

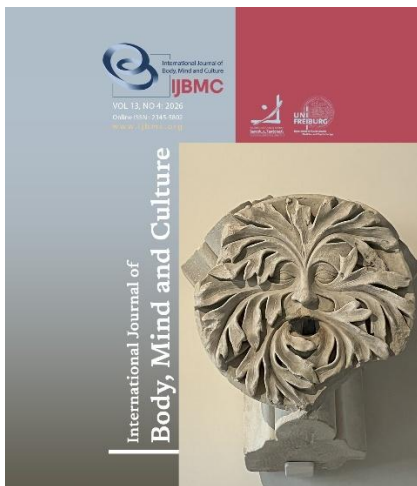
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- 1 Department of Psychology, Ker.C., Islamic Azad University, Kermanshah, Iran.
- 2 Department of Psychology, Ker.C., Islamic Azad University, Kermanshah, Iran.
- 3 Department of Psychology, Ker.C., Islamic Azad University, Kermanshah, Iran.

Corresponding author email address:
ahasan.amiri@iau.ac.ir

The Effectiveness of Sexual Mindfulness Training on Sexual Satisfaction and Sexual Intimacy in Married Women

Marzieh Poosti¹, Hassan Amiri^{2*}, Saeedeh Al-Sadat Hosseini³



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ABSTRACT

Objective: This study aimed to examine the effectiveness of sexual mindfulness training on sexual satisfaction and sexual intimacy among married women attending health care centers in Tehran.

Methods and Materials: This quasi-experimental study used a pretest–posttest control-group design. The statistical population consisted of married women attending health care centers in Tehran during 2024–2025. Thirty eligible women were selected through convenience sampling and randomly assigned to an experimental group ($n = 15$) and a control group ($n = 15$). Data were collected using the Sexual Satisfaction Questionnaire and the Sexual Intimacy Questionnaire. The experimental group received eight weekly sessions of sexual mindfulness training, while the control group received no intervention. Data were analyzed using one-way analysis of covariance in SPSS-26.

Findings: The results showed that sexual mindfulness training significantly improved sexual satisfaction and sexual intimacy in the experimental group compared with the control group. After controlling for pretest scores, the intervention had a significant effect on sexual satisfaction ($F = 164.062$, $p = 0.001$, $\eta^2 = 0.859$) and sexual intimacy ($F = 359.630$, $p = 0.001$, $\eta^2 = 0.930$). The posttest mean scores of both variables were higher in the experimental group than in the control group.

Conclusion: Sexual mindfulness training was effective in enhancing sexual satisfaction and sexual intimacy among married women. This intervention may be considered a useful educational and therapeutic approach for promoting marital and sexual well-being in health care and counseling settings.

Keywords: sexual mindfulness training, sexual intimacy, sexual satisfaction, married women.

Introduction

Love, intimacy, and sexual relationships are intertwined aspects of close relationships, each of which can influence the others in positive or negative ways (Velotta & Schwartz, 2018). Sexual satisfaction is defined as an individual's subjective evaluation of their sexual relationship. It is associated with sexual assertiveness, the quality of intimate communication, body image satisfaction, frequency of sexual intercourse, and the number of orgasms. Sexual satisfaction is also strongly linked to marital satisfaction, which is essential for establishing stable and secure family bonds. It contributes to quality of life and helps prevent high-risk sexual behaviors. In addition, studies have related sexual satisfaction to body awareness and psychological flexibility (Ortega-Otero et al., 2023). Sexual satisfaction, which refers to pleasant feelings about one's sexual relationship, reflects a person's judgment and appraisal of sexual behaviors that are assumed to be pleasurable (Malvini, 2025; Shareh).

