

Effectiveness of a Sternberg-Based Empowerment Program in Reducing Marital Conflict among Women

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Received: June 05, 2024; Revised: December 07, 2024; Accepted: January 12, 2025

Abstract

Background: In recent years, the growing divorce rate in Iran has emerged as a pressing social issue, and one of the predictive factors in this regard is marital conflict. Therefore, the present study aimed to design a women's empowerment training program based on Sternberg's theory and evaluate its effect on reducing marital conflict.

Methods: This quasi-experimental study included 20 women with mild or moderate marital conflict, as determined by the Marital Conflict Questionnaire (MCQ). The study participants were evenly divided into two groups experimental (n=10) and control (n=10). The intervention included six 60-minute training sessions. Data were collected using the Marital Conflict Questionnaires and Sternberg's Triangular Love Scale before and after the intervention. Data were analyzed using SPSS version 23, employing independent t-test, and ANCOVA. A significance level of less than 0.05 was considered.

Results: The mean score of marital conflict before the intervention was 71.49 ± 22.80 , which reduced to 65.04 ± 45.08 after the intervention ($P=0.050$). Similarly, the mean score of triangular love reduced from 316.08 ± 55.14 to 285.30 ± 92.57 ($P=0.030$). Significant reductions were observed in intimacy ($P=0.040$) and commitment ($P=0.030$), while passion showed no significant changes.

Conclusions: The women's empowerment training program, developed based on Sternberg's theory, had a positive effect on reducing marital conflict among women with mild or moderate marital conflict.

Keywords: Family Conflict, Empowerment, Interpersonal relations

How to Cite: Rostami B, Khaleghi F, Kasirloo Y, Jabbari S, Saadati E, Hoseinzadeh Z. Effectiveness of a Sternberg-Based Empowerment Program in Reducing Marital Conflict among Women. Women. Health. Bull. 2025;12(3):2-11. doi: 10.30476/whb.2025.102890.1296.

1. Introduction

Marriage is a fundamental social institution that establishes a bond of cohabitation between two individuals, enabling the development of personal identities and the realization of individual talents, while preserving relative independence. According to the World Health Organization (WHO), the family serves as a primary social determinant of health and plays a crucial role in promoting overall well-being)1(. Recent studies have emphasized that marital satisfaction significantly contributes to psychological well-being, physical health, and increased longevity)2, 3(. However, marital conflict remains inevitable, arising from differences in personal values, unmet emotional needs, and external pressures, which may lead to

dissatisfaction and relational distress)4(.

Marital conflict occurs when one spouse is satisfied with the marital relationship while the other is dissatisfied. Numerous reasons are expressed for conflicts, such as the transition from tradition to modernity, changes in family systems, the weakening of emotional relationships, inefficiency of communication and control patterns, and job and social pressures)4(.

Alongside marital conflicts, attention to family health has become increasingly important. Various models have been proposed to explain the concept of a healthy family, each addressing a different aspect. Family health goes beyond the mere absence of disease and poor functioning and

suggest a multidimensional and dynamic image of family health that includes concepts such as well-being and quality of life (5).

According to recent models, family health is influenced by various determinants including biological, behavioral, socio-cultural, and environmental factors, along with access to health services, framing the family as a central context for health promotion (6). Functional models emphasize that when family interaction patterns are effective in achieving goals, the family is considered functionally efficient; however, dysfunctional patterns lead to stress and maladaptive behaviors, harming both the family and society (6).

Recent studies have reinforced Sternberg's Triangular Theory of Love, which posits that intimacy, passion, and commitment are the core components shaping romantic relationships. These elements interact to create diverse love typologies, such as companionate or consummate love, each characterized by unique strengths, such as emotional stability, and challenges, like sustaining passion over time. For example, a 2021 large-scale study involving 7,332 participants from 25 countries confirmed the cultural universality of Sternberg's framework through psychometric validation of the Triangular Love Scale (STLS), demonstrating its applicability across diverse societies, from collectivist to individualistic cultures (7). Additionally, a 2023 study developed and validated a shortened 15-item version of the STLS (TLS-15) across 37 languages, further supporting the theory's global relevance and reliability in measuring love components (8). Furthermore, applications of the theory in literary and educational contexts highlight its ongoing relevance, demonstrating that relationships involving multiple components tend to be more stable and enduring than those based on a single element (9). The type of love that arises from the combination of all three components is regarded as the strongest and most enduring form of love (10).

