Original Article

# Comparing the Effects of Two Methods of Group Education and Peer Education on Sexual Dysfunction of Menopausal Women: A Randomized Controlled Trial

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## Abstract

**Background:** Sexual problems could cause severe personal discomfort and affect interpersonal relationships. Considering that selection of appropriate methods has an important role in success of the education, this study was conducted to compare the effects of two methods of group education and peer education on sexual dysfunction of menopausal women. **Materials and Methods:** In this randomized controlled trial, 108 menopausal women were allocated into three groups in the health centers of Isfahan, Iran. After educating four menopausal women, educational sessions were conducted by them for the participants (36 women) in the peer groups. Two educational sessions were conducted by the researcher in the group education. The control group received no intervention. Before and 1 month after the intervention, female sexual function index was completed by the participants. Data were analyzed using descriptive and inferential statistics (one-way analysis of variance, paired *t*-test, Chi-square, Kruskal–Wallis, and Post hoc LSD test). **Results:** The total mean score of sexual function and its domains in the peer education and group education groups was significantly higher than the control group after the intervention ($F_{2, 93} = 23.52$, $p < 0.001$); but the difference between the peer education group and the group education group was not statistically significant. **Conclusions:** Both methods of peer education and group education have been effective in improving the sexual function of menopausal women. So, considering the advantages of peer education such as its low cost, affordability, and no need to train specialized individuals, its implication in educational programs for menopausal women is recommended.

**Keywords:** *Iran, menopause, peer group, sexual dysfunction, sexual education*

## Introduction

Sexual responding appears due to complicated interactions of psychological, interpersonal, cultural, environmental, and biological factors.[1] One of the effective factors on sexual function is menopause which acts through changes in hormonal levels including deprivation of estrogen.[2] The possibility of sexual dysfunction is higher among menopausal women.[3] The prevalence of sexual dysfunction varies from 68% to 86.5% in women after menopause.[4] In a study that was conducted in Iran, the prevalence of sexual dysfunction in menopausal women was estimated as 72.4%.[5] Sexual dysfunction is mostly associated with problems such as depression, lack of self-esteem, and decreased marital satisfaction.[6-9]

Providing the required education, counseling, and information about the physiology of sexual responses could result in increased ability of taking effective steps toward resolving the sexual problem.[10-13] These educations should be in proportion with age, gender, level of knowledge, and sociocultural context and be provided at the appropriate time.[14,15]

Selecting the appropriate method of education has an important role in success of the education.[16] One of the educational methods is group education. Group education is a method to stimulate thinking, challenge the attitudes and beliefs, and train interpersonal skills. In this method, if the learners would be ready for participating in the discussion or the topic would be understandable for them, the education would have an acceptable success rate.[17] Another educational



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method is peer education which is presented as a flexible educational model.[18] Peer education is exchanging information, attitude, and behavior between people who are not specifically trained for that subject but have common experiences. In peer education, due to the participation of the peer and the patient in the same group, the sense of empathy and social identity would be more strengthened and could improve their knowledge.[19-21] In this regard, Buldukh and Erdogan evaluated the effect of peer education on decreasing risky behaviors and HIV/STI among Turkish college students and showed that the level of awareness was significantly increased in the participants of the peer education group compared with the control group.[22] Considering that no studies have yet been conducted in Iran to compare the effects of educational methods on sexual dysfunction in menopausal women, the present study was carried out to compare the effects of two methods of group education and peer education on sexual dysfunction of menopausal women.

## Materials and Methods

The present study was a randomized controlled trial (IRCT2016102926756N3), which was conducted on 108 menopausal women in three groups (36 women in each group) in the health centers of Isfahan, Iran, from November 2016 to October 2017. The sample size was calculated with a confidence interval of 95%, a test power of 80%, a minimum difference in the mean of sexual function score between the intervention groups (d = 0.7S), and considering a sample loss rate of 10% [Figure 1]. The inclusion criteria were being a menopausal woman younger than 65-year old with sexual dysfunction [gaining a score of <28 from the female sexual function index (FSFI)]; having Iranian nationality; living stably with the husband; not having a history of surgery for both spouses, such as prostatectomy, hysterectomy, oophorectomy, mastectomy, and other breast surgeries; having mental and physical health; not experiencing premature menopause; having at least the elementary school literacy; not having any sexual diseases effective on the sexual function such as premature ejaculation and impotence of the husband; not having any diagnosed diseases in both spouses that would affect their sexual function (including cardiovascular, mental, cancer, thyroid, and nervous diseases); not consuming any drugs that would affect the sexual function by both spouses (such as psychotropic, cardiovascular, nervous, and hormonal drugs); not being remarried; not being addicted to cigarette, alcohol, and drugs by both spouses; not having a history of participation in educational classes about menopause with focus on sexual education; and not being a physician, dentist, paramedic, or psychologist.

