Article

The effect of telephone counseling with a positive psychology approach on quality-of-life in postmenopausal women: A randomized controlled trial

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Abstract

Background: Positive psychology can improve the quality of life of postmenopausal women.
Objectives: This study was conducted to determine the effect of telephone counseling with a positive psychological approach on the quality-of-life of postmenopausal women.
Methods: This randomized controlled trial was conducted on 70 eligible postmenopausal women (each group=35). The experimental group received eight telephone counseling sessions with a positive psychology approach. Data were collected using questionnaires (demographic characteristics, menopausal women's quality-of-life (MENQOL), and depression anxiety stress scale (DASS-21) on social media platforms (WhatsApp), before, immediately, and 2 months after the intervention. Data were analyzed using chi-square, independent t-test, Friedman, and Mann-Whitney tests in SPSS 16 software.
Results: The mean (SD) of quality-of-life score two months after the intervention in the experimental group was 15.50 (7.62) and in the control group was 25.19 (12.19). The mean quality-of-life scores in the experimental group were lower than the scores of the control group. This significant difference remained in the experimental group until follow-up, two months after the intervention (P <0.001). Friedman's test also showed that the quality-of-life variable in the experimental group had a statistically significant change in different phases (P<0.001). According to the median scores, the quality-of-life has improved over time.
Conclusion: Telephone counseling with a positive psychology approach can improve quality-of-life in postmenopausal women. Given this, it is recommended that positive interventions be used to promote mental health during menopause, among other methods to improve health.

Implications of this paper in nursing and midwifery preventive care:
- Training midwives service provider to menopausal women in positive psychology is essential.
- Providing these techniques in the country's health center programs can improve the quality-of- life in women and their prosperity in society at a low cost.
- Non-pharmacological factors affecting health can improve women's mental and physical health and prevent problems from occurring in families and society.

Introduction

Due to the increase in life expectancy in women, most women spend significant years of their lives in the post-menopause stage [1]. Menopause means the permanent cessation of menstruation for at least 12 months due to the loss of activity of the ovarian follicle. The postmenopausal stage is after menopause [2]. Menopause is a natural growth process in women. Menopause usually occurs naturally. In some women, pathological factors (chemotherapy, pelvic radiation therapy, bilateral oophorectomy) cause menopause [3]. Hormonal changes during menopause may affect this period, for example, vasomotor symptoms, hot flashes and night sweats, sleep disorders, fatigue, depression, clouding of consciousness, decreased libido, and increased anxiety depressive and anxiety symptoms have been described among postmenopausal women [4].

In Nappi's study, the prevalence of moderate to severe vasomotor was reported to be 16%, and 40%, and a large proportion of these people were opposed to hormone therapy. They reported that the most common menopausal symptoms reported in Menopause-Specific QOL (MENQOL) were: fatigue or exhaustion, pain in muscles and joints, trouble sleeping and hot flashes [5]. The results of the study by Moghani et al. showed that the experience of menopause is worse in women with depression, anxiety, and stress. [6]. Women's explanation of menopause symptoms depends on how "normal" they consider this event to be or

whether it means ending for them. For some women, the end of the reproductive phase is difficult to understand, especially if fertility plays an important role in the woman's identity. The society also gives meaning to the concept of menopause. Menopause is considered positive in societies that value aging [2].

Various studies have shown the negative effects of menopausal symptoms on the quality-of-life of menopausal women. According to Chen et al., vasomotor symptoms have been seen in 80% of menopausal women, physical symptoms in 99%, mental symptoms in 93%, and sexual symptoms in 82%, all of which reduce the quality-of-life [3]. Also, in another study physical symptoms (low backache) were reported as the most common symptom of menopause experienced affecting quality-of-life in Ethiopian postmenopausal women [7]. The results of another study indicate that women with more severe menopausal symptoms have poorer quality-of-life. Also, this study reports current hormone therapy, marital intimacy, monthly family income, menopausal symptoms, and education level as factors affecting quality-of-life [8]. Also, the quality-of-life of postmenopausal women was reported to be at a moderate level. The highest average score was related to the physical dimension and the lowest average score was related to the vasomotor dimension [9].

Psychological and behavioral interventions are effective in treating menopausal symptoms. 80% of women who were willing to use complementary or alternative therapies (such as nutritional, physical, psychological, traditional herbs, or mental-physical and behavioral therapies) reported improvement in menopausal symptoms [3].

