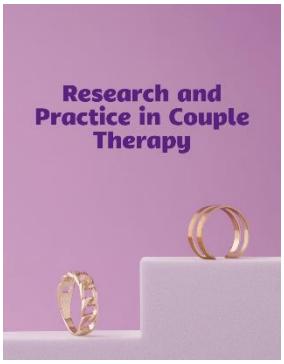
Article Type: Original Research
Article history:
Received 11 September 2024
Revised 18 November 2024
Accepted 24 November 2024
Published online 10 December 2024

Impact of a Mindful Touch Program on Marital Satisfaction and Sexual Responsiveness



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ABSTRACT

This study aimed to evaluate the effectiveness of a Mindful Touch Program in enhancing marital satisfaction and sexual responsiveness among married couples. A randomized controlled trial was conducted with 30 married participants (15 in the intervention group and 15 in the control group) recruited from counseling centers in Taiwan. Participants in the intervention group received a 10-session Mindful Touch Program over five weeks, while the control group received no intervention. Both groups were assessed at three time points—pre-test, post-test, and five-month follow-up—using the ENRICH Marital Satisfaction Scale and the Female Sexual Function Index (FSFI). Data were analyzed using repeated measures ANOVA and Bonferroni post-hoc tests via SPSS-27. All assumptions for statistical tests were verified and met. The results indicated significant interaction effects between time and group for both marital satisfaction ($F(2,84) = 34.88$, $p < .001$, $\eta^2 = .557$) and sexual responsiveness ($F(2,84) = 45.36$, $p < .001$, $\eta^2 = .603$), confirming that the intervention group experienced significant improvements over time compared to the control group. Post-hoc analyses showed that the intervention group had marked increases from pre-test to post-test ($p < .001$) and from pre-test to follow-up ($p < .001$) on both outcome measures. The control group showed no statistically significant change across any time points. The Mindful Touch Program was effective in significantly enhancing both marital satisfaction and sexual responsiveness among married individuals. These improvements were sustained over a five-month follow-up period, highlighting the potential of mindfulness-based physical intimacy interventions in strengthening emotional and sexual bonds in romantic relationships.

Keywords: mindful touch, marital satisfaction, sexual responsiveness, couple therapy, intimacy enhancement

How to cite this article:
Chen, M.L., Lee, S., Chen, L., & Yang, Y. (2024). Impact of a Mindful Touch Program on Marital Satisfaction and Sexual Responsiveness. *Research and Practice in Couple Therapy*, *2*(4), 1-11. https://doi.org/10.61838/rpct.2.4.3

Introduction

The interplay between sensory awareness and emotional attunement has garnered increasing interest in both relationship science and sexual health domains. Touch is not merely a biological stimulus; it is laden with cognitive, contextual, and affective components that shape individual responses (Everaerd, 2015; Pfaus et al., 2014). Research demonstrates that sensory cues such as warmth, gentleness, and timing significantly influence the degree to which physical contact is perceived as pleasurable, safe, or arousing (Lehman, 2022; Ponseti et al., 2018). The role of visual and tactile attention in modulating sexual response is particularly salient in women, who may exhibit more contextual and emotionally dependent patterns of arousal (Carvalho & Pereira, 2022; Chivers, 2017; Micanovic et al., 2021). A growing body of literature underscores the importance

of integrating mindful awareness into sensory experiences to deepen emotional and sexual intimacy (Drouin, 2022; Milani et al., 2021).

Marital satisfaction, while a multifaceted construct, is significantly influenced by the quality of physical and emotional intimacy between partners. Emotional intimacy often emerges through touch-based expressions such as hugging, caressing, or holding hands, which signal responsiveness, care, and validation (Vowels et al., 2022). The erosion of such practices over time—due to habituation, stress, or unresolved emotional conflict—can result in relational dissatisfaction and decreased sexual responsiveness. Research suggests that touch-based interventions can restore a sense of connection and trust, particularly when paired with mindful practices that cultivate present-moment awareness and reduce performance anxiety (Huberman & Chivers, 2015; Jabs & Brotto, 2018).