Sexual satisfaction is one of the most important factors affecting the quality and stability of couples' relationships. It is a recognized indicator of sexual health and sexual well-being. In most cases, a successful marriage is accompanied by both partners' satisfaction with their sexual relationship. Sexual satisfaction is an emotional-affective response arising from an individual's positive and negative appraisals of their sexual relationship with another person. Studies have shown that sexual satisfaction increases self-esteem, life satisfaction, capacity for love, relationship satisfaction, emotional satisfaction, and a sense of happiness in life (Butzer & Campbell, 2008). Healthy and satisfying sexual functioning and satisfaction are also important factors in preventing sexual dysfunction (Elbeigi-Zanganeh et al., 2024; Hoseinnezhad et al., 2025).

The relationship between sexual dissatisfaction and marital adjustment problems indicates that couples' satisfaction with their sexual relationship is one of the most important dimensions of marital satisfaction (Butzer & Campbell, 2008). Sexual relations influence marital satisfaction in various ways. Sexual interaction fulfills human biological and social needs and, as a result, enhances quality of life. Experiencing sexual satisfaction increases intimacy in the relationship and reduces relational tensions (Liu & Roloff, 2015). Various factors

influence sexual satisfaction, including psychological factors such as the level of intimacy and commitment between spouses; economic and social factors such as income level and working hours; demographic factors such as age, gender, educational level, and religious beliefs; family factors such as length of marriage, parenting styles, number of children, sexual knowledge, and sexual attitudes; and physical aspects of sexual relations such as frequency of intercourse and the experience of orgasm (Zahedinia, 2020). Experiencing sexual satisfaction increases intimacy in the relationship and reduces relational tensions; consequently, reduced tension and increased marital satisfaction can also increase couples' desire to engage in sexual relations (Haavio-Mannila & Kontula, 1997). Schoenfeld et al. (2017) showed that sexual relationship satisfaction is strongly associated with marital satisfaction among married women and is of particular importance in analyzing their marital relationships. Research indicates that low and undesirable sexual relationship quality in married life is directly associated with reduced marital satisfaction (Jiang et al., 2015; Salehi & Sheykhholeslami, 2025). Sexual satisfaction is important because the stability of marital relationships is threatened without a satisfying sexual relationship (Hoseinnezhad et al., 2025).

Another important factor in marital relationships is a form of intimacy, namely sexual intimacy. Intimacy is a sense of closeness, similarity, and a personal romantic or emotional relationship with another person, and it involves deep knowledge and understanding of the other in order to express thoughts and feelings that serve as a source of similarity and closeness. Intimacy is an interactive process and includes interconnected dimensions. The core of this process is knowing, understanding, accepting, empathizing with the other person's feelings, and appreciating and accepting their perspective. del Mar Sánchez-Fuentes et al. (2014) identified the existence of intimate relationships as one of the influential factors in sexual satisfaction. Intimacy is defined as the ability to connect with others while maintaining one's individuality. Such self-based definitions imply that a person has reached a certain level of development in order to establish intimate relationships with others.

Bagarozzi (2001) conceptualizes intimacy as comprising nine dimensions: emotional intimacy, psychological intimacy, intellectual intimacy, sexual intimacy, physical intimacy, spiritual intimacy, social intimacy, recreational intimacy, and time intimacy. The intensity of intimacy and its nine dimensions differ from one person to another. Sexual intimacy refers to the need to share and express sexual thoughts, feelings, and fantasies with one's spouse. Intimacy is not merely a desire or wish; rather, it is a fundamental and real need and a broad concept that includes self-disclosure, sexual relations, and emotional, physical, and intellectual closeness (Velotta & Schwartz, 2018). Sexual intimacy is a complex issue that deserves special attention, because dissatisfaction in this domain often affects all other aspects of the marital relationship (Bagarozzi, 2014).