The goal of positive psychotherapy is to enhance pleasure, interaction, and meaning by using strengths to deal with stressors, expressing gratitude, and fostering positive relationships [10]. The positive psychology approach was founded by Martin Seligman in 1998 [11].

A positive approach to psychology believes that positive emotions, abilities, and having a meaningful life help people to have a better life, both in times of comfort and in times of crisis and difficulty. Positive psychology affects many aspects of quality-of-life and one of its goals is to increase the quality-of-life [12].

The result of a study in Iran showed that elderly men who received positivity training had higher life satisfaction and character strengths [13]. Also, Positive psychology strengthens the cognitive and emotional-social development of primary and secondary students [14]. According to studies conducted in recent years, positive counseling is effective in improving the quality-of-life in pregnant women, improving the quality-of-life and life expectancy in the elderly [15]. These interventions have also been able to reduce anxiety and depression and increase life satisfaction in adolescent girls [16]. Menopausal women experience several vasomotor, physical, sexual, and psychological symptoms that affect their quality-of-life. People's motivation and attitude towards menopause increase the severity of symptoms. Quality-of-life is a major component of improved health, especially in menopausal women, and maintaining a good quality-of-life is a very important health goal not only for menopausal medicine but also for governments and health care [17].

Menopausal problems and their impact on various aspects of life indicate the need for intervention to increase the quality-of-life in this group [18]. Given the importance of the role of women in the family and society, increasing the quality-of-life of women improves the health of the family and society. In the existing literature, a study was not found to investigate the effect of telephone counseling with a positive psychology approach on the quality-of-life of postmenopausal women. Therefore, the present study was designed and implemented to investigate the effectiveness of telephone counseling with a positive psychology approach on the quality-of-life of postmenopausal women.

Methods

This randomized control trial was conducted to evaluate the effect of telephone counseling with a positive psychology approach on the quality-of-life of postmenopausal women in the health centers and clinics of Takab City, West Azerbaijan, Iran.

The study design was approved by the Ethics Committee of the Zanjan University of Medical Sciences (IR.ZUMS.REC.1398.455) and registered in the Iranian Registry for Randomized Controlled Trials (IRCT20200210046448).

This study started on 17 April and was completed on 27 June 2021.

Inclusion criteria were: middle school education, resident of Takab, age between 48-60 years, sexually active, having a spouse, cessation of menstruation for at late one year the past year natural menopause, having a mental health (have a normal, mild to moderate score based on the DASS-21 questionnaire), do not have acute and chronic diseases.

Exclusion criteria were as follows: menopause induced by medication or surgery, use of hormones and smokers in the last 6 months, major stressful events in the last six months such as death of a close relative, and acute and chronic illness.

The sample size was estimated based on the mean quality of life score in menopausal women [19]. The values of Z1-a/2=1.96, Z1-β = 1.28, σ_1= 17.66, σ_2=13.04, μ_1=55.85, μ_2= 42.55 were considered. 70 women were estimated for the sample size considering a 20% dropout rate.

Sampling in the first stage was performed by convenience sampling among postmenopausal women referring to all three health centers and one gynecological clinic in Takab City. Among 358 postmenopausal women whose names were registered in the centers, 70 eligible postmenopausal women were registered at the centers and then divided into two experimental and experimental groups (35 people in each group). In this study block randomization with block size four and allocation ratio 1:1 was used for randomization. To randomize into two groups, a list of eligible postmenopausal women's names is prepared from number one to 70, and then blocks of four are created, two allocations are considered for the experimental group (AA) and two allocations for the control group (BB) are considered. A maximum of six modes were created (AABB, ABAB, ABBA, BBAA, BABA, BAAB). Quadruple blocks of the table of random numbers and according to the determined modes continued until the classification to the determined sample size, i.e., 35 people in each group.

