Nabipour, I. (2017). Association of serum uric acid with high-sensitivity C-reactive protein in postmenopausal women. *Climacteric*, 20(1), 44-48. <https://doi.org/10.1080/13697137.2016.1247261>
- Saeedinejad, N., Foroozandeh, E., Besharat, M. A., Nikvarz, M., & Bani Taba, S. M. (2024). The effectiveness of paradox therapy on the anxiety and ego strength of mothers with premature babies. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 13(7), 61-70. <http://frooyesh.ir/article-1-5627-en.html>
- Saeedinejad, N., Foroozandeh, E., Besharat, M. A., Nikvarz, M., & Bani Taba, S. M. (2025). The Effectiveness of “Paradox Therapy” on the Symptoms of Depression and Rumination Response in Mothers with Premature Babies. *Journal of Health Promotion Management*, 14(1), 53-64. <https://10.22034/JHPM.14.1.53>
- Sarwar, S., & Alimirza, Z. I. (2025). Breaking The Silence: How Self-Compassion Reduces Fear Of Self Disclosure In Women With Obsessive Compulsive Disorder. *Journal of Political Stability Archive*, 3(3), 290-302. <https://doi.org/10.63468/jpsa.3.3.21>
- Sharshar, T. (2024). The paradox of post-intensive care unit physical therapy. *Intensive Care Medicine*, 50(8), 1388-1389. <https://doi.org/10.1007/s00134-024-07539-9>
- Soucie, K., Scott, S. A., Partridge, T., Hakim-Larson, J., Babb, K. A., & Voelker, S. (2024). Meta-Emotion and emotion socialization by mothers of preschoolers during storytelling tasks. *Journal of Child and Family Studies*, 33(5), 1618-1631. <https://doi.org/10.1007/s10826-023-02736-4>
- Straub, V. J., & Mills, M. C. (2025). The interplay between male fertility, mental health and sexual function. *Nature Reviews Urology*, 22(1), 1-2. <https://doi.org/10.1038/s41585-024-00936-1>
- Taghilo, L., Azizi Ziabari, L. S., Khajevand Khoshli, A., & Damghani Mirmahaleh, M. (2023). Comparing the effectiveness of acceptance and commitment therapy (ACT) and paradoxical time table therapy (PTC) on the psychological well-being of nurses. *EBNESINA*, 25(3), 14-24. DOI: <https://10.22034/25.3.14>
- Wang, H., Chen, Y., Song, C., Jiang, H., Chen, H., Zhang, L., Xia, X., Zhang, S., Wei, F., & Chen, W. (2025). Latent Profile Analysis of Stigma in Infertile Women and its Influencing Factors. *Asian Nursing Research*. <https://doi.org/10.1016/j.anr.2025.01.010>
- Watts, J. R., Lazzareschi, N. R., Warwick, L. A., & Gaa, M. (2025). Posttraumatic stress disorder symptoms in postsecondary students exposed to childhood psychological abuse: Exploring the role of negative meta-emotions. *Journal of Counseling & Development*, 103(1), 3-14. <https://doi.org/10.1002/jcad.12534>
- Woodward, J. T., Cirino, N. H., Copland, S., & Davoudian, T. (2024). Integrated behavioral health Care in Reproductive Medicine: how and why to include mental health professionals in infertility care teams. *Clinical obstetrics and gynecology*, 67(1), 222-232. <https://doi.org/10.1097/GRF.0000000000000829>
- Wu, D., Zhao, Y. C., Zhang, Y., & Song, S. (2024). Contextual information needs of people in life transitions struggling with obsessive-compulsive disorder. *Information Research an international electronic journal*, 29(2), 669-679. <https://doi.org/10.47989/ir292855>
- Yan, Y., Ma, Y., Xu, L., & Lv, Y. (2025). Impact of perceived social support on anxiety and depression in women undergoing in vitro fertilization-embryo transfer: the role of psychological resilience. *Journal of Assisted Reproduction and Genetics*, 42(1), 231-242. <https://doi.org/10.1007/s10815-024-03308-1>