One educational-therapeutic method is the approach focused on sexual mindfulness, which was developed to teach sexual skills in women and leads to improved marital communication, increased sexual satisfaction, sexual intimacy, and marital satisfaction. The mindfulness approach was introduced by Jon Kabat-Zinn in 1990 and has been demonstrated to be effective in treating chronic pain, depression, obsessive disorders, and sexual disorders (Kabat-Zin, 1990 cited in Soughanlou et al., 2015). Mindfulness, which has roots in Buddhist meditation practices, may reduce distraction during sexual activity and improve self-judgment and greater attention to pleasurable sensations, arousal, and sexual satisfaction by overcoming barriers to awareness during sexual intercourse (attention, self-judgment, and clinical symptoms such as anxiety and depression) (Brotto et al., 2016), and may even lead to greater overall relationship satisfaction (Mize, 2015). In addition, by increasing describing, acting with awareness, nonjudgment, and avoiding the suppression of anxiety-provoking thoughts about appearance, mindfulness may increase body satisfaction (Barrington, 2017).

Mindfulness refers to paying attention to the present moment in a nonjudgmental and purposeful way. It emphasizes awareness of present experience together with acceptance and alertness to reality, encountering the nature of experience, and seeing things as if for the first time. The results of a study by Humphreys et al., (2009) showed that increasing mindfulness in social processing leads to changes in various aspects of intrapersonal and interpersonal conflicts, and that

awareness, self-regulation, and restoration of balance improve with increased mindfulness. Mindfulness is a technique which, combined with meditation, encourages a mental orientation—especially toward experience—and awareness of the present moment in a nonjudgmental manner, or minimizing engagement in thoughts and emotions. This therapeutic approach is considered one of the key components of third-wave therapeutic models.

Sexual mindfulness refers to full attention to sexual experience in the present moment, nonjudgmental acceptance of sexual thoughts and feelings, and attention to the body and the partner's emotions. This method helps individuals experience higher-quality sexual activity and greater satisfaction by reducing anxiety, intrusive thoughts, and cognitive worries (Brotto et al., 2021). Sexual mindfulness involves present-moment awareness during the stages of intercourse. Mindfulness techniques used by Lori Brotto to treat sexual disorders have expanded mindfulness-based sexual therapies. Reviews of various studies indicate the effectiveness of mindfulness-based interventions in different groups of women with problems in sexual desire and arousal, sexual pain, orgasm, sexual satisfaction, and sexual anxiety (Adam et al., 2020). Mindfulness and sexual mindfulness can provide a useful mechanism for couples to increase satisfaction in romantic and sexual relationships even without their partner's satisfaction (Leavitt et al., 2019).

The issue is that as the duration of marriage increases, individuals' sexual quality of life tends to decline, affecting sexual satisfaction and sexual intimacy. Moreover, acquiring sexual knowledge plays a substantial role in sexual quality of life and contributes to sexual well-being. Few studies have been conducted on sexual mindfulness training, and, on the other hand, sexual education is a relatively new domain in Iran, leaving a gap in examining these issues and highlighting the need for further research in this area. Therefore, the present study was conducted to investigate the effectiveness of sexual mindfulness training on sexual satisfaction and sexual intimacy among married women attending healthcare centers in Tehran.

Methods and Materials

Study Design

The present study was applied in terms of purpose and, in terms of data collection method, quasi-experimental with a pretest–posttest design and a control group. The study population included married women who attended healthcare centers in different districts of Tehran during 2024–2025. The sample consisted of 30 married women selected from this population in 2024. First, healthcare centers covered by three universities of medical sciences—Shahid Beheshti University of Medical Sciences, Iran University of Medical Sciences, and Tehran University of Medical Sciences—were considered, and one healthcare center from each university was selected through convenience sampling. Then, after the necessary screening, 30 participants were selected and randomly assigned to two groups of 15 (the sexual mindfulness training intervention group and the control group) (based on Cohen's table, 1986). After the pretest, an 8-session training program (one session per week) was administered to the experimental group.

Inclusion criteria were: absence of chronic psychological and personality disorders; no concurrent psychiatric or psychotherapeutic treatment and no use of medications that cause sexual functioning problems; absence of medical conditions that cause sexual dysfunction; at least 2 to 5 years of marital life; and at least a high school diploma. Exclusion criteria included: withdrawal from treatment; absence from more than two sessions; not having adequate physical or psychological condition to complete the questionnaires; and incomplete questionnaire responses in a way that could negatively affect the results.