Due to the conditions created during the COVID-19 pandemic and the use of telephone counseling, blinding was not possible. The experimental group received eight sessions (every 60 minutes) of individual telephone consultation with a positive psychology approach using the Seligman protocol that was validated in Iran by the Rahimi protocol [20]. The reason for holding the sessions by phone was the COVID-19 pandemic, and because the target group was high-risk individuals, it was not possible to hold face-to-face sessions. All sessions were held by one of the researchers (ShH). Before presenting the intervention with a positive psychology approach, the researcher (ShH) had received the necessary training under the supervision of a psychologist. Consent to participate in the study and questionnaires were sent to individuals through WhatsApp software and after completion sent to the researcher. The consent form was sent virtually in WhatsApp software and how to fill it was explained. The time and day of the sessions were planned in coordination with each participant. For the sessions not to be boring, the participants were given a break whenever they wanted, and we tried to involve the participants in the discussion with active asks and answers. At the end of each session, homework was given to the individuals [20]. The description of the sessions is given in Table 1.

Table 1: Description of Positive Psychology Intervention Sessions

Session	Description
Session 1	Self-introduction and initial communication, structure, and goals of meetings, description of menopause, familiarity with the concept of positive psychology and quality-of-life. Homework: write "a positive story" about yourself.
Session 2	Talking about menopause problems, discussing feelings, abilities, positive emotions, moral virtues, and the abilities of other family members and the role of these abilities in a person's ability and problem-solving power. Homework: write "three positive events" about yourself.
Session 3	Discussing the topics related to lifestyle and traditional treatments and diet in menopause, the time to meet with a doctor. Discussion about forgetting and forgiveness (turning the feeling of anger into a neutral feeling or positive emotion) Homework: writing a letter of forgetting and forgiveness"
Session 4	Talk about gratitude and appreciation Expressing good or bad memories with emphasis on good memories and gratitude Discuss the establishment of appropriate interpersonal communication Homework: writing a letter of appreciation and presenting it to the intended person
Session 5	Discussing hope and optimism and flourishing after trauma and remembering the opportunities after trauma Homework: writing a post-traumatic recovery event
Session 6	Discussing the role and importance of positive social communication in self-efficacy Homework: writing a positive communication and its role in life
Session 7	Familiarity with enjoying life and avoiding haste and the role of calmness in life satisfaction Familiarity with types of pleasure and related techniques Discussing strategies to avoid habituation and also the concept of goal-setting Homework: writing three enjoyable things in life with a purpose
Session 8	Summarize all the contents and points in this training course Explaining the experience of telephone counseling and getting feedback conducting the post-test Coordination for follow-up two months later

Demographic questionnaire including (age, education, and employment status of women and their partner, menopause age, marital status, fertility history, having sex with a partner), Postmenopausal Women Quality-of-life Questionnaire (MENQOL) was used to collect the data before, immediately after and 2 months after the intervention respectively.

The Menopausal Women Quality-of-life Questionnaire was designed by Hilditch al. At the University of Toronto, Canada. This questionnaire includes 26 questions about the signs and symptoms of menopause in 4 domains: vasomotor (questions 1 and 2), psychosocial (questions 3-9), physical (questions 10-24), and sexual (questions 25 and 26). Correlation coefficients are reported respectively 0.60 for the physical domain, 0.28 for the vasomotor domain, 0.55 and −0.54 for the psychosocial domain, 0.54 and 0.32 for the sexual domain, and 0.12 for the quality-of- life question. A higher score in each field indicates a worse quality-of-life and a lower score indicates a better quality-of-life. A 4-point Likert scale was used to rate each item (0 = none; 3 = strong), yielding a total score ranging from 0 to 78. The total score was interpreted as follows: poor quality-of-life (52-78), average quality-of-life (26-52), and good quality-of-life (0-26). In Iran by Fallahzade et al., Content validity was confirmed by a panel of experts, and its reliability was obtained by Cronbach's alpha with a value of 0.85 [21].

The Depression, Anxiety, and Stress Inventory, designed by Lovibond and Lovibond in 1995, consists of 21 questions that measure negative emotions and feelings. The person should determine the status of one of the symptoms during the past week. A 4-point Likert scale was used to rate each item (0 = It does not apply to me at all; 3 = Absolutely true of me) [22].

anxiety score of 4–8 (mild and moderate anxiety), a depression score between 5 to 11 (mild and moderate depression), and a stress score between 8 to 13 (mild and moderate stress) [4].

The validity and reliability of this questionnaire in Iran have been studied by Samani and J Jokar. They reported by test-retest validity for depression, anxiety, and stress scales to be 0.87, 0.85, and 0.75, respectively, and Cronbach's alpha for depression and anxiety scales. and stress was reported as 0.87, 0.83, and 0.80 respectively [23].