Six health centers from the total health centers of Isfahan (58 centers) were selected that had more population under their coverage. Then to prevent interactions and relationships between the participants about the interventions, randomly, two health centers were selected for selecting the participants of the group education, two for the peer education, and two for the control group. In

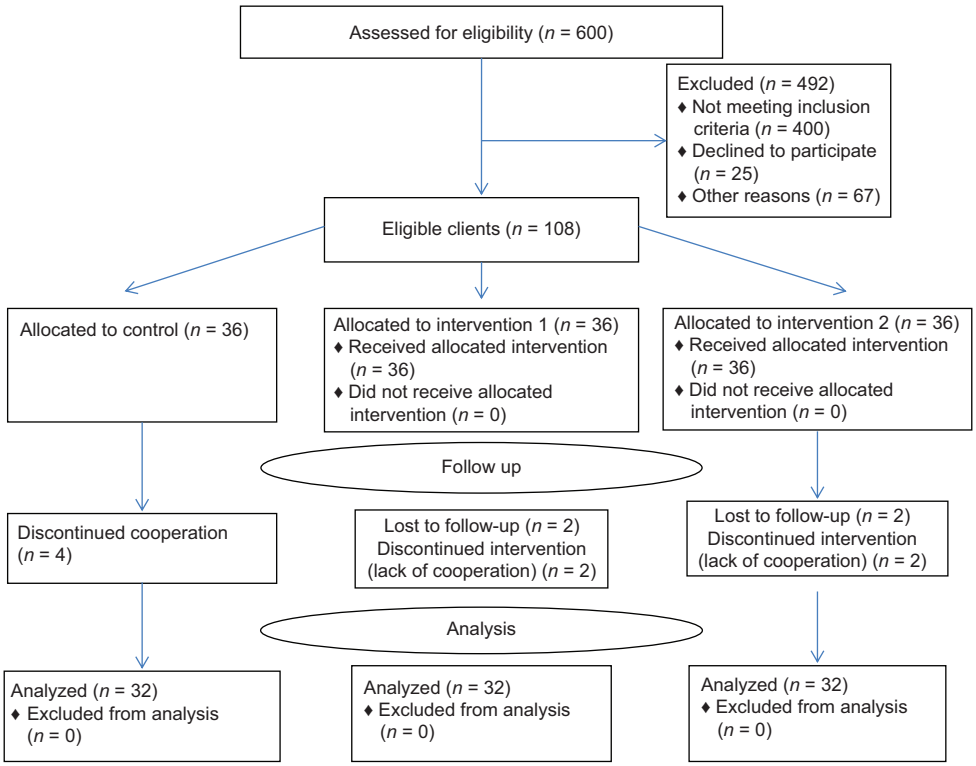


**Figure 1: Trial flowchart**

the selected health centers, using convenience sampling, the medical files of 600 menopausal women were evaluated and 200 women who had the inclusion criteria were selected. Then, after making phone calls to them, other inclusion criteria were asked and the time for their visit was settled. After visiting 108 eligible women and assuring them of the confidentiality of their information, written consent was obtained from all the participants; then, the participants completed the demographic characteristics questionnaire and FSFI. FSFI has been designed by Rosen *et al.* to evaluate the sexual function of women.[23] Validity and reliability of this scale in Iran have been approved by Mohammadi *et al.* in 2008.[24] This questionnaire has 19 items, which evaluate sexual function during the last 4 weeks in six domains of desire (two items), arousal (four items), moisturizing (four items), orgasm (three items), satisfaction (three items), and pain (three items). The score of each domain would be achieved by summing the scores of the items in each domain and multiplying that by the factor number. The score for each item in each domain could be 0–5 or 1–5. The score of 0 indicates that the individual has had no sexual activity during the past 4 weeks. By summing up the scores of the six domains, the total score of the scale would be achieved. Considering the equiponderating of the domains, the maximum score for each field could be 6 and for the total scale could be 36. The range of the total score is between 2 and 36. The cut-off point for the scale is considered at the score of 28 and the cut-off points for the domains of desire, arousal, moisturizing, orgasm, satisfaction, and sexual pain are, respectively, 3.3, 3.4, 3.4, 3.4, 3.8, and 3.8. Scores above the cut-off point indicate better sexual function [Table 1].