The sexual response cycle, once conceptualized as a linear process of arousal, plateau, orgasm, and resolution, is now understood as a dynamic, feedback-based interaction influenced by cognitive schemas, emotional availability, and interpersonal feedback (Damjanović et al., 2013; Everaerd, 2015). For many women, sexual responsiveness is more accurately described as a circular process, in which emotional closeness, safety, and contextual cues precede and facilitate arousal (Clifton et al., 2015; McNicoll et al., 2016). This distinction has critical implications for intervention design, as it highlights the need for approaches that foreground emotional engagement and gradual arousal, rather than goal-oriented sexual performance (Carvalho & Oliveira, 2024; Jabs & Brotto, 2018). In this regard, mindfulness-enhanced touch exercises may foster both physiological arousal and emotional intimacy by anchoring the experience in bodily awareness, emotional regulation, and mutual responsiveness (MacConochie, 2022).

Furthermore, attentional mechanisms play a crucial role in shaping sexual arousal patterns. Studies using eye-tracking and neurophysiological assessments show that visual and tactile attention toward erotic stimuli correlates with subjective and genital arousal, though the pathways differ across genders (Carvalho & Oliveira, 2024; Micanovic et al., 2021). For instance, women often exhibit a more diffuse pattern of attention and arousal, influenced by emotional valence and relational cues, while men show more focal responses to explicit sexual stimuli (Huberman & Chivers, 2015; Seto et al., 2012). These findings support the argument that enhancing mindful attention to bodily and emotional cues during partner touch may significantly impact sexual responsiveness, particularly among women (Milani et al., 2021).

The role of cognitive-affective schemas also contributes to individual differences in sexual functioning. Internal beliefs and self-schemas regarding sexuality, bodily acceptance, and relational expectations can either facilitate or inhibit sexual arousal and satisfaction (Kilimnik & Meston, 2016; Nanos, 2018). For example, women with negative body image or histories of sexual trauma often display greater sexual inhibition and diminished responsivity (Kilimnik & Meston, 2016). Mindful touch interventions that focus on nonjudgmental awareness of sensations and emotional responses may serve as corrective experiences, allowing individuals to reframe bodily sensations from a place of acceptance and curiosity rather than fear or shame (Singh, 2015).

From a neurobiological perspective, touch activates key brain regions associated with reward, empathy, and bonding, including the insula, orbitofrontal cortex, and anterior cingulate cortex (Pfaus et al., 2014; Ponseti et al., 2018). These activations not only facilitate sexual arousal but also promote emotional regulation and interpersonal synchrony. When touch is administered mindfully, its impact is amplified, reinforcing mutual trust and reinforcing intimacy circuits. The evolutionary and relational importance of touch thus cannot be overstated—it is an ancient modality through which humans co-regulate emotion, negotiate power, and express relational commitment (Lehman, 2022; MacConochie, 2022).

Emerging research on sexual need responsiveness further illuminates how partners can enhance each other's sexual wellbeing by attending to verbal and nonverbal cues, adjusting their behavior based on feedback, and expressing interest in

their partner's pleasure (Vowels et al., 2022). Mindful touch provides a structure for this type of responsive engagement, enabling partners to pause, reflect, and modulate their behavior in real-time. It also supports the development of sexual assertiveness, a key predictor of positive sexual outcomes in women (McNicoll et al., 2016).

Cultural and societal norms, however, shape how touch and sexuality are experienced and expressed. In East Asian contexts such as Taiwan, relational harmony, emotional restraint, and gender roles may influence how couples engage with physical intimacy (Liu & Xiong, 2016). Programs that incorporate culturally sensitive mindfulness and touch-based exercises may offer a valuable framework for enhancing marital satisfaction without violating norms of modesty or emotional regulation. Moreover, such interventions are especially relevant given increasing evidence of touch deprivation and its consequences in modern relationships (Drouin, 2022; Ramos et al., 2023).