All data were entered SPSS 16. First, the normality or not of the variables was assessed using the Kolmogorov-Smirnov test. Parametric tests (t-test) were used for variables with normal distribution, and non-parametric tests (Chi-square, Mann-Whitney, and Friedman) were used for variables with non-normal distribution. The variable of quality-of-life before the intervention, immediately after the intervention has a normal distribution ($p>0.05$), but two months after the intervention, it does not follow the normal distribution ($p<0.05$). The descriptive statistical test such as mean and standard deviation was used before, immediately after the intervention, and two months after the intervention in the experimental and control groups. A significance level of less than 0.05 was considered.

Results

Two participants in the control group and three participants in the experimental group were dropped out (Fig. 1). Baseline demographic and social characteristics of the two groups are summarized in Table 2. The mean (SD) age of women in the experimental group was 55.14 (4.13) and in the control group was 54.11 (3.42) years. According to the independent t-test and Mann-Whitney test, there was no statistically significant difference between the two groups in terms of women's menopausal age and the two groups were homogeneous at the beginning of the study ($p>0.05$).

Table 2: Demographics and clinical characteristics of the two study groups

Characteristic		Experimental group (n=32)	Control group (n=33)	P
		Mean (SD)		
Age		55.14(4.13)	54.11(3.42)	Independent t-test (0.261)
Menopause age		48.71(2.85)	48.11(2.84)	Mann-Whitney (0.231)
Spouse age		60.57(6.06)	57.26 (5.9)	Mann-Whitney (0.031)
Women's education		n (%)		
Diploma and lower		26 (81.2%)	24 (72.7%)	Chi-square test (0.415)
Academic		6 (18.8 %)	9 (27.3%)	
Women's Employment	Retired	6(18.7%)	5(15.2%)	Chi-square test (0.788)
	Homemaker	22 (68.8%)	22 (66.7%)	
	Employed	4 (12.5%)	6 (18.1%)	