Instruments

Sexual Satisfaction Questionnaire: This questionnaire was developed by Hudson-Harrison and Croscap (1998) to measure couples' level of sexual satisfaction. It includes 25 items rated on a 7-point scale from 0 ("never") to 6 ("always"), with some items reverse-scored. Reverse-scored items include questions 4, 5, 6, 7, 8, 11, 13, 14, 15, 18, 20, 24, and 25. The minimum possible score is 25 and the maximum score is 150. Scores from 25 to 67 indicate low sexual satisfaction; scores from 67 to 100 indicate

moderate sexual satisfaction; and scores above 100 indicate high sexual satisfaction. The developers reported a Cronbach's alpha of 0.91, and the validity of the test was confirmed at 0.85. Test–retest reliability with a one-week interval was reported as 0.93. In the study by Moradi & Madani (2020), Cronbach's alpha was reported as 0.89. In the present study, Cronbach's alpha was 0.85.

Sexual Intimacy Questionnaire: This questionnaire was developed by Bagarozzi (2001) adapted the Sexual Intimacy Questionnaire based on valid scientific sources. It contains 30 items, each rated on a 4-point scale (always, sometimes, rarely, never) scored from 1 to 4 (always = 4, sometimes = 3, rarely = 2, never = 1). The minimum score is 30 and the maximum score is 120. Reverse-scored items include questions 2, 6, 9, 11, 12, 13, 14, 16, 20, 22, 26, 27, and 29. Scores from 30 to 50 indicate low sexual intimacy; scores from 51 to 100 indicate moderate sexual intimacy; and scores above 100 indicate high sexual intimacy. Content validity was confirmed by five counseling and psychology specialists at the Faculty of Educational Sciences, University of Isfahan. To determine internal reliability, the questionnaire was administered to 140 individuals (70 couples), and Cronbach's alpha was 0.81.

Sexual Mindfulness Training Protocol

Sexual mindfulness training consists of teaching mindfulness exercises during sexual intercourse. Mindfulness is a technique that, combined with meditation, encourages a specific mental orientation toward experience, becoming aware of the present moment in a nonjudgmental way, and minimizing involvement in thoughts and feelings. This therapeutic approach is considered one of the important components of third-wave therapeutic models. Individuals with high mindfulness, due to their awareness of time and lack of fear of change, can create a constantly dynamic and flexible environment in their lives (Farshidmanesh et al., 2019). For implementing this training, Kabat-Zin mindfulness approach (1990) can be used. The sexual mindfulness training protocol in sex therapy was written by Hoseinnezhad et al., (2025) and is delivered in eight two-hour sessions. A summary is presented in Table 1.

Table 1*Summary of Sexual Mindfulness Training Sessions Based on Kabat-Zinn's Approach*