It is also critical to consider the impact of trauma, shame, or prior negative relational experiences on an individual's openness to touch-based interventions. Gender and sexual minority individuals, for example, may face heightened barriers to physical intimacy due to stigma or prior violations of bodily autonomy (Labonté et al., 2023). In these populations, the pacing, consent framework, and psychological safety embedded in mindful touch protocols are particularly beneficial. When guided ethically, touch can become not only a source of pleasure and arousal but also a pathway to healing and relational empowerment (Labonté et al., 2023).

Despite widespread recognition of the importance of touch in romantic relationships, few interventions explicitly integrate tactile intimacy with structured mindfulness practices. Existing literature has largely focused on cognitive-behavioral approaches to sexual dysfunction or pharmacological treatments that often ignore the embodied, relational nature of sexuality (Damjanović et al., 2013). The Mindful Touch Program aims to address this gap by offering a relationally oriented, sensory-based, and emotionally attuned pathway to restoring marital satisfaction and sexual responsiveness.

In summary, the present study builds on a growing interdisciplinary consensus that sexuality and intimacy are deeply intertwined with sensory awareness, emotional attunement, and relational responsiveness. By introducing a structured mindful touch intervention, this research seeks to empirically assess its impact on two key dimensions of couple functioning: marital satisfaction and sexual responsiveness.

Methods and Materials

Study Design and Participants

This study employed a randomized controlled trial (RCT) design to examine the effectiveness of the Mindful Touch Program on marital satisfaction and sexual responsiveness among married couples. A total of 30 participants (15 couples) were recruited from community mental health centers and marriage counseling clinics in Taiwan through purposive sampling and were randomly assigned to either the intervention group (n = 15) or the control group (n = 15). Participants were eligible if they were legally married, aged between 25 and 50 years, cohabiting for at least two years, and reported mild to moderate dissatisfaction with sexual or relational intimacy based on screening criteria. Exclusion criteria included a diagnosis of severe psychiatric disorder, history of sexual trauma in the past year, or current use of medications that may affect sexual functioning. All participants provided informed consent before enrollment. The intervention lasted five weeks, and a follow-up assessment was conducted five months after the final session to evaluate the sustainability of outcomes.

Measures

To assess marital satisfaction, the study employed the ENRICH Marital Satisfaction Scale (EMS) developed by Olson, Fournier, and Druckman in 1985. This widely used self-report questionnaire evaluates various dimensions of marital quality through 35 items across several subscales, including communication, conflict resolution, sexual relationship, financial management, and leisure activities. Participants respond on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Higher scores reflect greater marital satisfaction. The EMS has demonstrated high internal consistency (Cronbach's alpha ranging from 0.80 to 0.95) and strong construct validity in both clinical and non-clinical samples. Numerous studies have confirmed its sensitivity in detecting changes resulting from marital interventions and therapeutic programs.

Sexual responsiveness was measured using the Female Sexual Function Index (FSFI) developed by Rosen et al. in 2000. This 19-item scale evaluates key aspects of female sexual function over the past four weeks across six domains: desire, arousal, lubrication, orgasm, satisfaction, and pain. Each item is rated on a 5- or 6-point Likert scale, and domain scores are calculated by multiplying the sum of items in each domain by a specific factor; these are then summed to yield a total score ranging from 2 to 36, with higher scores indicating greater sexual functioning and responsiveness. The FSFI has demonstrated high internal consistency (Cronbach's alpha > 0.90), excellent test-retest reliability, and strong discriminant validity in both clinical and general populations. Its widespread use in intervention studies confirms its robustness as a standard instrument.