*SD: Standard deviation

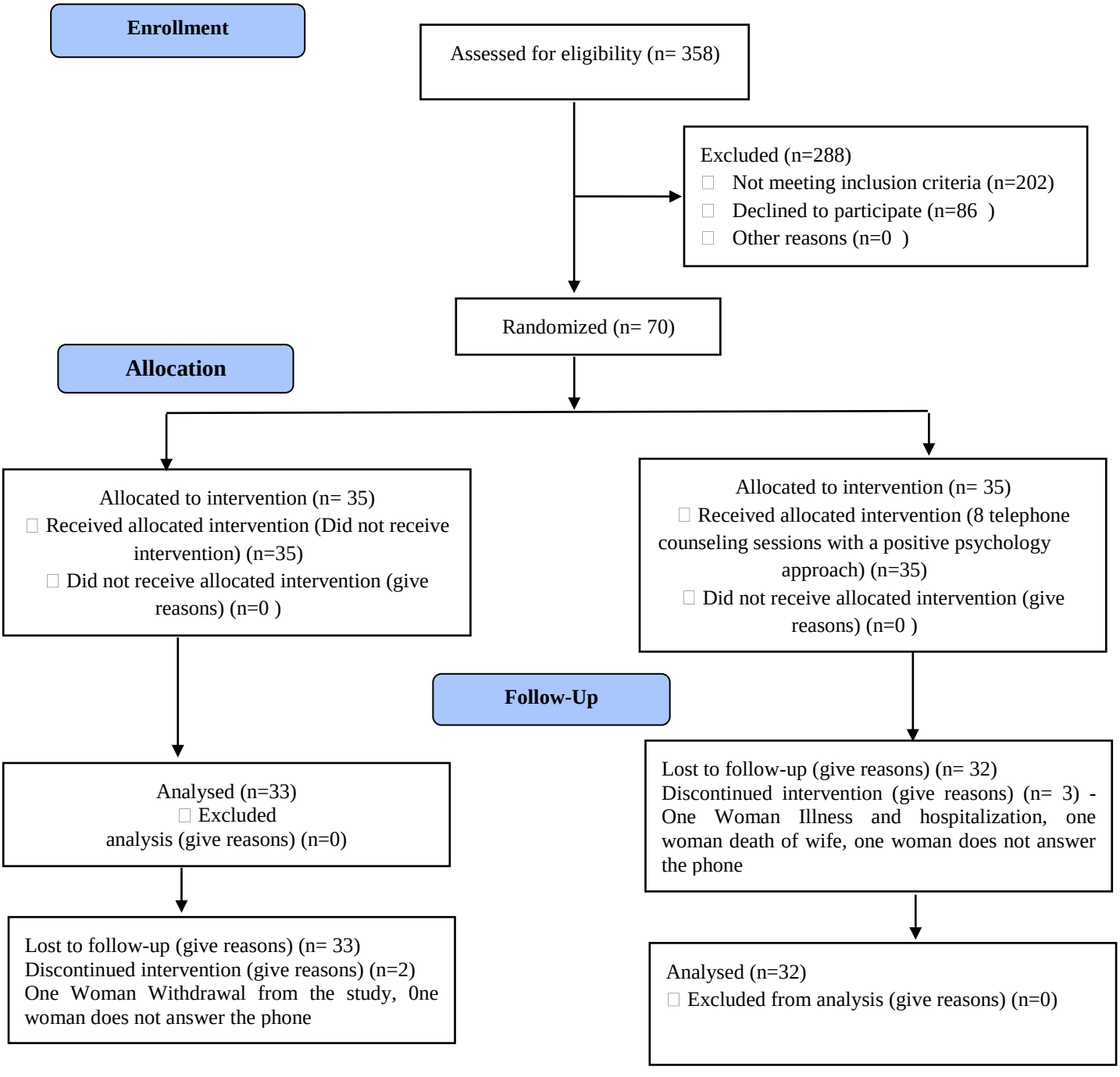

Figure 1: Flow diagram of recruitment and drop up of participants in the study

According to the independent t-test, the mean quality-of-life variable before the intervention was not significantly different between the two groups (p = 0.088). However, based on an independent t-test, a significant difference was observed in the mean quality-of-life immediately after the intervention (p = 0.041). In the experimental group, the quality-of-life score was lower, meaning that the quality of life of the individuals was higher. The mean (SD) of quality-of-life two months after the intervention in the experimental group was 15.50 (7.62) and in the control group

was 25.19 (12.19). According to the Mann-Whitney test, there was a significant difference between the mean quality-of-life two months after the intervention (p <0.001) (Fig. 2).

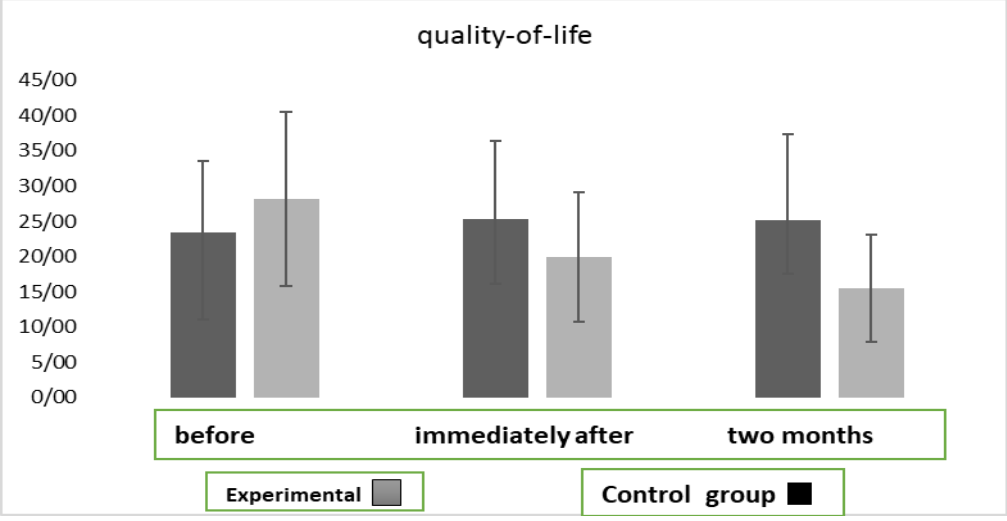

Figure 2: Comparison of quality-of-life score before, immediately after, and two months after the intervention of the two study groups (N=65)

In the experimental group, the quality-of-life score was lower two months later, meaning that the quality of life of the individuals had increased. Based on the results Friedman test, the mid-quarter range of MENQOL score in the experimental group decreased in the two months after the study intervention, which indicates an increase in quality-of-life. Friedman test also showed that the quality-of-life variable in the experimental group at 3 stages had a statistically significant change (p <0.001). According to the median of scores, quality-of-life has improved over time. Also, the Friedman test showed that there was no statistically significant change in the quality-of-life in the control group (P = 0.449), and the quality-of-life score of the period immediately after the intervention increased compared to before the intervention (Table 3).

