



The University of Tehran Press

## Comparison of the Effectiveness and Mechanism of Effect of Acceptance and Commitment Therapy Based on Emotion-Focused Therapy on Sexual Health in Patients with Type 2 Diabetes: The Role of Psychological Flexibility and Emotional Efficiency

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### Extended Abstract

#### Aim

Diabetes is a prevalent, chronic, and increasingly common disease that affects a significant number of people in modern society, with numerous physical and psychological consequences for those affected (Bastami et al., 2016). It is a condition characterized by defects in the body's ability to produce or respond to insulin and is classified into type 1 and type 2 (Van Dijk et al., 2013). One of the chronic disorders associated with diabetes that has not received adequate attention is sexual dysfunction (Kizilay et al., 2017). While a fulfilling sexual relationship may not guarantee success or satisfaction in a marriage, the absence of a sexual relationship or poor-quality sexual interactions can significantly undermine the marital institution (Ali-Kamali et al., 2019). Among the effective psychological treatments for alleviating the negative psychological impacts caused by diabetes are Acceptance and Commitment Therapy (ACT) and Emotion-Focused Therapy (Bastami et al., 2016; Ghiasvand & Qorbani, 2015). Based on this, the present study aimed to compare the effectiveness of Acceptance and Commitment Therapy and Emotion-Focused Therapy in improving sexual health, while also considering the role of psychological flexibility and emotional efficacy as mediating variables in patients with type 2 diabetes.

#### Methodology

This study was conducted as a semi-experimental design with a pre-test/post-test control group structure. The statistical population included all patients with type 2 diabetes living in Tehran who visited the endocrine clinics of hospitals affiliated with Tehran University of Medical Sciences in 2019. Using a multi-stage cluster sampling method, 45 patients with type 2 diabetes (27 women and 18 men) were selected based on inclusion and exclusion criteria and were randomly assigned to three groups, each consisting of 15 participants. For the experimental groups, Acceptance and Commitment Group Therapy (Peterson et al., 2009 cited by Kavousian et al., 2017) was conducted over twelve 60-minute sessions, and Emotion-Focused Group Therapy (Greenberg, 2011) was conducted over eight 60-minute sessions. The control group did not receive any treatment. The research tools included the Sexual Satisfaction Questionnaire (Larson et al., 1998), Emotion Efficacy Scale (McKay & West, 2016), and the Acceptance and Action Questionnaire-II by Bond et al. (2011). Data were analyzed using both descriptive and inferential statistics. Descriptive statistics included the calculation of frequency, percentage frequency, and cumulative percentage. In the inferential statistics section, analysis of covariance (ANCOVA), paired t-tests, and repeated measures tests were used. To examine the role of mechanisms, bootstrapping and the eta index were applied. SPSS-26 was used for data analysis.

#### Findings

The results indicated that the difference between the pre-test and post-test scores of the total sexual health score ( $t = -7.209$ ;  $P = 0.0001$ ) in the Acceptance and Commitment Therapy (ACT) group was

significant. Therefore, it can be concluded that ACT has a significant effect on the sexual health of individuals with type 2 diabetes (main effect).

Additionally, the findings showed that the difference between the pre-test and post-test scores of the total sexual health score ( $t = -2.854$ ;  $P = 0.013$ ) in the Emotion-Focused Therapy (EFT) group was also significant. Thus, it can be stated that EFT significantly impacts the sexual health of individuals with type 2 diabetes (main effect).

On the other hand, it was observed that the difference between the pre-test and post-test scores of the total sexual health score in the control group ( $t = -0.203$ ;  $P = 0.842$ ) was not significant.

The results further revealed that the interaction effects of therapy on the mechanisms of psychological flexibility and emotional efficacy were significant ( $P < 0.001$ ). The psychological flexibility mechanism demonstrated a greater effect size than emotional efficacy. Specifically, the effect size of the psychological flexibility mechanism was 0.923, while the effect size of the emotional efficacy mechanism was 0.681.

Table 1 indicates that both the time effect and the time  $\times$  group interaction effect on the sexual health of patients are significant ( $p < 0.001$ ). In other words, there is a difference in the results of the measurements (pretest, during treatment, and posttest) across all the studied groups. Additionally, based on the means obtained and the improvement in patients' sexual health, Acceptance and Commitment Therapy (ACT) resulted in a greater increase in sexual health compared to Emotion-Focused Therapy (EFT).

**Table 1:** Results of the ANCOVA Test of Treatment  $\times$  Mechanisms Interaction Effects on the Sexual Health of Patients

Source of effect	Sum of squares	Df	Sum of squares	F-value	Sig.	Effect size
Time effect	347.465	1	347.465	10.548	0.001	0.210
Time $\times$ group effect	1134.412	2	567.206	17.218	0.002	0.463
Error	1317.681	40	32.942			

## Conclusion

The study's discussion highlights that Acceptance and Commitment Therapy (ACT) significantly improves sexual health in individuals with type 2 diabetes, consistent with findings by Hor & Manshaei (2017), Amsberg et al. (2018), Baghban-Baghestani et al. (2017), and Asadpour & Veisi (2018). ACT enhances patients' psychological flexibility and teaches skills such as emotional disclosure, verbal and non-verbal communication, and self-expression, leading to improved sexual health. Findings from Van Dijk et al. (2013) also emphasize the role of peer support in promoting self-care behaviors and sexual health. Emotion-Focused Therapy (EFT) was also effective, aligning with research by Ahmadi-Bejestani et al. (2018), Ghiyasvand & Ghorbani (2015), Rostami et al. (2014), and Greenberg (2011). EFT addresses emotional imbalance caused by diabetes, reducing negative emotional arousal and fostering emotional validation and reframing to enhance sexual function and relational quality.

The results indicate that while both ACT and EFT are effective interventions for improving sexual health in type 2 diabetes patients, ACT demonstrates greater overall efficacy. The study suggests combining these therapies with medical interventions for comprehensive care and emphasizes the need for further meta-analytic research to confirm the relative effectiveness of ACT.

**Keywords:** Acceptance and Commitment Therapy, Emotion Focused Therapy, Sexual Health, Type 2 Diabetes, Psychological Flexibility, Emotional Efficiency.

## Ethical Considerations

The present study was conducted after receiving approval from the Ethics Committee of the Islamic Azad University, UAE Branch, under approval number (IR.SBMU.RETECH.REC.1399.383). To uphold ethical standards, participants' voluntary and informed consent was obtained, ensuring they

were aware of their rights and responsibilities, the confidentiality of the data collected, and their freedom to withdraw from the study at any point. Furthermore, the ethical principles in writing this article were adhered to in accordance with the national ethics committee guidelines and COPE (Committee on Publication Ethics).

### Acknowledgments

This study received no financial support. The authors express their sincere gratitude to the managers of the collaborating clinics and the esteemed participants in this study.

### Conflict of Interest

None of the authors, individuals, or institutions involved in this study have any conflicts of interest regarding the publication of this article.

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**Cite this article:** Zandi, M., Mohammad Khani, Sh., & Hatami, M. (2024). Comparison of the Effectiveness and Mechanism of Effect of Acceptance and Commitment Therapy Based on Emotion-Focused Therapy on Sexual Health in Patients with Type 2 Diabetes: The Role of Psychological Flexibility and Emotional Efficiency. *Journal of Applied Psychological Research, 15*(4), 283-300. doi: 10.22059/japr.2024.322990.643828.



**Publisher:** University of Tehran Press  
DOI: <https://doi.org/10.22059/japr.2024.322990.643828>

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