Intervention

The Mindful Touch Program is a structured 10-session intervention delivered over five weeks (two sessions per week), each lasting 90 minutes. It combines mindfulness-based practices, psychoeducation, and experiential couple exercises focusing on intentional, nonsexual and sexual touch. The primary goal is to cultivate bodily awareness, emotional connection, and deeper intimacy through slow, present-moment physical contact. Each session includes guided practices, couple dialogues, experiential touch exercises, and reflective sharing. Home assignments reinforce in-session learning.

Session 1: Orientation and Building Mindful Presence

This introductory session focuses on establishing rapport and setting expectations for the program. Participants are introduced to the core principles of mindfulness—non-judgment, present-moment awareness, and compassion—and their relevance to intimate relationships. Couples practice basic mindful breathing and body scan exercises. A brief discussion on the role of touch in emotional bonding is facilitated. Home practice includes daily 10-minute mindful breathing and journaling of bodily sensations during touch.

Session 2: Foundations of Mindful Touch

Couples are introduced to the concept of mindful touch—physical contact characterized by intention, attention, and emotional presence. The session covers the physiological and psychological impacts of touch. Guided exercises include slow, non-sexual hand and arm touching with verbal feedback on sensations and emotions. Partners learn to observe their own and each other's bodily responses non-judgmentally. The session closes with reflective dialogue and journaling prompts.

Session 3: Attuning to the Body and Emotional Cues

This session deepens somatic awareness. Couples practice a body-sensing meditation followed by an exercise in synchronized breathing while maintaining light physical contact (e.g., hand on heart or shoulder). Discussion focuses on recognizing how stress, anxiety, or past experiences manifest in bodily reactions during touch. Partners begin to articulate comfort levels, boundaries, and emotional signals. This prepares them for deeper embodied communication in later sessions.

Session 4: Trust-Building and Safe Touch

The focus is on cultivating safety, trust, and vulnerability. Couples explore giving and receiving touch at their own pace using a "yes-no-maybe" framework to establish consent and comfort zones. The session includes a "grounding touch" exercise—gentle holding or touching of the back, shoulders, or hands while maintaining eye contact and verbal reassurance. Reflection emphasizes emotional safety, empathy, and honoring individual boundaries.

Session 5: Emotional Communication Through Touch

This session introduces the use of touch as a form of nonverbal emotional communication. Partners engage in exercises such as "emotional mapping," where they attempt to express affection, care, or empathy through hand movements or light caressing on the back or arms. The couple discusses the felt emotional quality of the touch. This enhances both responsiveness and expressiveness within the relationship.

Session 6: Exploring Pleasure and Sensuality (Nonsexual)

The goal is to enhance awareness of pleasure and sensual connection without pressure for sexual performance. Couples are guided through slow, intentional touching exercises on non-erogenous zones (e.g., arms, back, face), focusing on temperature, texture, and rhythm. Discussion focuses on mindfulness of desire, emotional openness, and reintroducing playfulness. The session sets a foundation for safely transitioning to sexual touch in later sessions.

Session 7: Mindful Sensate Focus – Stage 1 (Giving and Receiving)

Drawing from sensate focus principles, this session begins structured sexual responsiveness work. Partners alternate roles in giving and receiving sensual (not genital) touch, such as stroking the torso or thighs while maintaining mindful attention to sensations and reactions. There is no goal of intercourse or orgasm. Emphasis is placed on communication, attunement, and describing experiences verbally and nonverbally.

Session 8: Mindful Sensate Focus – Stage 2 (Mutual Exploration)

Couples engage in mutual touch that may involve genital contact, still without expectations of intercourse or climax. The focus remains on observing bodily and emotional reactions in real time. Guided verbal sharing is encouraged to foster emotional safety. Discussions explore arousal patterns, responsiveness, and acceptance of differences. This session strengthens emotional and physical intimacy simultaneously.

Session 9: Integrating Mindfulness in Sexual Intimacy

In this integrative session, couples explore how to incorporate mindfulness into their existing sexual routines. Topics include pacing, breath coordination, emotional check-ins, and managing distractions or performance anxiety. The session includes partner yoga poses, synchronized touch practices, and co-created rituals for initiating intimacy. Emphasis is on maintaining presence, emotional connection, and authenticity during intimacy.

