Iran J Public Health, Vol. 53, No.6, Jun 2024, pp.1457-1466

Original Article

Evaluating an Integrated Approach to Improve the Couple Sexual Desire Disorders: A Randomized Clinical Trial Study

Parisa Samadi [1], * Zahra Alipour [2], Raziyeh Maasoumi [1,3]

1. *Department of Midwifery and Reproductive Health, School of Nursing & Midwifery, Tehran University of Medical Sciences, Tehran, Iran*
2. *Department of Midwifery, School of Medicine Qom University of Medical Sciences, Qom, Iran*
3. *Nursing and Midwifery Care Research Center, School of Nursing & Midwifery, Tehran University of Medical Sciences, Tehran, Iran*

***Corresponding Author:** Email: kanom_alipour@yahoo.com

(Received 12 Aug 2023; accepted 23 Oct 2023)

Abstract

Background: Treating and changing patterns of low sexual desire and dysfunctions can be done in various ways. However, it is important to recognize the value of integrated approaches when it comes to addressing these issues. To this end, we conducted a randomized clinical trial study to compare the effectiveness of an integrated approach with that of Masters-Johnson Sex Therapy (MJST) for treating hypoactive sexual desire disorder (HSDD) in Iranian couples from Mar 2016 to May 2018.

Methods: We conducted a clinical trial on 24 couples who were experiencing HSDD. The couples were randomly divided into two groups. The intervention group was given an integrative approach, while the control group received MJST for ten sessions. We collected data using standard questionnaires before, immediately after, and eight weeks after the intervention.

Results: There was no significant difference in sexual desire and function among men between the MJST and integrative approach groups. However, women in the integrative approach group showed more improvement in sexual desire and dysfunction compared to those in the MJST group. The improvement in sexual function for women and sexual desire for both men and women were maintained at the eight-week follow-up in the integrative approach.

Conclusion: Our study found that using an integrative approach effectively treated HSDD in couples.

Keywords: Hypoactive sexual desire disorder; Integrated approach; Clinical trial

Introduction

There is a condition called hypoactive sexual desire disorder (HSDD), which refers to a lack of sexual desire or interest between sexual partners or one of the spouses (1). The most common type of sexual disorder is a lack of sexual desire (2). Theories suggest that various factors, including biological, developmental, intrapsychic, relationship, and cultural, contribute to a lack of sexual desire (3). Clinical literature highlights that a lack of sexual desire is one of the significant challenges that couples face after the initial communication phase (4). For women, 37.7% of

them experience HSDD, which causes personal distress. The most common symptom of HSDD is a lack of sexual desire, which affects 7% to 12% of women(5).

Among Iranian women who report experiencing sexual problems, 65.8% are found to have HSDD, while the general population has a prevalence of 35%. Similarly, among Iranian women who seek help for sexual issues, 59.6% are diagnosed with sexual arousal disorder, compared to a prevalence of 33.8% in the general population. Men also report HSDD, with an estimated 15% to 25% of adult males experiencing this condition (6). The values presented here are comparable to global statistics (7). This is currently a significant challenge in experimental research on couple therapy and sex therapy (4). Sex therapy has proven to be effective in treating various sexual disorders (8). The innovative work of Masters and Johnson, considered pioneers of modern sex therapy, has transformed the treatment of sexual dysfunctions. They have focused on sensory concentration exercises, behavioral interventions, and sex therapy (3). However, the data suggests that this approach may not be effective for all sexual disorders (8).

Among the therapeutic interventions carried out in Iran in the field of improving sexual function or satisfaction, we can mention cognitive behavioral interventions (9) and Emotionally Focused Couples Therapy (EFT)(10), but most of the interventions carried out in Iran are based on cognitive behavioural counselling. Masters and Johnson's approach is generally effective in treatment, but the improvement of outcomes is often not continuous in the follow-up period or the studies do not have a follow-up period (11).