In this study, intervention was performed at two stages. The first stage was to select the peer group and educating them and the second stage was performing the intervention and collecting the data, which was conducted before and 1 month after the intervention. At the stage of selecting the peers, eight menopausal women with sexual dysfunction who had characteristics such as ability to run educational sessions, willingness to cooperate with the researcher, having appropriate social communications, having at least high school degree, and being interested in leading the group were selected by the researcher as the trainers of the peer group. During two 2-h sessions,[25] selected peers were educated by the researcher about the importance and advantages of peer education, sexual function, and the causes of sexual dysfunction during menopause and the methods of confronting and coping with it. Education was performed using speech and question and answer with the help of learning assist tools (slides, images, etc.). After each educational session, the participants exercised the trained items in the presence of the researcher using role play method. At the end, participants were evaluated using a checklist (that was evaluated and confirmed by one expert in the field of medical education) including evaluation of communication skills and the level of mastering over the trained items. On this basis, four peers with the highest scores were selected. Then, the 36 participants for the peer education group were divided into four groups of nine and each of the selected peers was allocated to educate one of the divisions; educating the peers was performed during two 2-h educational sessions (once a week). The end of each session was assigned to question and answer. The researcher participated in all the educational sessions for the peers as an observer and answered the questions, if necessary. For the group education, after preparing the appropriate environment, education was performed by the researcher for four groups of nine during two sessions (once a week).[6] The educational content of the sessions included describing the anatomy of the female and male reproductive system, describing the natural process of sexual function, the importance of sexual relationship, and the effect of menopause on sexual function (first session), and problems in sexual function during menopause, and the methods of confronting and coping with sexual dysfunction during menopause (second session). The educational content was developed by reviewing scientific sources and the literature[1,10,26-28] and was similar for both of the intervention groups. At the end of the intervention, a pamphlet about the trained subjects, which was developed in simple language, was distributed among the participants of both groups. No educational intervention was performed for the participants of the control group and they just received the routine care. To answer the probable questions of the women in both groups, apply the provided recommendations and emphasize on revisiting for competing the FSFI again, follow-ups were conducted once a week through phone calls.

**Table 1: Scoring of female sexual function index**

| Domain | Questions | Factor number | Range | Minimum | Maximum |
|---|---|---|---|---|---|
| Desire | 1,2 | 0.60 | 1-5 | 1.20 | 6 |
| Arousal | 3,4,5,6 | 0.30 | 0-5 | 0 | 6 |
| Lubrication | 7,8,9,10 | 0.30 | 0-5 | 0 | 6 |
| Orgasm | 11,12,13 | 0.40 | 0-5 | 0 | 6 |
| Satisfaction | 14,15,16 | 0.40 | (0 or 1)-5 | 0.80 | 6 |
| Pain | 17,18,19 | 0.40 | 0-5 | 0 | 6 |
| Total | - | - | - | 2 | 36 |

The effect of the provided education was evaluated in all participants in three groups by completing the FSFI 1 month after the end of the educational sessions. At the end of the study, to respect ethical considerations, the educational pamphlet was distributed among the participants of the control group, too. The data were analyzed applying the statistical package for the social sciences software 20.0 (SPSS version 20.0, Isfahan, Iran). Data were analyzed using Chi-square test, Kruskal–Wallis test, paired *t*-test (for comparison of means before and after the intervention in each group), one-way analysis of variance (for comparison

of means between three groups after the intervention), and Post hoc LSD test (for comparison of means between two groups after the intervention) and a $p$ values <0.05 was considered as statistically significant.

### Ethical considerations

Research ethics confirmation (ethical approval code: ethics code: IR.MUI.Rec. 1395.3.543) was received from the Ethics Committee of Isfahan University of Medical Sciences and written informed consent, anonymity, confidentiality, and the right of leaving the research at any desired time were preserved.

## Results

The mean age of the women and their husbands, the age of menopause, the time elapsed after menopause, women's age difference with their husbands, duration of marriage, frequency distribution of the job of women and their husbands, and the educational level of the women and their husbands had no significant difference between the three groups.