Session 10: Reflection, Consolidation, and Future Planning

The final session reviews progress, challenges, and growth throughout the program. Couples reflect on changes in their emotional closeness, communication, and physical intimacy. They co-create a personalized "Mindful Intimacy Plan" to continue practicing mindful touch beyond the intervention. Rituals for reconnecting after conflict or emotional distance are introduced. A closing gratitude exercise fosters mutual appreciation and commitment.

Data analysis

Data were analyzed using SPSS version 27. Descriptive statistics were computed for demographic variables. To examine the effects of the intervention across time (pretest, posttest, and five-month follow-up), a repeated measures analysis of variance (ANOVA) was conducted. The interaction effects of time and group were tested for both dependent variables (marital satisfaction and sexual responsiveness). In cases where significant main effects were found, the Bonferroni post-hoc test was

used to identify pairwise differences. All assumptions for repeated measures ANOVA, including sphericity, normality, and homogeneity of variance, were tested and confirmed before analysis. The significance level was set at $p < 0.05$ for all statistical tests.

Findings and Results

The participants included 30 married individuals (50% female, 50% male) ranging in age from 26 to 48 years (M = 36.7, SD = 5.92). Regarding education level, 12 participants (40.0%) had completed a bachelor's degree, 10 participants (33.3%) held a master's degree, and 8 participants (26.7%) had completed high school. In terms of marital duration, 13 participants (43.3%) had been married for 2–5 years, 11 participants (36.7%) for 6–10 years, and 6 participants (20.0%) for over 10 years. Most participants (21 individuals, 70.0%) reported being in their first marriage, while the remaining 9 participants (30.0%) reported remarriage. Additionally, 26 participants (86.7%) had no prior experience in mindfulness or touch-based interventions.

Table 1. Means and Standard Deviations of Marital Satisfaction and Sexual Responsiveness by Group and Time

Variable	Group	Pre-Test (M ± SD)	Post-Test (M ± SD)	Follow-Up (M ± SD)
Marital Satisfaction	Intervention	92.47 ± 6.81	107.35 ± 7.14	110.12 ± 6.56
	Control	93.14 ± 7.03	94.01 ± 7.18	93.89 ± 6.97
Sexual Responsiveness	Intervention	19.76 ± 3.27	26.89 ± 3.42	27.54 ± 3.12
	Control	19.31 ± 2.95	19.88 ± 3.04	19.67 ± 2.88

As shown in Table 1, participants in the intervention group demonstrated substantial gains in both marital satisfaction and sexual responsiveness from pre-test to post-test, which were maintained or slightly improved at follow-up. In contrast, the control group exhibited minimal change across all time points. For marital satisfaction, the intervention group improved from a pre-test mean of 92.47 to 110.12 at follow-up. For sexual responsiveness, scores increased from 19.76 at baseline to 27.54 at follow-up, indicating a strong positive trend over time.

All statistical assumptions for repeated measures ANOVA were evaluated and met. Shapiro–Wilk tests confirmed the normality of the dependent variables in each group at all time points (p-values ranged from .145 to .483). Levene's test indicated that the assumption of homogeneity of variances was not violated for marital satisfaction ($F = 1.38$, $p = .262$) or sexual responsiveness ($F = 0.94$, $p = .341$). Additionally, Mauchly's test of sphericity was non-significant for both outcome variables (marital satisfaction: $\chi^2(2) = 3.21$, $p = .201$; sexual responsiveness: $\chi^2(2) = 2.68$, $p = .262$), suggesting that the sphericity assumption was met. These findings validated the appropriateness of conducting repeated measures ANOVA for inferential analysis.