Table 3: Friedman's test to rank the quality-of-life scores before, immediately after, and two months after the intervention in the two study groups (N=65)

Quality-of-life	Before intervention		Immediately after intervention		Two months after the intervention		P*
	Median	Interquartile range	Median	Interquartile range	Median	Interquartile range	
Experimental group	30.50	8.5	19	8.5	14	5.5	0.001
Control group	26	17.5	25.50	19.5	24.50	18.5	0.449

*Friedman's test

The results of the analysis of the variance test with repeated measurements showed that there was a statistically significant difference between sexual, physical, and psycho-social variables before, immediately after, and 2 months after the intervention, but the vasomotor variable was not significant between the two groups (Table 4)

Table 4: Comparison of dimensions of quality-of-life score before, immediately after, and two months after the intervention of the two study groups (N=65)

Group	Time Mean (SD)					
	Before intervention	Immediately after intervention	Two months after the intervention	P*	Effect size	Intercept size
Sexual variable						
Experimental	2.59(1.99)	1.53(1.13)	1.03(0.933)	0.016	0.127	0.752
Control	2.09(1.95)	2.06(1.69)	2(1.97)			
Physical variable						
Experimental	17.84(8.87)	11.53(6.35)	8.28(5.70)	0.001	0.211	0.868
Control	13.88(6.26)	14.42(6.79)	14.24(7.65)			
Psychosocial variable						
Experimental	5.44(3.66)	4.31(2.44)	3.91(2.45)	0.001	0.268	0.830
Control	4.94(2.76)	6.24(3.58)	6.42(4.30)			
Vasomotor variable						
Experimental	2.72(1.80)	2.5(1.24)	2.28(1.55)	0.304	0.038	0.818
Control	2.30(1.82)	2.58(1.41)	2.64(1.83)			

*Analysis of variance with repeated measures

Discussion

The present study aimed to investigate the effect of telephone counseling on the quality-of-life of postmenopausal women. The results showed that positive psychology intervention increases the quality- of-life of menopausal women.

A meta-analysis conducted by Carr et al., found that positive psychology intervention (PPI) was associated with increased well-being. Their study was on the population of children and adults with clinical and non-clinical problems in 41 countries. results showed that PPI had a small to medium but significant effect on health, strengths, quality-of-life, depression, anxiety, and tension. This effect was also seen in the 3-month follow-up period. Non-western residents with clinical problems in individual or group counseling benefited the most from this intervention [24]. Another study in line with the results of this study was the systematic meta-analysis conducted by Hendriks which showed that by removing outliers in the data analysis, there was a significant decrease in the effect size for mental well-being and depression, a slight decrease for psychological well-being, and a strong increase in the effect size for stress. Excluding low-quality studies resulted in significant reductions in effect sizes for subjective well-being, psychological well-being, and depression, and slight reductions for anxiety, but large increases for stress. In their studies of non-Western countries, compared to studies of Western countries, a larger effect size was found for anxiety [25]. In Iran, Mostafaei et al., Also showed a positive psychological approach to the quality-of-life of pregnant women. The score of quality-of-life after the implementation of the intervention was higher than in the experimental group [26]. Also, other results showed that positivist psychology intervention has been effective in the quality-of-life and happiness of people with COVID-19 anxiety [27]. These results were in the line with current study.

In explaining these findings, it can be said that positive psychology, which studies human capabilities, focuses on identifying factors that increase mental health. Some of the capabilities of a human being are related to a psychological aspect and help people to imagine potential incidents as less threatening and to prepare themselves for such incidents. In general, positive psychology, as a new approach in psychology, deals with the study of positive emotions and characteristics in humans and is more concerned with the strengths and talents of humans. Another goal of positive psychology is to identify and define concepts of people's health and happiness and benefit from a healthy life. One of these concepts is the concept of quality-of-life, which positive thinking can improve [28].