One of the important aspects of Sternberg's love triangle model is intense sexual desire for the other person. Sexual instinct is deeply intertwined with psychological needs, and its effects can be seen in many aspects of life. This instinct has an undeniable impact on marital life and its cohesion and stability (11). Today, sexual dissatisfaction is recognized as an important factor contributing

to various psychological problems and marital incompatibilities. Recent evidence has showed that lower levels of sexual satisfaction are significantly associated with more accepting attitudes toward marital infidelity among Iranian married individuals. Furthermore, increased use of social media and exposure to entertainment content have been linked with both decreased sexual satisfaction and greater acceptance of extramarital affairs (7, 8). A recent study surveying Iranian couples has reported that 17.3% of participants were dissatisfied with their sexual relationships, while 16% indicated their spouses had engaged in online infidelity and 6.6% reported instances of physical extramarital affairs (4). These findings emphasized the crucial role of sexual satisfaction in promoting marital stability and preventing relational breakdown (11).

Intimacy is also seen as an important aspect of Sternberg's complete love. A person who experiences a higher degree of marital intimacy can present themselves more desirably in relationships and express their needs more effectively to their spouse (12). Several studies (13, 14) have highlighted the pivotal role of marital intimacy in enhancing psychological well-being and overall life satisfaction. For instance, Aghamiri and Vaziri (13) found a significant positive correlation between marital intimacy and psychological well-being among couples in Tehran, Iran, indicating that higher levels of intimacy contribute to better mental health outcomes. Additionally, a study by Aseka and colleagues (14) demonstrated a strong positive relationship between various dimensions of intimacy emotional, social, sexual, intellectual, and recreational and marital satisfaction among Christian married couples in Nairobi County. These findings underscored the multifaceted nature of intimacy and its substantial impact on both emotional wellbeing and the quality of marital relationships.

Commitment is widely recognized as one of the most influential personality traits in the formation, maintenance, and potential breakdown of marital relationships. It significantly shapes how spouses perceive and respond to one another, influencing their ability to manage conflicts and navigate differences. Studies have consistently demonstrated a positive relationship between marital commitment and satisfaction, emphasizing that commitment enhances relational stability and emotional resilience (15, 16). However, in

some instances, unresolved negative emotions and persistent relational stress may gradually erode initial enthusiasm, emotional attachment, and commitment eventually leading to conflict and relationship deterioration. Divorce, as the most explicit manifestation of unresolved marital conflict, is now a common outcome in many marriages, including among those who seek counseling (16).

In recent years, the growing rate of divorce in Iran has emerged as a pressing social issue, with concerning statistics reflecting the challenges faced by couples during and after separation. Research shows that numerous psychological, interpersonal, and sociocultural factors contribute to marital breakdown, particularly from the perspective of women on the verge of divorce. Without timely and effective intervention by policymakers and professionals, the social and emotional consequences of this trend are likely to persist or worsen (17). In response to these concerns,

the present study utilized Sternberg's Triangular Theory of Love emphasizing intimacy, passion, and commitment as a conceptual framework to develop an empowerment based intervention. This program was specifically designed for women, acknowledging their unique roles and vulnerabilities within marital dynamics. The study aimed to evaluate the effectiveness of this intervention in reducing marital conflict among women in 2021.