EFT has created a shared boundary between couple therapy and sex therapy(7). EFT is formulated as a 5-step framework with 14 phases(12). To begin improving a relationship, the first steps are to confirm and form an alliance. The second step involves reducing negative cycles. The third step is about accessing underlying emotions. During this phase, the goal is to uncover, experience, and own unacknowledged emotions that contribute to the position of each partner in the interaction cycle. In step four, the focus is on negative interactions and self-reconstruction. As interaction patterns are being restructured, couples need to share their vulnerable underlying feelings with each other in order to establish a new way of interacting. Finally, in step five, the aim is to consolidate and integrate new interaction patterns into daily life. The end goal of therapy is to enable couples to sustain these positive changes in their relationship(13). This method of therapy promotes open communication and encourages individuals to share their positive emotions (14). Another advantage of this treatment is its low recurrence rate for related disorders (7). While studies have been conducted on integrated couple therapy (15) there is still a need for more research on an integrated approach to addressing couples' sexual problems(16).

Many authors consider pragmatism to be the best worldview for the mixed method approach (17). This perspective, which embraces pluralism, allows researchers to gather diverse information and arrive at the best possible answers to their research questions (17). Therefore, for our study on sexual issues, we chose to adopt the pragmatism paradigm. Since sexual desire is a complex issue that has not been fully explored, we conducted a randomized clinical trial to evaluate the effectiveness of an integrated approach compared to MJST for HSDD in Iranian couples.

Materials and Methods

This research was a randomized clinical trial that utilized random allocation and involved pre-test, post-test, and control groups. It was taken from a thesis submitted for the degree of Ph.D. in Reproductive Health, titled "Designing an Integrative Therapeutic Approach and Studying Its Effect on Couples' Sexual Interactions and Desire" with the number 394488.

Participant Characteristics

A letter of introduction was created and presented to the health centers of Isfahan City and the Province, following the approval of the Ethics Committee of the Faculty of Nursing and Midwifery of Isfahan University of Medical Sciences (IR.MUI.REC.1394.3.488).

To qualify for the study, participants had to meet the DSM-V criteria and Sexual Interest/Arousal Disorder (SIAD) criteria for women and HSDD for men, experience moderate to lower sexual desire or arousal disorder, be between 18-55 yr of age for men and 18 yr to premenopausal for women, have no history of acute or chronic physical or psychological diseases that disrupt treatment, not use drugs that affect sexual function, have no history of substance abuse or physical aggression, be interested in attending treatment sessions, have at least one year of cohabitation in the form of permanent marriage, not have participated in EFT and MJST classes before the study, have the ability to read and write, have a couple age difference of less than or equal to ten years, have been married for 1-30 yr, have no history of infertility or use of contraceptive pills, not be pregnant, and not have experienced any unfortunate events such as the death of those around them or accidents leading to disability between pre-test and post-test.

Since no similar study had been conducted, this study measured variables in couples(18). To ensure statistical significance, the sample size for both the intervention and control groups was set at 24 participants, with a 95% confidence level and 80% test power. The minimum number of samples in each group was 12. To account for potential dropouts, 13 couples were included in the study.

Sampling Procedure

The researcher selected participants through the available sampling method. The participants were referred to the mental health department of Ibn Sina Health Center of Isfahan, Khorshid Hospital of Isfahan, and the Clinic of Preventive Medicine and Promotion of Health Behsa in Tehran due to lacking sexual desire disorder from Mar 2016 to May 2018. The participants agreed to treatment and completed questionnaires at the beginning of their first session following the Helsinki Declaration. Twenty-six couples who met the inclusion criteria were included in the study and were randomly allocated to two groups: MJST and integrative treatment. We collected quantitative data by completing a questionnaire from 24 couples in both groups who lived in Tehran or Isfahan before, immediately, and eight weeks after the treatment session. During the treatment process, two couples were excluded due to the husband's dissatisfaction and lack of cooperation (Fig. 1).

Intervention

Combining different approaches to create a new approach

The treatment design used in this study is called a pluralistic approach. This approach recognizes that each couple may require different levels of intervention, and suggests that higher level interventions should only be used if lower level interventions are not effective. The approach prioritizes building interpersonal skills and reducing negative behavior before moving on to more complex methods. If a crisis or issue arises, it may be necessary to return to a previous level of intervention to find a solution. The goal is to establish a foundation of positivity before moving on to more advanced techniques (19). Couple therapy may not always progress linearly, and may require revisiting previous therapeutic tasks or communication problems. To accommodate for this, a pluralistic approach was used in the study.