Another finding shows the effectiveness of positive psychology intervention on the physical dimension of quality-of-life. In line with these results in a systematic review and meta-analysis conducted by Chakhssi et al., the effect of positive psychology intervention by studying emotions, and identifying positive behaviors is not only effective for well-being but also reduces clinical disorders [29]. Psychological interventions are also used to improve the health of healthy or at-risk people. The results of a quasi-experimental study on elderly people (average age 65) showed that depression and anxiety symptoms were improved in the experimental group. Also, after the end of the intervention, the health indicators increased [30]. In a study of positive psychological well-being in cardiovascular disease, it has been shown that the relationship between positive psychological well-being and cardiovascular conditions may be established through biological, behavioral, and psychosocial pathways [31]. The alignment of these studies with the present study shows that positive psychology is effective in the physical aspect of quality-of-life by creating higher self-care and performing healthier behaviors.

In Mostafaei's study, there was a statistically significant difference in the average scores of physical dimensions in the two groups, but in the follow-up period, no difference was seen between the two groups, which can be attributed to the difference in the target population, as they were conducted on pregnant women. In pregnancy, physical problems due to physiological changes of pregnancy increase with increasing gestational age [26]. This finding is contrary to the present results.

Another finding shows the effectiveness of positive psychology intervention on the psychological dimension of quality-of-life. In line with the present results, Saffarinia et al. showed that the use of the hope therapy training package based on positive psychology has a significant effect on the quality-of-life (QoL) and psychological well-being of people with Parkinson's due to the benefit of hope therapy [32]. Huffman et al., showed that positive psychotherapy can improve the components related to social communication and QoL in individuals [33]. In explanation, positive psychotherapy activates the optimism of trained people. Evidence suggests that optimism plays an effective role in maintaining a person's mental health [34] Optimism, as a protective factor, may lead to resisting adverse psychological and physiological outcomes. Similarly, optimism can lead to improved psychological well-being [32].

The results of the analysis of variance with repeated measurements, taking into account the Mukhelli test, also showed that in the experimental group, the average sex score before, immediately after, and two months after the intervention had a significant difference. Considering the eta square, it can be said that 35% of the changes in the sex score were positive due to the intervention. In the sessions on positive psychology, by discussing menopause and its problems (one of the most important problems in menopause is sexual problems) [35], we tried to talk about feelings, capabilities, positive emotions, and the power of solving problems. Effective strategies for increasing women's understanding of menopause include educational interventions such as health education programs and support groups. These interventions foster positive attitudes and strengthen coping mechanisms. By adapting and accepting menopause, menopausal women can increase their awareness of the physical, psychological, and sexual aspects of this stage and improve their quality-of-life [36].

Another finding showed that this intervention did not affect vasomotor symptoms. Hot flashes are one of the common problems of menopause which is caused by the decrease of estrogen [35]. In the reviews, no study was found on positive psychology on the quality-of-life of menopausal women. Because, all studies have been on the effect of positive psychology on the physical, psychosocial, and sexual dimensions of quality-of-life.

Limitations of this study include; this study was not blinded. there is a possibility that women in the experimental group will focus more sensitively and carefully on their positive traits and show more positive behaviors and emotions. Other limitations of the study are self-report questionnaires by providing the necessary explanations about the need for accuracy in completing the questionnaires, the participants were asked to complete the questionnaires accurately. The COVID-19 pandemic and the lack

of face-to-face sessions and telephone counseling sessions were other limitations of this study. The choice of session time by the participants the 24-hour access of the consultant and the establishment of honest communication were tried to control it.

Conclusion

The findings of the present study suggest that telephone counseling with a positive psychology approach can be an acceptable method to improve the quality-of-life of postmenopausal women, which has continued until two months later in the follow-up period. Based on these findings, health providers who are in direct contact with postmenopausal women can use this approach to promote physical and mental problems and improve the routine care of postmenopausal women.

Ethical Consideration

This study has received ethics approval from the ethics committee of Zanjan University of Medical Sciences (Ethical Code: (IR.ZUMS.REC.1398.455) and registered in the Iranian Registry for Randomized Controlled Trials (IRCT20200210046448).

Informed consent was obtained from all participants in the study. The confidentiality of information and anonymity of individuals were observed during the study process

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Conflict of interest

The authors declare that they have no conflicts of interest.

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Authors' contributions

Study concept and design: H.Sh, R.L and EKh.T; Drafting of the manuscript: H.Sh. M. Critical review of the manuscript for important intellectual content: R. L. Critical review of the intervention sessions

Study Z.S.

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