Table 2. Repeated Measures ANOVA for Marital Satisfaction and Sexual Responsiveness

Variable	Source	SS	df	MS	F	p	η^2
Marital Satisfaction	Time	2947.56	2	1473.78	31.62	<.001	.531
	Group	1842.18	1	1842.18	28.44	<.001	.506
	Time × Group	2690.11	2	1345.06	34.88	<.001	.557
	Error	4091.32	84	48.70			
Sexual Responsiveness	Time	732.89	2	366.45	42.11	<.001	.583
	Group	529.63	1	529.63	36.72	<.001	.468
	Time × Group	819.40	2	409.70	45.36	<.001	.603
	Error	730.28	84	8.69			

The ANOVA results in Table 2 demonstrate statistically significant main effects of time and group as well as significant interaction effects between time and group for both variables ($p < .001$ in all cases). For marital satisfaction, a strong interaction was observed ($F(2,84) = 34.88$, $p < .001$, $\eta^2 = .557$), indicating that the intervention group's improvement over time was

significantly greater than that of the control group. Similarly, sexual responsiveness showed a robust interaction ($F(2,84) = 45.36$, $p < .001$, $\eta^2 = .603$), confirming that the increase in sexual responsiveness was specific to the intervention condition and not attributable to time alone.

Table 3. Bonferroni Post-Hoc Tests for Time Effects in Each Group

Variable	Group	Comparison	Mean Difference	SE	p
Marital Satisfaction	Intervention	Post vs. Pre	14.88	1.77	<.001
		Follow-Up vs. Pre	17.65	1.91	<.001
		Follow-Up vs. Post	2.77	1.22	.041
	Control	Post vs. Pre	0.87	0.98	.376
		Follow-Up vs. Pre	0.75	1.04	.481
		Follow-Up vs. Post	-0.12	0.76	.876
Sexual Responsiveness	Intervention	Post vs. Pre	7.13	0.84	<.001
		Follow-Up vs. Pre	7.78	0.93	<.001
		Follow-Up vs. Post	0.65	0.66	.325
	Control	Post vs. Pre	0.57	0.45	.221
		Follow-Up vs. Pre	0.36	0.49	.462
		Follow-Up vs. Post	-0.21	0.39	.601

The Bonferroni post-hoc results in Table 3 reveal that the intervention group experienced significant increases in both marital satisfaction and sexual responsiveness between pre-test and post-test, as well as between pre-test and follow-up ($p < .001$). A small but significant gain in marital satisfaction was also noted between post-test and follow-up ($p = .041$). In contrast, the control group showed no significant changes over time on either variable, confirming that the observed improvements were exclusive to the intervention.

Discussion and Conclusion

The present study investigated the effectiveness of a Mindful Touch Program on marital satisfaction and sexual responsiveness among married couples in Taiwan. The results revealed statistically significant improvements in both outcome variables for the intervention group compared to the control group at post-test and five-month follow-up. Repeated measures ANOVA indicated a significant interaction between time and group for both marital satisfaction and sexual responsiveness, confirming the sustained efficacy of the program over time. Bonferroni post-hoc tests showed that the most substantial gains occurred between pretest and posttest, with continued improvement or maintenance at follow-up. These findings support the hypothesis that incorporating mindful, intentional, and emotionally attuned physical contact into couples' routines enhances not only their relational satisfaction but also their capacity for sexual responsiveness.

One of the most notable outcomes of this study is the significant increase in marital satisfaction following the intervention. This result aligns with emerging literature that identifies mindful presence and responsive touch as critical mediators of relational closeness and satisfaction (Vowels et al., 2022). The slow, consensual, and attuned nature of the touch exercises may have allowed participants to re-establish emotional trust and interpersonal safety—factors strongly associated with positive relational evaluations (MacConochie, 2022). Moreover, mindful touch encourages couples to shift from habitual, automatic behaviors toward intentional engagement with one another, fostering a more secure attachment dynamic and open communication. This is particularly relevant in long-term relationships where emotional and physical routines often become mechanized or disconnected (Drouin, 2022; Lehman, 2022).