2. Methods

2.1. Design and Participants

This quasi-experimental study involved 20 women with mild or moderate marital conflict, as determined by the Marital Conflict Questionnaire (MCQ). Figure 1 summarizes the sampling process. The required sample size was calculated using data from the study of Lopez-Ixta and colleagues (18), where the mean \pm SD of marital conflict scores in the intervention group increased from 120.20 \pm 19.92 to

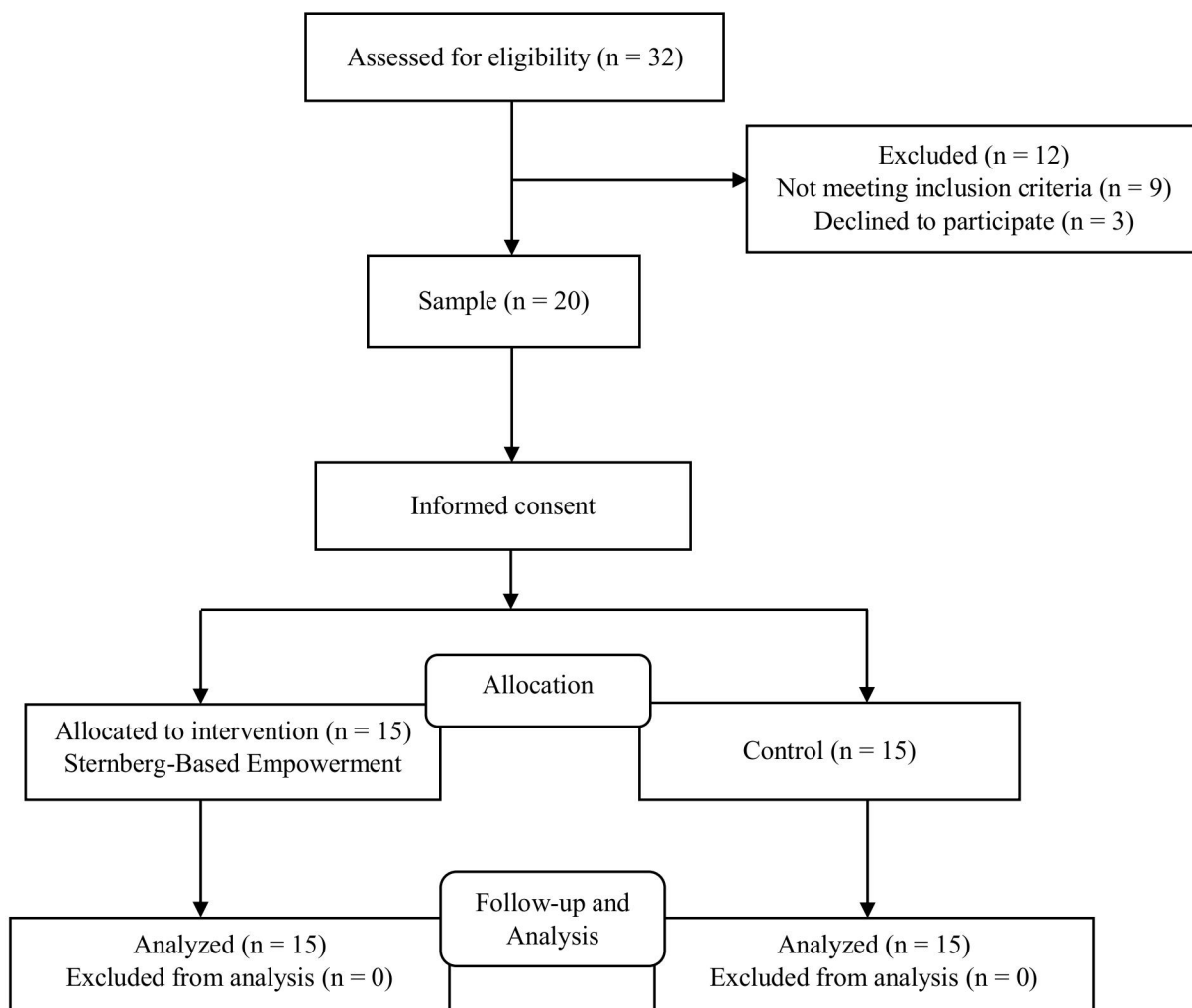


Figure 1: The figure shows the CONSORT flow diagram of the study.