The results showed that the mean of total score of sexual function and its domains had no significant difference between the three groups before the intervention. The mean of total score of sexual function and its domains was significantly increased in the group education group after the intervention compared with before the intervention ($t = 9.20$, $p < 0.001$). Also, the mean of total score of sexual function and its domains was significantly increased in the peer education group after the intervention compared with before the intervention ($t = 11.32$, $p < 0.001$). However, the mean of total score of sexual function and its domains had no significant difference 1 month after the intervention in the control group compared to the first time of completing the questionnaire.

Also, the mean of total score of sexual function and its domains had a significant difference between the three groups after the intervention ($F_{2, 93} = 23.52$, $p < 0.001$) [Table 2]. Post hoc LSD test showed that the mean of total score of sexual function and its domains after the intervention was significantly higher in both of the intervention groups compared with the control group, but the difference between the group education and the peer education was not statistically significant [Table 3].

## Discussion

This study was conducted to compare the effect of two methods of group education and peer education on sexual dysfunction in menopausal women. The results of the present study showed that the mean of total score of sexual function and its domains had a significant difference between the three groups after the intervention; in other words, group education and also peer education have been effective in improving the sexual function of menopausal women.

In the study of Mir Mohammad Aliei *et al.* on menopausal women, it was determined that performing group educational programs would significantly increase the score of sexual function and all of its domains, except for orgasm.[29] Abedi *et al.* in a study that was aimed to compare the effect of group and individual education on sexual satisfaction in menopausal women concluded that women's sexual satisfaction was higher in the group education group than the individual education group.[6] The above-mentioned studies were consistent with this study which indicated that group education could improve sexual function. Skelly *et al.* in their study concluded that peer education would significantly increase the undergraduate student's sexual health knowledge after education compared with pretraining.[30] However, the study of Malek-khahi *et al.*, which was aimed to determine the effect of peer support group on sexual function in patients treated with hemodialysis showed that peer support group in hemodialysis patients would improve their sexual function. But this change was not significant.[31] It seems that, in this study, the effect of the peer education and group education might be due to selecting the right peers for educating, providing appropriate education to them, and appropriate development and execution of education of menopausal women by their peers. It must be noted that in the field of sexual relationships, people do not tend to easily discuss their issues and problems with anybody. On the other hand, information resources about sexual relationship, especially during menopause, are restricted and also, wrong beliefs

**Table 2: Comparison of the mean of total score of sexual function and its domains with use of one-way analysis of variance in three groups after the intervention**

| Dimension | Mean (SD) | | | One-way analysis of variance | | |
|---|---|---|---|---|---|---|
| | Group education | Peer education | Control group | *F* | df | *p* |
| Sexual desire | 3.24 (0.96) | 3.40 (0.75) | 2.64 (1.10) | 5.69 | 2,93 | 0.005 |
| Sexual arousal | 3.77 (0.90) | 3.57 (1.10) | 2.93 (0.74) | 7.11 | 2,93 | 0.001 |
| Sexual moisturizing | 4.75 (0.73) | 4.81 (0.64) | 3.59 (1.26) | 18.03 | 2,93 | <0.001 |
| Orgasm | 4.27 (0.74) | 4.20 (0.78) | 3.06 (0.83) | 24.17 | 2,93 | <0.001 |
| Sexual satisfaction | 4.25 (0.89) | 4.57 (0.83) | 3.64 (1.27) | 7.03 | 2,93 | 0.001 |
| Pain | 5.11 (1.00) | 5.07 (0.86) | 4.32 (1.47) | 4.84 | 2,93 | 0.01 |
| Total score of sexual function | 25.40 (3.34) | 25.63 (3.18) | 20.19 (4.18) | 23.52 | 2,93 | <0.001 |

**Table 3: Comparison of the mean of total score of sexual function and its domains with use of Post Hoc LSD test after the intervention between the three groups (one by one)**

| Domain | Group education and peer education | | Group education and control group | | Peer education and control group | |
|---|---|---|---|---|---|---|
| | Mean difference (95% Confidence interval for mean) | *p* | Mean difference (95% Confidence interval for mean) | *p* | Mean difference (95% Confidence interval for mean) | *p* |
| Sexual desire | −0.15 (−0.63,0.31) | 0.51 | 0.60 (0.13,1.07) | 0.01 | 0.76 (0.29,1.23) | 0.002 |
| Sexual arousal | 0.20 (−0.26,0.66) | 0.40 | 0.83 (0.37,1.29) | <0.001 | 0.64 (0.18,1.09) | 0.007 |
| Sexual moisturizing | −0.06 (−0.51,0.39) | 0.80 | 1.16 (0.70,1.61) | <0.001 | 1.22 (0.76,1.67) | <0.001 |
| Orgasm | 0.07 (−0.31,0.46) | 0.70 | 1.22 (0.83,1.61) | <0.001 | 1.14 (0.75,1.53) | <0.001 |
| Sexual satisfaction | −0.32 (−0.82,0.18) | 0.20 | 0.61 (0.11,1.12) | 0.02 | 0.94 (0.43,1.44) | <0.001 |
| Pain | 0.04 (−0.53,0.60) | 0.90 | 0.79 (0.22,1.35) | 0.007 | 0.75 (0.18,1.32) | 0.01 |
| Total score of sexual function | −0.23 (−2.01,1.55) | 0.80 | 5.21 (3.43,6.99) | <0.001 | 5.44 (3.66,7.23) | <0.001 |