Integrative treatment approach

The intervention group received a ten-weekly session treatment that combined MJST and EFT. The therapy model started with emotion-based couple therapy and gradually included MJST from the fourth session onwards. The treatment took into account the suppressing and strengthening factors of sexual desire identified in the qualitative study(20), This treatment focused on enhancing the quality of the couples' sexual interactions, and their interpersonal relationships,

and preparing them for sexual intercourse. Table 1 provides an overview of the different treatment stages covered during each session. All treatments were performed by one of the researchers to prevent measurement bias. The control group received MJST.

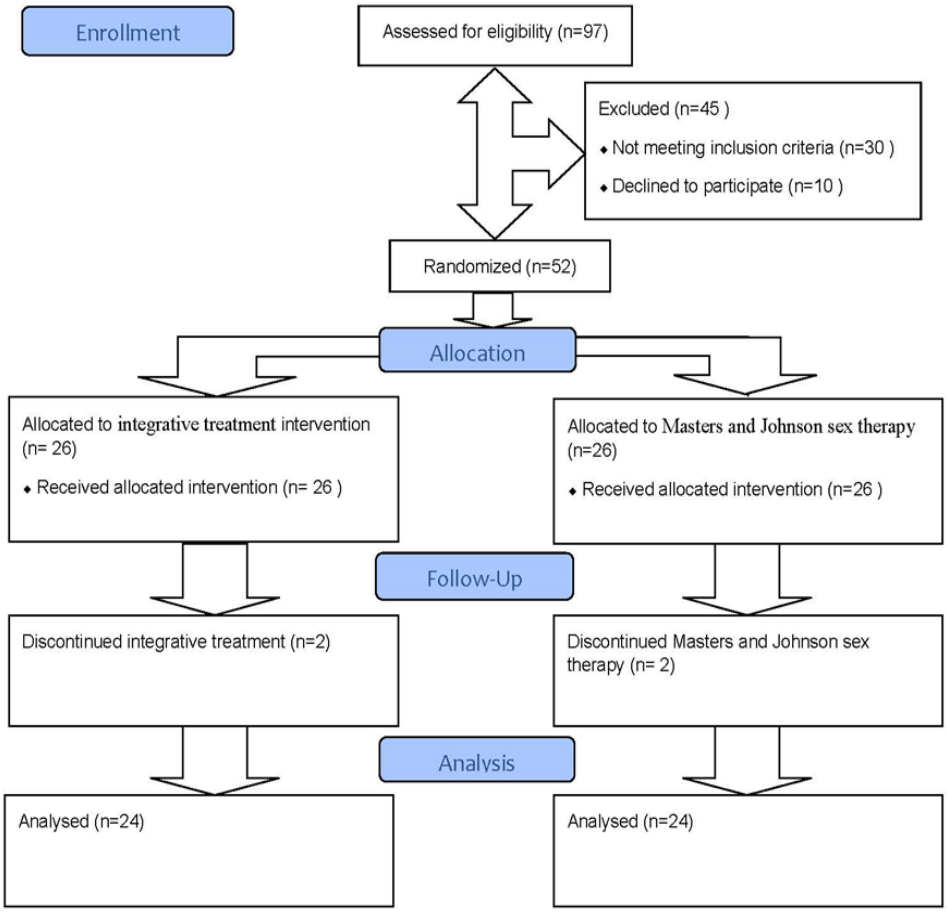

Fig. 1: Consort diagram

Table 1: Outlines the individual treatment steps that will be addressed in each session an integrative approach should be taken

Session	***Integrative Approach (EFT & MJST)***	
	Objectives	Interventions
Session 1	Creating therapeutic integration, evaluating and addressing conflict issues related to attachment styles.	EFT
Session 2	Identify and detect defective interaction cycles	EFT
Session 3	Identifying underlying emotions that cause a defective cycle	EFT
Session 4	1- Resolve the problem by paying attention to negative interaction cycles, emotions, and attachment styles. *Education:* Description of the anatomy and physiology of the male and female	EFT Slide tutorial Forbidden sex Kegel exercise