Session	Goal	Implementation Method	Homework
1	Welcoming and introductions; establishing therapeutic alliance; administering the pretest	Establishing initial rapport; explaining goals and procedures; interaction and pretest administration	Participants specify their goals for taking part in the course
2	Turning inward	Mindful movement; introduction to mindful listening; raisin-eating mindfulness exercise; body scan; general inquiry; grounding technique (grounding/breathing/awareness)	Body scan; mindful moments; practice with spouse
3	Moving and exploring	Mindful movement; mindful listening; movement practice; dyadic inquiry; mindful listening; sensory objects; general inquiry; seated meditation (breathing with music); grounding (breathing/awareness/movement)	Seated meditation; mindful moments; mindful listening; dyadic inquiry with spouse
4	Avoidance and intimacy	Mindful movement; mindful listening; dyadic inquiry; mindful listening; seated meditation (kindness and gentleness); general inquiry; mindful inquiry; feeling exercise while sitting back-to-back; grounding (breathing/awareness/movement)	Seated meditation; mindful moments (touch); back-to-back sitting-feeling exercise with spouse
5	Recognizing the automatic mind	Mindful movement; mindful listening; dyadic inquiry; seated meditation (self sexual exploration); general inquiry; practice of sexual meanings; viewing sexual position images; grounding (breathing/awareness/movement)	Seated meditation; mindful moments (self-sensory touch); viewing sexual position images with spouse and practicing sexual meanings together
6	Comprehensive awareness	Mindful movement; mindful listening; dyadic inquiry; seated meditation (exploring sexual discomfort); learning an intimate and confidential question with mindful listening; general inquiry; grounding (breathing/awareness/movement)	Mindful moments (self or partner sensory touch); mindful couple practice; practicing intimate/confidential questioning with spouse
7	Expanding the program and learning new skills	Mindful movement; mindful listening; dyadic inquiry; seated meditation (future goals); general inquiry; mindful walking; dyadic guidance exercise (one guides, the other follows with eyes closed); writing a letter to oneself; grounding (breathing/awareness/movement)	Review completed homework and continue it in later periods of life
8	Treatment review and posttest	Combination of mindfulness exercises: (a) sharing current experience with spouse and using it for speaking/listening (not conversation) followed by mindful inquiry; (b) mindful movement; (c) dyadic homework review; (d) dyadic mindful listening to heartbeat; (e) mindful walking; (f) discussion of sexual relationship and intimacy issues; administering the posttest	Continuing homework throughout life

Procedure

After administering the pretest and assigning participants to the experimental and control groups, the experimental group received the sexual mindfulness intervention in 8 two-hour weekly group sessions based on *Kabat-Zin (1990)* mindfulness approach (1990), using the protocol developed for sex therapy (*Hoseinnezhad et al., 2025*). Descriptive and inferential statistics were used for data analysis. Descriptive indices of the study variables included measures of central tendency (frequency, percentages, mean) and dispersion (variance and standard deviation), which were calculated and reported in tables. In the inferential section, to test the study hypotheses and examine the effect of the independent variable on the dependent variables, one-way analysis of covariance (ANCOVA) was used.

Ethical Considerations

This study was initiated after receiving ethical approval from the Ethics Committee of Islamic Azad University. The ethics code for this study was IR.IAU.KSH.REC.1402.088.

Analysis

This analysis has assumptions, including normality of the distribution of the variables, which was examined using the Shapiro-Wilk test. The next assumption is homogeneity of error variances across groups, which was tested using Levene's test. The assumption of homogeneity of regression slopes was also examined. The study data were analyzed using SPSS software, version 26.

Findings and Results

Participants in this study were 30 married women attending healthcare centers in different districts of Tehran (under the supervision of three universities of medical sciences: Iran, Shahid Beheshti, and Tehran). They were assigned to two groups: 15 participants in the

control group and 15 participants in the sexual mindfulness training group, with random allocation. Most participants were in the 20–25 age range. The results also showed that the duration of marriage for most participants was between 2 and 5 years.

Table 2

Descriptive indices for the pretest and posttest data

Phase	Variable	Experimental Mean	SD	Control Mean	SD
Pretest	Sexual satisfaction	74.66	21.65	84.80	13.55
	Sexual intimacy	73.46	12.11	85.66	11.12
Posttest	Sexual satisfaction	124.53	17.32	85.53	13.00
	Sexual intimacy	104.20	11.93	85.93	11.17

As shown, the mean scores of the groups changed at the posttest compared with the pretest. One of the key assumptions for conducting one-way analysis of covariance (ANCOVA) is the normality of the variables, which was examined using the Shapiro–Wilk test. The obtained significance levels for all main variables at both the pretest and posttest stages were greater than the 0.01 error level; therefore, the distributions were considered normal and the normality assumption was confirmed.

The assumptions of homogeneity of error variances were also examined for each hypothesis. Another prerequisite of ANCOVA is homogeneity of error variances, tested using Levene’s test. The significance levels for the main variables across the two groups were not significant at the 0.05 error level; therefore, the

homogeneity of error variances assumption was confirmed. In addition, the significance levels for the interaction effects between the covariate and the main dependent variables were greater than 0.05, indicating that the interaction effects were not significant. Accordingly, the assumption of homogeneity of regression slopes was also confirmed.