The improvements in sexual responsiveness observed in the experimental group also confirm theoretical models emphasizing the role of contextual and attentional factors in sexual arousal. Female sexual response, in particular, is known to

be context-sensitive and emotion-driven, relying heavily on nonverbal cues such as emotional safety, partner responsiveness, and synchronized arousal pacing (Chivers, 2017; McNicoll et al., 2016). The Mindful Touch Program's structure, which included gradual sensate focus and feedback-driven touching, may have activated these processes by allowing women to reconnect with their bodies without pressure or performance expectations. These results mirror those of previous studies that identified emotional and attentional variables as key to female arousal and satisfaction (Carvalho & Oliveira, 2024; Jabs & Brotto, 2018; Milani et al., 2021).

Furthermore, the program's efficacy may be partially attributed to its foundation in attentional modulation theory, which posits that conscious direction of attention toward bodily sensations and emotional reactions facilitates physiological and psychological arousal (Carvalho & Pereira, 2022). As participants became more attuned to their sensory and emotional experiences through guided exercises, they likely reduced cognitive distractions, self-judgment, and anxiety—factors often implicated in diminished sexual function (Huberman & Chivers, 2015; Kilimnik & Meston, 2016). This is particularly important in cultures like Taiwan's, where sexual modesty and emotional restraint are socially normative, often inhibiting spontaneous sexual expression (Liu & Xiong, 2016). The mindful format may have offered a culturally acceptable avenue for reconnecting with physical intimacy.

The finding that participants maintained improvements in both marital satisfaction and sexual responsiveness at the five-month follow-up suggests that the intervention facilitated sustainable behavioral and emotional changes. This echoes the work of Pfaus and colleagues, who argue that neural and relational pathways associated with touch and intimacy can be strengthened through consistent positive reinforcement and repetition (Pfaus et al., 2014). In this study, the ongoing practice of mindful touch may have recalibrated couples' emotional scripts and neural associations with physical contact—from stress or avoidance to safety and pleasure. Moreover, the reflective components of the sessions likely enhanced emotional processing and co-regulation, contributing to sustained intimacy and responsiveness.

Notably, the intervention was effective across a diverse range of participants, including those with histories of relational dissatisfaction or past sexual inhibition. This aligns with findings suggesting that body esteem, cognitive flexibility, and emotional readiness are modifiable through mindfulness-based interventions (Clifton et al., 2015; Kilimnik & Meston, 2016). For women who reported initial anxiety or discomfort with physical contact, the structured pacing and consent-oriented approach of the program may have provided a reparative relational experience (Labonté et al., 2023). Similarly, the program's focus on mutual feedback and nonverbal responsiveness resonates with models of sexual need responsiveness that highlight empathy, attunement, and adaptive behavior as predictors of sexual wellbeing (Vowels et al., 2022).

Theoretically, the study also supports a non-linear, feedback-based model of sexual arousal and relationship satisfaction, challenging traditional linear models that prioritize orgasm or intercourse as end goals (Damjanović et al., 2013; Everaerd, 2015). Instead, our findings reinforce conceptualizations that view sexuality as an emergent property of emotional safety, partner attunement, and bodily awareness (Nanos, 2018; Seto et al., 2012). By shifting the emphasis from performance to presence, the Mindful Touch Program offered couples an alternative script for intimacy—one rooted in connection, feedback, and mutual exploration.

This study also contributes to ongoing discussions about gendered patterns of sexual arousal. Consistent with previous research, we observed greater variability in sexual responsiveness patterns among women participants, especially in relation to subjective arousal (Micanovic et al., 2021). While men demonstrated relatively stable baseline responsiveness, women's scores improved markedly after the intervention, highlighting the contextual sensitivity of female arousal (Chivers, 2017; Ponseti et al., 2018). This supports the notion that interventions targeting emotional synchrony, safety, and present-moment focus may be particularly effective for female sexual functioning.