exist about sexual relationship during menopause. However, a peer is someone from the similar social group that, the learners believed, had similar abilities as themselves; so, they could have strong motivational effects in learning. In this situation, people would accept information from their peers more easily and more openly discuss their issues and problems with them.[32] So, for educating sexual matters, an educational method should be applied in which, besides feeling comfortable for expressing their problems, people would also gain the best and most correct information. Considering the importance of educating menopausal women for improving their sexual function, also lack of specialized staff for education, financial and time limitations for providing group educational programs and also considering the features of peer education including affordability, efficiency, and its capacity for broad education, peer education is recommended as an appropriate educational method for menopausal women.

One of the limitations of this study was that the sensitivity of the subject and feeling ashamed of discussing sexual matters could decrease the correctness and accuracy in answering the questions of the questionnaire by the participants. However, by explaining the importance of the subject and gaining the participants' trust and providing the opportunity for completing the questionnaires in appropriate time and quiet environment, the effort was to decrease this limitation and control it, to some extent. Also, different attitude of the spouses toward sexual function, which is caused by religious beliefs, and social, cultural, and family factors could have been effective on the sexual function of the participants. Besides, the participants' diseases were determined based on their own statements or their medical files; so, if they had any disease and were not aware of it, it was out of the researcher's control. One of the strong points of this study was that there is no similar study in this field and also the design of this study, which used useful educational methods.

## Conclusion

In general, results of this study showed that both the methods of group education and peer education have been effective on improving sexual function in menopausal women. So, considering the workload and lack of time of the specialized staff in the health centers, and considering that peer education has low costs and is affordable and does not require training specialized staff, it could be used as an appropriate educational method for menopausal women.

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## Conflicts of interest

Nothing to declare.

## References

1. Berek JS. Berek & Novak· s Gynecology. 15th ed. Philadelphia: Lippincott- Williams & Wilkins; 2012.
2. Faubion SS, Sood R, Kapoor E. Genitourinary syndrome of menopause: Management strategies for the clinician. Mayo Clin Proc 2017;92:1842-9.
3. Nappi RE, Cucinella L, Martella S, Rossi M, Tiranini L, Martini E. Female sexual dysfunction (FSD): Prevalence and impact on quality of life (QoL). Maturitas 2016;94:87-91.
4. Ambler DR, Bieber EJ, Diamond MP. Sexual function in elderly women: A review of current literature. Rev Obstet Gynecol 2012;5:16-27.
5. Beigi M, Fahami F. A Comparative study on sexual dysfunctions before and after menopause. Iran J Nurs Midwifery Res 2012;17(2 Suppl 1):S72-5.
6. Abedi P, Jafarzadeh M, Abbaspoor Z, Bastami P, Haghighizadeh MH, Hassani M. Education for sexual satisfaction promotion in postmenopausal women: Individual or group education? Iran J Obstet Gynecol Infertil 2017;20:16-23.
7. Lo SS, Kok WM. Sexuality of Chinese women around menopause Maturitas 2013;74:190-5.
8. Bachmann G, Santen RJ. Treatment of genitourinary syndrome of menopause (vulvovaginal atrophy), 2017. Available from:

http://www.uptodate.com/contents/treatment-of-genitourinary-syndrome-of-menopause-vulvovaginal-atrophy. [Last accessed on 2018 Jan 20].