Table 1: Sternberg-Based Empowerment Program Protocol

Session Number	Topic	Key Activities	Sternberg's Components
1	Introduction to Theory	Overview of Sternberg's triangular theory of love	General Introduction
2	Building Intimacy	Workshops on communication skills, emotional sharing, empathy exercises	Intimacy
3	Enhancing Passion	Activities focusing on renewing interest and attraction, date planning, exploring shared interests	Passion
4	Deepening Commitment	Discussion on mutual support, future planning, understanding and setting relationship goals	Commitment
5	Conflict Resolution	Role-playing scenarios, conflict management techniques, negotiation skills	Intimacy, Commitment
6	Program Review & Closure	Review of concepts covered, feedback session, setting personal and relational goals	Intimacy, Passion, Commitment

100.47±15.80 following the intervention. Assuming a power of 80%, a significance level of 0.05, and accounting for potential dropouts and variability in participant responses, the required sample size was determined to be 20 participants. To assess the effectiveness of the intervention, these 20 participants were homogeneously divided into two groups: an experimental group (n=10), which received the intervention, and a control group (n=10), which did not receive any intervention. Allocation of participants to the groups was performed to ensure comparability in terms of baseline characteristics.

2.2. Inclusion and Exclusion Criteria

The inclusion criteria were: 1) No intention to refer to judicial authorities, 2) Husbands' consent for participation (if necessary), and 3) Willingness to participate in the study. Participants who wished to withdraw or were absent for more than two sessions were excluded from the study.

2.3. Procedure

After coordination with the Deputy of Research and Technology of Zanjan University of Medical Sciences, Zanjan, Iran, sampling was conducted based on the Marital Conflict Questionnaire results. A list of eligible women was compiled, and those meeting the inclusion criteria were briefed about the study objectives and the details of the training sessions before consenting to participate. The intervention, aimed at empowering women to manage marital conflicts, was based on Sternberg's Triangular Theory of Love and consisted of six 60-minute training sessions conducted weekly (Table 1). Due to the nature of the intervention and the limited sample

size, participants were non-randomly assigned to either the intervention group or the control group, ensuring homogeneity in baseline characteristics. Only the intervention group received the training sessions, while the control group did not receive any intervention during the study period. These sessions were held publicly for all participants. In addition to the group sessions, individual counseling sessions (one to four sessions) were also offered to participants who needed or requested specific counseling. To enhance access and allow for future review, all educational materials, including recorded videos and lecture slides, were compiled electronically and provided to participants in the form of CDs. At the end of the educational intervention, participants were asked to complete the questionnaires again to evaluate the outcomes.

2.4. Measurement Tools

Data collection tools included demographic characteristics, the Persian version of the Marital Conflict Questionnaire (MCQ), and the Persian version of Sternberg's Triangular Love Questionnaire.

2.4.1. Marital Conflict Questionnaire (MCQ):

The Marital Conflict Questionnaire (MCQ), originally developed by Boostanipoor and Sanaei Zaker, consists of 42 items assessing seven dimensions of marital conflict, including decreased cooperation, decreased sexual relations, increased emotional reactions, increased child support, increased relationship with one's own family, decreased relationship with the spouse's family, and separation of financial affairs (19). Responses are rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree," with total scores ranging from 42 to 210. Based on the scoring,

conflict levels are categorized into four groups: no conflict (42–70), mild conflict (71–114), moderate conflict (115–134), and severe conflict (135 and above). Recent psychometric evaluations of the MCQ confirm its high reliability and structural validity. Boostanipoor and Sanai Zaker (19) conducted a confirmatory factor analysis (CFA) and reported a Cronbach's alpha of 0.96 for the entire questionnaire, supporting its internal consistency and eight-factor structure. Moreover, Naderi Moghaddam and co-workers (20) utilized the MCQ in an intervention study and confirmed its effectiveness in capturing changes in marital conflict levels among women undergoing therapy for divorce prevention. Hasan Beigi and Sohrabi Shegefti (21) further validated the questionnaire's predictive power, demonstrating significant associations between marital conflict scores and couples' communication skills, emotional competence, and resilience.