Finally, the success of the Mindful Touch Program reinforces the need to integrate embodied, relational, and sensory practices into couple therapy. Traditional talk-based approaches, while valuable, may overlook the nuanced ways in which nonverbal cues and bodily experiences shape emotional and sexual dynamics (MacConochie, 2022; Singh, 2015). Mindful touch exercises offer a grounded and empirically supported way to bridge the gap between emotional connection and physical intimacy, promoting holistic relational health.

Despite the promising results, several limitations must be acknowledged. First, the sample size was relatively small (n = 30), limiting the generalizability of the findings. While the effect sizes were robust and the statistical power adequate, future research with larger, more diverse samples is necessary to validate and extend these findings.

Second, the study relied on self-report instruments to assess marital satisfaction and sexual responsiveness. Although both tools are widely validated, they remain susceptible to social desirability bias and self-perception errors, especially in sexual domains where stigma and discomfort may influence responses.

Third, the cultural context of Taiwan may have influenced how participants engaged with the intervention. Cultural norms around modesty, emotional expressiveness, and physical contact may not generalize to Western or other Eastern populations, necessitating cultural adaptation for broader application.

Fourth, the lack of physiological measures of sexual arousal (e.g., thermography, genital response) limits the depth of analysis. Future studies may benefit from integrating objective biomarkers to corroborate subjective findings.

Fifth, there was no active control group. Although the control group did not receive the intervention, it is unclear whether alternative formats (e.g., verbal communication training, emotional intimacy workshops) would yield similar results, thereby limiting conclusions about the unique contribution of mindful touch.

Sixth, the five-month follow-up, while meaningful, may not capture long-term maintenance or deterioration. Assessing outcomes at one year or longer would provide valuable insights into the durability of intervention effects.

Finally, the study did not examine potential moderators such as attachment style, trauma history, or emotional regulation strategies, which may have influenced how participants responded to the program.

Future studies should aim to recruit larger and more diverse samples, including same-sex couples and individuals from different cultural or religious backgrounds, to enhance the external validity of the findings.

It would be beneficial to include objective physiological measures of arousal (e.g., fMRI, heart rate variability, thermography) to triangulate self-report data and deepen understanding of somatic-emotional links.

Researchers should explore comparative studies with other intimacy-enhancing interventions (e.g., cognitive-behavioral therapy, emotional-focused therapy) to isolate the specific effects of mindful touch.

Longitudinal designs with extended follow-ups (e.g., 12 months or more) are recommended to assess the sustainability of improvements and detect any delayed effects.

Incorporating process variables such as changes in body awareness, emotion regulation, or interpersonal trust during the intervention could illuminate the mechanisms of change.

Future research may examine moderating factors such as trauma history, attachment insecurity, or shame, to identify which couples benefit most from mindful touch programs.

Finally, adapting the intervention for digital delivery or hybrid formats (e.g., app-based mindfulness with therapist support) could enhance accessibility and scalability.

Therapists and counselors working with couples should consider integrating structured mindful touch exercises into therapy sessions to enhance emotional and physical intimacy.

Couples may benefit from explicit communication training around consent, boundaries, and comfort with touch prior to engaging in physical intimacy.

Clinicians should offer cultural adaptations of the program to align with clients' values, modesty norms, and relational scripts.

Using home assignments such as guided touch rituals or body scan meditations can help reinforce session content and build intimacy.

In cases of sexual inhibition or avoidance, starting with non-sexual touch and progressing gradually may foster safety and confidence.

Professionals should encourage joint reflection exercises, where partners verbally process their touch experiences to deepen mutual understanding.

Finally, it is essential to create a trauma-informed framework that emphasizes safety, pacing, and bodily autonomy throughout the intervention process.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adheried in conducting and writing this article.

Acknowledgments

We would like to express our gratitude to all those who helped us carrying out this study.

Authors' Contributions

All authors equally contributed to this study.

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.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

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