9. Masliza W, Daud W, Yazid Bajuri M, Shuhaila A, Hatta S, Rohaizat Hassan M, *et al*. Sexual dysfunction among postmenopausal women. Clin Ter 2014;165:83-9.
10. Jahanfar S, Molaeinezhad M. Textbook of Sexual Disorders. 2nd ed. Tehran: Jamnagar; 2013.
11. Karimi A, Dadgar S, Afiat M, Rahimi N. The effect of sexual health education on couples' sexual satisfaction. Iran J Obstet Gynecol Infertil 2013;15:23-30. [Persian]
12. Kaviani M, Rahnavard T, Azima S, Emamghoreishi M, Asadi N, Sayadi M. The effect of education on sexual health of women with hypoactive sexual desire disorder: A randomized controlled trial. Int J Commun Based Nurs Midwifery 2014;2:94-102.
13. Stabile C, Goldfarb S, Baser RE, Goldfrank DJ, Abu-Rustum NR, Barakat RR, *et al*. Sexual health needs and educational intervention preferences for women with cancer. Breast Cancer Res Treat 2017;165:77-84.
14. Browes NC. Comprehensive sexuality education, culture and gender: The effect of the cultural setting on a sexuality education programme in Ethiopia. Sex Educ 2015;15:655-70.
15. Future of Sex Education Initiative. National sexuality education standards: Core content and skills, K-12 [a special publication of the journal of school health], 2012. Available from: http://www.futureofsexeducation. org/documents/josh-fose-standards-web.pdf. [Last accessed on 2018 Jan 27].
16. Hodges BC, Videto DM. Assessment and Planning in Health Programs. 2nd ed., USA: Jones and Bartlett learning; 2011.
17. Saif A. Learning Psychology and Education. Tehran: Duran Publishing Company; 2011. [Persian]
18. Peykari N, Ramezani Tehrani F, Malekafzali H, Hashemi Z, Djalalinia SH. An experience of peer education model among medical science university students in Iran. Iran J Public Health 2011;40:57-62.
19. Brashers DE, Basinger ED, Rintamaki LS, Caughlin JP, Para M. Taking control: The efficacy and durability of a peer-led uncertainty management intervention for people recently diagnosed with HIV. Health Commun 2017;32:11-21.
20. Skirbekk H, Korsvold L, Finset A. To support and to be supported. A qualitative study of peer support centres in cancer care in Norway. Patient Educ Couns 2018;101:711-6.
21. Seymour JE, Almack K, Kennedy S, Froggatt K. Peer education for advance care planning: Volunteers' perspectives on training and community engagement activities. Health Expect 2013;16:43-55.
22. Bulduk S, Erdogan S. The effects of peer education on reduction of the HIV/sexually transmitted infection risk behaviors among Turkish university students. J Assoc Nurses AIDS Care 2012;23:233-43.
23. Rosen R, Brown C, Heiman J, Leiblum S, Meston C, Shabsigh R, *et al*. The female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. J Sex Marital Ther 2000;26:191-208.
24. Mohammadi K, Heidari M, Faqihzadeh S. The validation of female sexual function index (FSFI) in the women. Payesh J 2008;2:269-78. [Persian]
25. Khavasi M, Shamsizadeh M, Varai SH, Rezaei M, Elhami S, Masroor D. The effect of peer education on quality of life in patients with type 2 Diabetes: A randomized clinical trial. Sci J Hamadan Nurs Midwifery Fac 2017;25:8-16.
26. Fritz M, Speroff L. Clinical Gynecologic Endocrinology and Infertility. 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2011.
27. Arman S, Hassan Zahraee R. Detection and Treatment of Sexual Dysfunction. 2th ed. Esfahan: Salemi; 2010.
28. Bachmann G, Santen RJ. Treatment of genitourinary syndrome of menopause (vulvovaginal atrophy), 2016. Available from: https://www.uptodate.com/contents/treatment-of-genitourinary-syndrome-of-menopause-vulvovaginal-atrophy. [Last accessed on 2018 Sep 20].
29. Mirmohammadaliei M, Ghelichkhani F, Pakgohar M, Mahmoodi Majdabadi M. Effectiveness of a sex education program on sexual function in postmenopausal women with sexual dysfunction: A randomized trial. Payesh 2016;15:181-92.
30. Skelly C, Hall C, Risher C, Brown B. Peer-to-peer education of college females on sexual health. Univ J Educ Res 2018;6:844-7.
31. Malekkhahi A, Jadid MM, Amiri P. The effect of peer support groups on sexual function in patients treated with haemodialysis. J Sabzevar Univ Med Sci 2016;23:304-12.
32. Turpin A, Shier ML. Peer support and substance use disorder treatment: Benefits and barriers for intra-personal development in longer-term treatment programs. J Groups Addict Recover 2017;12:117-34.