2.4.2. Sternberg's Triangular Love Questionnaire: The Sternberg Triangular Love Questionnaire is a 45-item instrument designed to assess three fundamental components of love: intimacy, passion, and commitment. Each subscale includes 15 items, and responses are rated on a 9-point Likert scale ranging from "not at all" (1) to "completely" (9), with higher scores reflecting stronger presence of each component. Subscale scores range from 15 to 135. The original version of the scale demonstrated acceptable psychometric properties, with reported reliability of 0.70 and validity of 0.80 (22). Previous cross-cultural studies have supported the construct validity and universality of the STLS. For instance, Sorokowski and colleagues (7) validated the scale across 25

countries and reported strong psychometric properties across diverse cultures. In addition, a large-scale study by Kowal and co-workers (8) introduced and validated a short version (TLS-15), further supporting the tool's reliability, with alpha coefficients exceeding 0.85 across languages. In this study, face validity of the questionnaire was confirmed through expert review. Internal consistency, measured by Cronbach's alpha, was calculated to be 0.71, indicating acceptable reliability. Although CVI and CVR values were not originally reported by Sternberg, expert evaluations conducted in the present study yielded a Content Validity Index (CVI) of 0.89 and a Content Validity Ratio (CVR) of 0.85, indicating strong content validity within the Iranian cultural context.

Data were analyzed using SPSS version 23. Independent t-tests were applied for between-group comparisons before the intervention, and ANCOVA was used for post-intervention analysis. Skewness, kurtosis, and the Kolmogorov-Smirnov test confirmed data normality.

To comply with ethical standards, all participants voluntarily entered the study. After obtaining informed consent, the intervention was conducted. The study participants could withdraw from the study at any time if they wished. They were also assured that their names and identities would remain confidential and that the data would not be disclosed anywhere in the study.

3. Results

Table 2 presents the demographic characteristics

Table 2: Frequency distribution of participants based on the demographic variables

Demographic Variables	Experimental Group	Control Group	P value
Employment Status			1.000
Employed	7	7	
Unemployed	3	3	
Educational Level			0.964
Below Diploma	2	2	
Diploma	3	3	
Associate Degree	1	1	
Bachelor's Degree	4	2	
Master's Degree and Above	1	1	
Number of Children			0.704
0	3	2	
1	3	3	
2	0	1	
3	2	2	
4	2	1	

Table 3: Pretest and posttest comparison of various variables for control and experimental groups

Variable	Group	n	Pretest (Mean±SD)	Posttest (Mean±SD)	P (Within Group)	P (Between Groups)
Intimacy	Control	10	101.93±16.02	93.58±27.59	0.045	0.040
	Experimental	10	110.60±20.81	103.98±27.29	0.040	
Physical Charms	Control	10	92.77±16.12	85.10±26.11	0.090	0.095
	Experimental	10	100.67±21.01	101.40±37.00	0.095	
Decision Commitment	Control	10	116.60±10.49	114.30±23.18	0.035	0.030
	Experimental	10	123.40±19.81	107.20±36.98	0.030	
Reduced Cooperation	Control	10	7.80±3.77	8.50±3.81	0.390	0.400
	Experimental	10	5.20±3.05	6.20±5.18	0.400	
Reduced Sexual Relations	Control	10	8.56±3.04	9.70±4.57	0.250	0.260
	Experimental	10	6.70±3.97	7.60±7.17	0.260	
Increased Emotional Reactions	Control	10	16.30±7.24	15.40±5.83	0.160	0.170
	Experimental	10	12.30±5.98	11.30±9.23	0.170	
Increased Child Support	Control	10	10.73±3.90	9.04±3.04	0.210	0.220
	Experimental	10	8.53±4.20	8.37±5.48	0.220	
Increased Personal Relationship	Control	10	7.10±5.13	7.80±6.05	0.340	0.350
	Experimental	10	7.22±4.18	7.15±7.28	0.350	
Decreased Family Relationship	Control	10	10.13±5.03	8.40±6.28	0.140	0.150
	Experimental	10	6.40±6.19	7.90±8.48	0.150	
Separate Finances	Control	10	12.27±6.88	13.10±8.97	0.180	0.190
	Experimental	10	13.03±6.64	12.50±7.74	0.190	
Total Marital Conflict	Control	10	79.79±21.02	78.78±27.82	0.045	0.045
	Experimental	10	71.49±22.80	65.04±45.08	0.050	
Whole Triangular Love	Control	10	325.58±31.37	290.09±65.54	0.025	0.030
	Experimental	10	316.08±55.14	285.30±92.57	0.030	