To test the hypothesis, one-way ANCOVA was used. Specifically, posttest mean scores for sexual satisfaction were compared between the control group and the sexual mindfulness training group while controlling for pretest scores. After checking and confirming the assumptions (normality, homogeneity of error variances, and homogeneity of regression slopes), the main between-subjects (group) effects were examined. The output is presented in Table 3.

Table 3

Between-subjects effects (group effects) for sexual satisfaction

Source	Sum of Squares	df	Mean Square	F	Sig.	Eta squared (η^2)
Group	14541.330	1	14541.330	164.062	0.001	0.859
Error	2393.089	27	88.633			
Total	16934.419	29				

Table 3 presents the statistical results related to the effectiveness of sexual mindfulness training on married women’s sexual satisfaction. The results indicate that the group variable (experimental vs. control) had a statistically significant effect, with $p = 0.001$, which is below the 0.01 criterion level and shows that the observed differences between the two groups were

statistically significant. The F statistic for sexual satisfaction was 164.062, indicating a strong intervention effect. The eta squared (η^2) effect size for sexual satisfaction was 0.859, suggesting that sexual mindfulness training explained 85.9% of the variance in changes in sexual satisfaction. Overall, the findings indicate that sexual mindfulness training had a

significant effect on increasing sexual satisfaction among married women. The post-intervention mean comparison is presented in Table 4.

Table 4

Comparison of mean sexual satisfaction by group

Variable	Group	Mean	Comparison	Mean Difference	P.	Lower Bound	Upper Bound
Sexual satisfaction	Experimental	127.958	Experimental vs. Control	45.850*	0.001	38.505	53.195
	Control	82.108	Control vs. Experimental	-45.850*	0.001	-21.975	-27.273

Table 4 shows the results of comparing mean sexual satisfaction scores between the experimental and control groups after completion of the intervention. The analysis indicated a statistically significant difference between the two groups at a level below 0.01. For sexual satisfaction, the mean score in the experimental group was 127.958, compared with 82.108 in the control group. The mean difference between the groups,

favoring the experimental group, was 45.850, with $p = 0.001$. This finding indicates that women in the experimental group, after receiving sexual mindfulness training, had significantly higher sexual satisfaction than those in the control group. Overall, the findings indicate a significant effect of the intervention in increasing sexual satisfaction.

Table 5

Between-subjects effects (group effects) for sexual intimacy

Source	Sum of Squares	df	Mean Square	F	Sig.	Eta squared (η^2)
Group	5127.871	1	5127.871	359.630	0.001	0.930
Error	384.986	27	14.259			
Total	6243.867	29				

Table 5 presents the statistical results related to the effectiveness of sexual mindfulness training on married women's sexual intimacy. The results indicate that the effect of group (experimental vs. control) was statistically significant, with $p = 0.001$, which is below the 0.01 criterion level and indicates that the observed differences between the two groups were statistically significant. The F statistic for sexual intimacy was 359.630, demonstrating a strong intervention effect. The

eta squared (η^2) effect size for sexual intimacy was 0.930, suggesting that sexual mindfulness training explained 93% of the variance in changes in sexual intimacy. Overall, the findings indicate that sexual mindfulness training had a significant effect on increasing sexual intimacy among married women; therefore, the study hypothesis was confirmed. Adjusted mean comparisons for sexual intimacy after controlling for pretest scores are presented in Table 6.