Table 1: Continued…

	reproductive systems, stages of sexual intercourse, and advice on abstinence. *Practice:* Kegel exercise, sexual self-exploration, and forbidden sex	Genital self-exploration
Session 5	1- Enhance self-awareness, recognize emotions and needs, and integrate them into interactions. 2- It is recommended to maintain personal grooming and hygiene, and to create a comfortable environment for sexual activity. *Practice:* 1- Examining Kegel exercise, sexual self-exploration, and evaluation of forbidden sex. 2- Asexual sensation technique with the aim of better understanding couples	EFT Exercise Sensate focus I
Session 6	1- Each couple should be open to accepting new experiences and sharing them with their partner. 2-Advise to increase verbal sexual interactions. *Practice:* 1- Examining the practice of asexual sensation and forbidden sex. 2- Sexual sensation technique without sex	EFT Exercise Sensate focus II
Session 7	1- Assist in communicating one's needs and desires effectively. 2- Let's generate scenarios that evoke emotional connection for individuals with varying attachment styles. 3-Advice to improve lifestyle (exercise and healthy eating) *Practice*: 1- Examining the practice of sexual sensation and forbidden sex. 2- Genital contact without Intercourse	EFT Genital Containment
Session 8	1-Facilitate new solutions to old and old communication problems. 2- Suggest enjoyable activities for a couple to engage in and spend quality leisure time together. *Practice:* 1-Examining the practice of sexual sensation, without genital contact. 2- Examining Kegel exercise, sexual self-exploration, and continuing sexual sensation. 3-Stimulation of sexually sensitive points of the genitals by a sexual partner	EFT Outercourse practices
Session 9	1- Creating and reinforcing new patterns of attachment-focused behaviours. 2- Tips for promoting diversity in various aspects of married life. 1- Study of stimulation exercises. 2- Teaching Intercourse methods	EFT Intercourse practices
Session 10	Final Assessment and Conclusion	

Measures

Sexual Knowledge and Attitude Scale (SKAS)

Besharat created SKAS, a scale consisting of 30 items that evaluate sexual awareness and attitude using a 5-point Likert scale ranging from 1 to 5. The subscales for sexual awareness and attitude have a minimum and maximum score of 15 and 75, respectively. The internal reliability of the SKAS subscales was estimated to be between .84 and .94 using coefficient alpha(21).

Hurlbert Index of Sexual Desire (HISD)

Sexual desire and arousal questions were obtained from HISD (Hurlbert, 2011), and validated for Iranians. (22, 23). This tool uses a Likert scale ranging from 0 to 4, with 0 representing "always" and 4 representing "never".

Sexual Functioning Scale

The Female Sexual Function Index (FSFI) is a tool used to measure women's sexual function. It is based on a six-item Likert scale ranging from 0 to 5. The FSFI has six domains, which are desire, subjective arousal, lubrication, orgasm, satisfaction, and pain, and it consists of 19 items. The overall Cronbach's alpha for the FSFI questionnaire was 0.82 or higher (24).

The International Index of Erectile Function (IIEF) is a questionnaire designed by Rosen et al. to assess men's sexual function. It comprises five

domains: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction, with 15 items. The IIEF questionnaire has an overall Cronbach's alpha of 0.91 or higher(25).

Data analysis

The data was analyzed using SPSS 22 software (IBM Corp., Armonk, NY, USA) and various statistical tests including independent t-test, Mann-Whitney, Chi-square, Fisher's exact test, repeated measures analysis of variance (ANOVA), and LSD post hoc test.

Results

Descriptive Statistics

The study analyzed data from 48 males and females. The demographic characteristics of the integrated approach and sex therapy groups did not differ significantly (Table 2).

Table 2: Comparison of baseline characteristics in study groups

Variable	*Integrated approach group (n=24)*	*Sex therapy group (n=24)*	*Statistical Test Results*	*Sig*
	Mean (SD) or Number (%)	Mean (SD) or Number (%)		
Age of husband	36.1(9.03)	39.2(8.2)	t-test: 1.19	n.s.
Age of women	32.08(6.1)	34.9(9.2)	t-test: 1.26	n.s.
Length of marriage	7.7(6.7)	10.8(9.6)	t-test: 0.98	
Number Of Children	0.92(0.9)	1.08(0.88)	t-test: 0.62	
Education level of husband (%)			Mann-Whitney test: 0.8	n.s.
High school or less	10(49.5)	10(41.7)		
More than high school	12(50.5)	14(58.3)		
Education level of women (%)			Mann-Whitney test: 0.8	n.s.
High school or less	6(25.0)	8(33.3)		
More than high school	18(75.0)	16(66.7)		
Occupational status of men (%)			χ^2: 0.3	n.s.
Unemployed/ Retired	20(83.3)	22(91.7)		
Employed	4(16.7)	2(8.3)		
Occupational status of women (%)			χ^2: 0.3	n.s.
Employed	8(33.3)	10(41.7)		
Housewife	16(66.7)	14(58.3)		
Economic level (%)			Mann-Whitney test: 0.78	n.s.
High	0(0)	2(8.3)		
Good	4(16.7)	4(16.7)		
Medium	20(83.3)	18(75.0)		

Abbreviations: SD: Standard deviation; Sig: significance; n.s.: Not significant

After conducting an independent t-test on the variables of sexual function and sexual desire of men, the mean score of sexual function and desire did not differ significantly between the integrated approach and sex therapy groups.