of the participants in the experimental and control groups. Employment status was identical across both groups, with 70% of participants being employed and 30% unemployed ($P=1.000$). Educational levels were also similar, with the majority of participants holding a diploma or bachelor's degree (60% in both groups), and no significant differences were observed between groups ($P=0.964$). The distribution of the number of children was comparable between groups, with 30% of participants having no children, 30% having one child, and smaller proportions having two or more children. No statistically significant differences were identified for this variable ($P=0.704$) (Table 2).

The assumptions required for conducting ANCOVA were tested and confirmed. The normality of the data distribution was verified through skewness and kurtosis values ranging from -2 to +2, alongside the Kolmogorov-Smirnov test. Homogeneity of variances across groups was assessed using Levene's test, which indicated no significant differences in variance ($P>0.05$). Additionally, the assumption of homogeneity of regression slopes was examined and satisfied, ensuring that the relationship between the

covariate (pretest scores) and the dependent variable (posttest scores) was consistent across groups. All these preconditions were met, validating the use of ANCOVA to analyze posttest scores while controlling for baseline differences. Table 3 reports the scores of Marital Conflict and Whole Triangular Love. For Total Marital Conflict, the pretest score in the experimental group was 71.49 ± 22.80 , decreasing to 65.04 ± 45.08 in the posttest ($P=0.050$). The control group scored 79.79 ± 21.02 in the pretest and 78.78 ± 27.82 in the posttest ($P=0.045$). The posttest between-group comparison, adjusted using ANCOVA, shows a significant difference ($P=0.050$). For Whole Triangular Love, the pretest score in the experimental group was 316.08 ± 55.14 , decreasing to 285.30 ± 92.57 in the posttest ($P=0.030$). The control group scored 325.58 ± 31.37 in the pretest and 290.09 ± 65.54 in the posttest ($P=0.025$). The between-group comparison for posttest scores, also adjusted using ANCOVA, indicates a significant difference ($P=0.030$).

4. Discussion

The results of the educational intervention showed a statistically significant decrease in

the mean scores for intimacy and commitment. However, physical attraction showed a non-significant increase. These findings suggested that while certain aspects of marital satisfaction were influenced by the intervention, others remained unchanged. One potential explanation for the lack of significant improvement in some variables could be the limited sample size. A review Study by Kardan-Souraki and colleagues (23) emphasized that enhancing communication skills, problem-solving abilities, and emotional expression can significantly improve marital intimacy.

Intimacy plays a crucial role in marital relationships, and its absence can lead to increased conflicts, decreased satisfaction, and various emotional and psychological issues. A study by Dehghanidowlatabadi and colleagues (24) found that interpersonal mindfulness positively predicts marital intimacy and can mitigate the negative effects of marital conflict. This underscores the importance of fostering emotional closeness and understanding between partners to enhance marital satisfaction.

Commitment, another vital component of Sternberg's theory, significantly influences marital success. Committed spouses are dedicated not only to their family's well-being but also to each member's personal growth. Research by Lin and co-workers (25) demonstrated that higher levels of marital commitment are associated with greater marital quality and satisfaction. In our study, the educational intervention positively impacted participants' commitment levels, enhancing their overall marital commitment.