Table 6

Comparison of mean sexual intimacy by group

Variable	Group	Mean	Comparison	Mean Difference	Sig.	Lower Bound	Upper Bound
Sexual intimacy	Experimental	109.694	Experimental vs. Control	29.755*	0.001	26.536	33.974
	Control	80.189	Control vs. Experimental	-29.755*	0.001	-32.974	-26.536

Table 6 shows the comparison of mean sexual intimacy scores between the experimental and control groups after the intervention. The analysis indicated a statistically significant difference between the two groups at a level below 0.01. For sexual intimacy, the

mean score in the experimental group was 109.694, compared with 80.189 in the control group. The mean difference between the groups, favoring the experimental group, was 29.755, with $p = 0.001$. This finding indicates that women in the experimental group,

after receiving sexual mindfulness training, had significantly higher sexual intimacy than those in the control group. Overall, the findings indicate a significant effect of the intervention in increasing sexual intimacy.

Discussion and Conclusion

The results showed that sexual mindfulness training had a significant effect on increasing sexual satisfaction among married women. These findings indicate that women in the experimental group, after receiving sexual mindfulness training, reported higher levels of sexual satisfaction than those in the control group. This pattern is consistent with theoretical foundations and prior research (Ahmadzadeh et al., 2025; Brotto et al., 2008; Brotto et al., 2016; Ciaurriz Larraz et al., 2024; del Mar Sánchez-Fuentes et al., 2014; Goldberg et al., 2025; Jarvis et al., 2025; Kabat-Zinn, 2003; Khazaeian et al., 2023; Leavitt et al., 2019; Omidvar et al., 2021; Saavedra & Tavares, 2025; Stephenson & Kerth, 2017).

In this regard, mindfulness is considered an effective theoretical framework in the domain of sexual health. Mindfulness refers to purposeful, present-moment attention that is nonjudgmental (Kabat-Zinn, 2003). Sexual mindfulness training, by emphasizing greater body awareness, acceptance of sensory experience, and reduced cognitive reactivity, helps individuals distance themselves from intrusive thoughts and attend to the actual experience of sexual sensations. According to mindfulness-based theoretical models, increased attention to bodily sensations and reduced mental judgment enhance the quality of sexual experience and, consequently, sexual satisfaction. When individuals are able to remain in the present moment without anxiety and negative self-evaluation, the likelihood of experiencing sexual pleasure and satisfaction increases (Kabat-Zinn, 2003). Empirical evidence has also supported this theoretical account (Ciaurriz Larraz et al., 2024). The classic study by Brotto et al. (2008) showed that mindfulness-based interventions improve arousal, reduce sexual distress, and increase women's sexual satisfaction. Similarly, Stephenson & Kerth (2017) reported that mindfulness plays a significant role in improving women's sexual satisfaction by reducing self-criticism and increasing focus on sexual sensations.

Accordingly, it can be argued that sexual mindfulness training, through increased body awareness, reduced

intrusive thoughts, and improved attentional regulation, creates the conditions for increased sexual satisfaction in married women, which is consistent with established theoretical frameworks. The present findings indicated that sexual mindfulness training was effective in increasing married women's sexual satisfaction. One explanation is that sexual mindfulness training helped women shift attention away from mental worries, negative thoughts, and anxiety related to sexual performance toward the moment-by-moment experience of bodily and emotional sensations. These trainings appear to have reduced excessive self-monitoring and increased body acceptance, enabling women to remain present in sexual experiences without judgment or psychological pressure. This shift in attention and processing of sexual experience likely played an important role in enhancing pleasure and sexual satisfaction. Moreover, sexual mindfulness training may have increased sexual self-awareness and improved emotion regulation in intimate situations. Women in the experimental group, after training, were better able to connect with their sexual feelings and needs and to experience more satisfying sexual encounters. In contrast, women in the control group, who received no training, showed no meaningful change in sexual satisfaction. Overall, it can be concluded that sexual mindfulness training, by reducing cognitive barriers to sexual experience, increasing present-moment awareness, and strengthening self-acceptance, played an effective role in improving sexual satisfaction among married women.

The results also showed that mindfulness training increased sexual intimacy in married women. In other words, women in the experimental group, after receiving sexual mindfulness training, reported higher levels of sexual intimacy than those in the control group. These findings are consistent with previous studies (Khazaeian et al., 2023; Ahmadzadeh et al., 2025; Banbury et al., 2023; Eka & Tondok, 2024; Farshidmanesh et al., 2019; Lin et al., 2019).