The LSD test results showed that the mean scores of male sexual function and desire significantly increased immediately and eight weeks after the intervention compared to before the intervention (P=0.04). However, there was no significant difference in the mean scores of male

sexual function and desire between immediately and eight weeks after the intervention.

On the other hand, the independent t-test results for female sexual function showed no significant difference in the mean scores between the two groups of an integrated approach and sex therapy before and immediately after the intervention. However, the mean score of sexual function for women eight weeks after the intervention was significantly higher in the integrated approach group compared to the sex therapy group (P=0.04).

There were significant differences in the sexual function and desire scores of women in the integrated approach and sex therapy groups when measured at different times (P<0.05). The results of the LSD test showed that the sexual function scores of the women in the integrated approach group had a significant increase at eight weeks after the intervention, compared to the baseline. However, no significant differences were observed between immediately and eight weeks after the intervention. Furthermore, the mean sexual desire scores of women in the integrated approach group were significantly higher than those in the sex therapy group, both immediately and eight weeks after the intervention (Table 3).

Table 3: Comparison of Sexual function and desire of men and women scores between two groups by three times

Variable	*Integrated approach group (n=24)*	*Sex therapy group (n=24)*		*Time/ Group*			
	Mean (SD)	Mean (SD)	Sig $_a$	F_b	Sign	F_c	Sig_c
Sexual Knowledge and Attitude of Couples							
At Intake	71.9(6.3)	72.6(9.9)	ns				
Immediately after the intervention	81.7(10.09)	79.2(8.02)	ns	15.2	0.00	6.3	0.00
8 wk after the intervention	80.1(9.7)	78.4(10.4)	ns				
Sexual function of men							
At Intake	55.5 (29.1)	55.7 (28.7)	ns				
Immediately after the intervention	77.1 (14.9)	76.2 (10.22)	ns	4.22	0.04	4.33	0.04
8 wk after the intervention	76. 5 (14.04)	78.7 (6.5)	ns				
Sexual function of women							
At Intake	36.07 (21.7)	36.4 (21.1)	ns				
Immediately after the intervention	72.6 (11.22)	65.6 (15.1)	ns	31.8	.001	6.52	.01
8 wk after the intervention	70.07 (19.05)	56.6 (28. 8)	.04				
Sexual desire of men							
At Intake	48.5 (9.1)	49.7 (12.3)	ns				
Immediately after the intervention	58.5 (9.7)	59.3 (12.9)	ns	7.32	0.01	5.05	0.04
8 wk after the intervention	59.8 (9.6)	57.9 (9.3)	.04				
Sexual desire of women							
At Intake	19. 7 (18.04)	23.9 (22.9)	ns				
Immediately after the intervention	62.5 (18.4)	41.6 (22.8)	.03	28.1	.001	4.09	0.04
8 wk after the intervention	57.2 (26.3)	36.4 (22. 2)	.01				

Abbreviations: SD standard deviation, sig significance, ns not significant a: Results of T-test
b: Results of repeated measures analysis of variance (RMANOVA) c: test of within-subject effect
b: test of the between-subject effect

Discussion

Our study aimed to compare two therapies for treating HSDD: an integrated approach with the MJST. We found that both therapies improved the sexual desire disorders of couples by the end of treatment. However, the improvement in sexual desire for both men and women in the MJST group disappeared in the post-treatment period. On the other hand, the integrated approach continued to improve sexual desire in men and women up to eight weeks of follow-up.

At this point, the mean score of sexual desire in men and women was significantly higher than in the MJST group.