Physical attraction and passion, the third dimension of Sternberg's theory, also saw an increase in mean scores post-intervention, although the difference was not statistically significant. Passion encompasses not just physical and sexual feelings but also romantic emotions that foster positive mental engagement with the spouse. True love can help individuals overlook life's hardships, thereby reducing conflict (26). A study by Dehghanidowlatabadi and colleagues (24) supported this notion, indicating that enhancing emotional and sexual intimacy can lead to increased marital satisfaction.

The primary goal of this study was to assess the impact of love education on reducing marital

conflict. Results indicated a significant decrease in marital conflict scores post-intervention, moving participants from a mild conflict category to a non-conflictual one. This finding aligned with the study of Rouhbakhsh and colleagues, which found that couple empowerment training based on love theory significantly reduced marital conflict (27). Also, another study confirmed the efficacy of Sternberg's theory in enhancing marital satisfaction and reducing conflicts (28).

The decrease in marital conflict highlights the effectiveness of couple-centered psychological empowerment programs. The love-centered educational approach focuses on recognizing the place of love and emotional dependence in relationships, identifying negative behaviors, and fostering positive communication and actions that nurture love (29). Our study findings were limited to women with mild to moderate conflicts, and caution should be exercised when generalizing the results. Additionally, the COVID-19 pandemic impacted participation rates, leading to a smaller sample size. Future research should consider larger sample sizes and explore long-term effects of such interventions.

4.1. Limitations

Despite the promising results, this study had some limitations that warrant consideration. First, the small sample size and quasi-experimental design limit the generalizability of the findings. Future studies with larger, randomized samples are recommended to confirm these results and enhance external validity. Second, the lack of long-term follow-up precludes the assessment of the intervention's sustainability over time. Longitudinal studies are needed to explore whether the observed reductions in marital conflict persist beyond the immediate post-intervention period. Additionally, the study focused exclusively on women, which limits its applicability to couples or men. Expanding the scope of future research to include couples could provide a more comprehensive understanding of the impact of the intervention.

Designing empowerment programs based on Sternberg's theory of love can offer an innovative approach to reducing marital conflict and promoting family stability. Clinicians and counselors could incorporate these strategies into their practices to

address key components of intimacy, passion, and commitment, tailoring interventions to the unique needs of individuals and couples. Policymakers could also consider integrating such programs into community and family support initiatives to mitigate marital discord and its broader social consequences.

5. Conclusions

The findings suggested that love-centered empowerment programs can effectively reduce marital conflict and improve marital satisfaction. Policymakers and stakeholders are encouraged to implement such programs to prevent the escalation of conflicts and promote healthy, satisfying marital relationships. Early interventions can save resources and prevent the potential breakup of families.

Acknowledgment

This article was derived from a research project approved by the Zanjan Welfare Organization, Zanjan, Iran. The authors sincerely thank all participants and contributors who supported the implementation of this project.

Authors' Contribution

Bahram Rostami: Contributions to the conception and design of the work; the acquisition, analysis, and interpretation of data; drafting the work. Fahime Khaleghi: Acquisition, analysis, and interpretation of data for the work; critical review of the work for important intellectual content. Yadolah Kasirloo: Contributions to the interpretation of data; drafting the work and reviewing the work critically for important intellectual content. Saeideh Jabbari: Contributions to the conception and design of the work; critical review of the work for important intellectual content. Elahe Saadati: Contributions to data analysis and interpretation; drafting the work. Zarrintaj Hoseinzadeh: Contributions to the conception and design of the work; critical review of the work for important intellectual content. All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work, such that the questions related to the accuracy or integrity of any part of the work.

Conflict of interest: Not declared.

Funding: None.

Ethical Approval

This study was approved by the ethics committee of Azad University of Zanjan, Zanjan, Iran with the code of IR.ZUMS.REC.1399.219. Throughout the data collection process, adherence to ethical principles was rigorously maintained. These principles included employing a non-random quota sampling method for sample selection and allocation, ensuring the confidentiality of participants' information, obtaining voluntary participation, guaranteeing participants' right to withdraw from the study at any time, and providing comprehensive and transparent information to all participants. Also, written informed consent was obtained from the participants.

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