Research has shown that mindfulness-based interventions—even in brief formats—can significantly enhance sexual functioning, reduce sexual distress, and improve the quality of sexual relationships and intimacy (Banbury et al., 2023). This therapeutic approach emphasizes moment-to-moment awareness, acceptance of feelings, and attentional regulation, which reduces

maladaptive emotional reactions (such as performance anxiety or self-criticism) and helps couples experience sexual activity without mental distraction. Based on this theoretical framework and international research evidence, sexual mindfulness training—by strengthening presence, changing one's relationship with intrusive thoughts, and increasing sensory awareness—can facilitate greater sexual intimacy. This is because intimacy is an interpersonal process that requires shared attention, acceptance, and effective emotional connection in the moment of interaction.

The present study showed that sexual mindfulness training had a significant effect on increasing sexual intimacy among married women. One possible explanation is that sexual mindfulness training helped women shift attentional focus away from intrusive thoughts and performance anxiety toward the ongoing sexual experience, reduce negative judgments about themselves and their partners, and experience emotions and bodily sensations with acceptance and without negative reactivity. This not only increases attention to sensory experience, but also fosters deeper emotional and interpersonal connection with one's spouse—precisely what is central to sexual intimacy. International studies have also indicated that sexual mindfulness protocols can improve not only sexual functioning but also intimacy and closeness between partners (Eka & Tondok, 2024; Lin et al., 2019). Moreover, review studies have shown that mindfulness reduces psychological distress and enhances empathy and understanding of a partner's feelings, which are key components of sexual intimacy in marital relationships (Banbury et al., 2023). Therefore, women in the experimental group who received sexual mindfulness training were able to establish deeper emotional connections with their spouses, regulate their emotions more effectively, and consequently increase their sexual intimacy compared with the control group. These results suggest that sexual mindfulness training is an effective intervention for improving sexual intimacy and can be considered a practical, evidence-based approach to enhancing marital relationship quality.

Like other studies in the human sciences, the present research had limitations that should be considered when interpreting and generalizing the results. First, generalizability to other populations is limited because the sample included only women. Second, the data

collection method relied on self-report questionnaires, which may limit access to complete and comprehensive information. Because these instruments assess attitudes and perceptions, interpretation of the results should be made with caution due to limitations in questionnaire validity. Third, participants' response styles, individual diagnostic differences, and the influence of these characteristics on questionnaire completion may have affected the findings. In addition, respondents' honesty and accuracy in selecting response options may have influenced results, potentially due to concerns about being identified or disclosure of private information. Cultural features common in some Eastern societies—such as exaggerated or minimized reporting based on relational and emotional considerations—may also have contributed. Finally, the presence of intervening variables is another limitation, as the researcher could not control all other influential variables; thus, the study was subject to limitations related to implementation conditions.

Given limited generalizability due to the inclusion of women only, future studies should include men, couples, and more diverse demographic groups to allow broader generalization. It is also recommended that future studies use mixed methods—incorporating qualitative tools such as interviews and observation alongside questionnaires—to enhance the validity and richness of the data. Future research should also consider participants' individual and personality characteristics as contextual or moderating variables. To reduce cultural and social response biases, confidentiality should be more explicitly guaranteed and anonymous data collection methods should be used. Given the potential influence of intervening variables and limitations in controlling them, future studies should employ more rigorous designs, larger samples, and better-controlled implementation conditions to strengthen the validity of findings.

From an applied perspective, healthcare centers and family counseling clinics are encouraged to offer workshops and educational programs based on sexual mindfulness as effective interventions for improving sexual satisfaction and sexual intimacy among married women. Family and sexual health counselors and therapists can use this approach to modify maladaptive beliefs, reduce relationship-related anxiety, and strengthen sexual communication skills. Short-term and

long-term educational programs based on this approach may also be integrated into healthcare centers as part of prevention efforts and as a means of enhancing marital quality of life.

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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.

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