The MJST principles are rooted in systemic behavior therapy, communication skills, couple education, and cooperation (26). By merging two therapies, EFT and MJST, we have developed an innovative treatment approach. This comprehensive treatment covers all levels of sexual interaction, resulting in improved sexual desire disorder in couples. The benefits of this treatment are long-lasting. We recognize that sexual desire is influenced by social and cultural expectations, psychosocial development, and sexual schemas (27). Our treatment approach took into account the social and cultural expectations of the couples, as revealed by our qualitative research results(20).

Other studies have also shown that MJST has low effectiveness and a high likelihood of relapse after six months of follow-up (8, 26). Therefore, it may not be the best option for treating all sexual disorders, especially lack or loss of sexual desire (8).

Our research discovered an interesting fact: the average score of men's sexual desire between the MJST and new integrated approach groups did not have a significant difference, indicating both methods had a similar effect on men's sexual desire. However, the average score of women's sexual desire significantly increased in the new integrated approach group after the intervention and eight weeks after it ended compared to the sex therapy group. Bisson's non-linear model states that women have various reasons besides sexual desire to engage in sex, such as emotional closeness and intimacy (28). Therefore, it is possible that the increase in women's sexual desire in the new integrated approach group was due to working on couple intimacy and its effect on women's sexual desire.

In comparing the effects of an integrated approach and MJST on couples' sexual function, both treatments were found to improve women's sexual function. The mean score of women's sexual function in each group was significantly different at various times, but in the integrated approach group, the improvement of female sexual function remained stable for up to eight weeks after the intervention. The another study have also reported that emotional couple therapy can increase sexual self-esteem and function in women with sexual desire disorder (29), which supports our study's findings.

Although our study was randomized and experimental, we must note that it was not conducted as a double-blind study. Additionally, we utilized self-report questionnaires to evaluate the effectiveness of treatment, which have limitations in accurately measuring participants' views and opinions, despite their validity in Iranian society. Another limitation of our study is that one researcher applied both treatment approaches. Future studies investigate the effect of the integrated approach on couples' sexual interactions with more samples and for a longer period. Moreover, we recommend that specialized interviews be conducted to evaluate the outcomes of the integrated approach. Despite the limitations of our study, the integrated approach was effective in improving the couple's sexual desire, and this improvement was sustained.

Conclusion

The integrated approach is a more comprehensive method for treating sexual desire disorder compared to MJST. It is important to conduct a thorough evaluation and treatment of sexual desire disorders by considering all social, cultural, individual, and interpersonal aspects. In future treatments, it is recommended to use integrated and multidimensional approaches for better results.

Funding

This study was supported solely by the Isfahan University of Medical Sciences; no funding was received from other organizations.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

The researchers wish to thank the Research Deputy, Midwifery and Reproductive Health professors at the Isfahan Department of Nursing and Midwifery.

Conflict of interest

The authors declare that there is no conflict of interests.

References

1. Michal Lew-Starowicz, Annamaria Giraldi, Tillmann H. C. Krüger. (2021). *Psychiatry and Sexual Medicine: A Comprehensive Guide for Clinical Practitioners*. Springer International Publishing, 109–161.
2. Gambescia N, Weeks GR (2019). Systemic treatment of sexual interest/arousal problems in women. *In: Systemic sex therapy*. Ed(s): Routledge, 107-129.
3. Schwartz MF, Southern S (2018). An integrative model for treatment of sexual desire disorders: An update of the masters and Johnson institute approach. *The Family Journal*, 26 (2):223-237.
4. Ferreira LC, Fraenkel P, Narciso I, Novo R (2015). Is committed desire intentional? A qualitative exploration of sexual desire and differentiation of self in couples. *Fam Process*, 54 (2):308-326.
5. Parish SJ, Hahn SR (2016). Hypoactive Sexual Desire Disorder: A Review of Epidemiology, Biopsychology, Diagnosis, and Treatment. *Sex Med Rev*, 4 (2):103-120.
6. Hall K (2019). Male hypoactive sexual desire disorder. In: *Systemic sex therapy*. Ed(s), 3rd Edition: Routledge, 19.
7. Ramezani MA, Ahmadi K, Ghaemmaghami A, et al (2015). Epidemiology of sexual dysfunction in Iran: a systematic review and meta-analysis. *Int J Prev Med,* 6:43.
8. Pereira VM, Arias-Carrión O, Machado S, et al (2013). Sex therapy for female sexual dysfunction. *Int Arch Med*, 6 (1):37.
9. Jangi S, Nourizadeh R (2023). The effect of cognitive-behavioral therapy and sexual health education on sexual assertiveness of newly married women. *BMC Psychiatry,* 23 (1):201.
10. Shahrahmani N, Mollazadeh S, Taghipour A, et al (2023). The Impact of Emotion-focused Counseling on Marital Issues of Infertile Couples: A Systematic Review. *Journal of Midwifery & Reproductive Health*, 11(4):3884-3895.
11. Ahmadnia E, Haseli A, Karamat A (2017). Therapeutic Interventions Conducted on Improving Women's Sexual Satisfaction and Function during Reproductive Ages in Iran: A Systematic Review. *J Mazandaran Univ Med Sci*, 27 (153):146-162.
12. Johnson SM (2019). The practice of emotionally focused couple therapy: Creating connection (3rd ed). Routledge, 218-237.
13. Şenol A, Gürbüz F, Dost MT (2023). Emotion-Focused Couple Therapy: A Review of Theory and Practice. *Psikiyatride Güncel Yaklaşımlar*, 15 (1):146-160.
14. Stephenson K R, Sullivan K, Christensen A. (2016) Couple Therapy, Editor(s): Howard S. Friedman, Encyclopedia of Mental Health (Second Edition), Academic Press, 368-376.
15. Baucom KJ, Baucom BR, Christensen A (2015). Changes in dyadic communication during and after integrative and traditional behavioral couple therapy. *Behav Res Ther*, 65:18-28.
16. Johnson S, Zuccarini D (2010). Integrating sex and attachment in emotionally focused couple therapy. *J Marital Fam Ther*, 36 (4):431-445.
17. Creswell, John W & Plano Clark, Vicki L. (2011). Designing and conducting mixed methods research. Los Angeles, Cali.: SAGE Publications,43.
18. Soleimani AA, Najafi M, Ahmadi K, et al (2015). The Effectiveness of Emotionally Focused Couples Therapy on Sexual Satisfaction and Marital Adjustment of Infertile Couples with Marital Conflicts. *Int J Fertil Steril*, 9 (3):393-402.

19. Snyder DK, Balderrama-Durbin C (2012). Integrative Approaches to Couple Therapy: Implications for Clinical Practice and Research. *Behav Ther*, 43 (1):13-24.
20. Samadi P, Maasoumi R, Salehi M, et al (2019). Married Women's and Men's Experiences Regarding the Concept of Sexual Desire: A Qualitative Research. *Iran J Psychiatry Behav Sci*, 13 (1): e66324.
21. Besharat MA, Ranjbar Kelagari E (2013). Development and validation of sexual knowledge and attitude scale. *Contemporary Psychology*, 8 (1):21-32.
22. Hurlbert DF (2011). Hurlbert index of sexual desire. In: Handbook of sexuality-related measures. Ed(s): Routledge, Taylor & Francis Group, New York, 191-192.
23. Yousefi N, Farsani K, Shakiba A, et al (2014). Halbert Index of Sexual Desire (HISD) Questionnaire Validation. *Clinical Psychology & Personality (Daneshvar Raftar)*, 20 (9):107-118.
24. Rosen CB J Heiman S Leiblum C. et al (2000). The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J Sex Marital Ther*, 26 (2):191-208.
25. Rosen RC, Riley A, Wagner G, et al (1997). The international index of erectile function (IIEF): a multidimensional scale for assessment of erectile dysfunction. *Urology*, 49 (6):822-830.
26. Ramezani MA, Ahmadi K, Besharat M, et al (2018). Efficacy of metacognitive therapy for hypoactive sexual desire disorder among Iranian couples. *Psychother Res*, 28 (6):902-908.
27. Potki R, Ziaei T, Faramarzi M, et al (2017). Biopsycho-social factors affecting sexual self-concept: A systematic review. *Electron Physician*, 9 (9):5172-5178.
28. Damjanović A, Duisin D, Barisić J (2013). The evolution of the female sexual response concept: treatment implications. *Srp Arh Celok Lek*, 141 (3-4):268-74.
29. Asadpour E, Veisi S (2017). The Effectiveness of Emotionally Focused Couple Therapy on Sexual Self-Esteem and Sexual Function in Women with Multiple Sclerosis. *J Arak Uni Med Sci,* 20 (7):1-12.