Introduction

Menopause is one of the developmental stages in women that all women experience by aging. This phenomenon cause extensive changes in them. Reduced estrogen levels at the time of menopause leads to a wide range of symptoms, including dizziness, rapid and irregular heartbeat, vaginal atrophy and bladder irritability, mood swings, sleep disturbances, headache, muscle pain, joint pain, difficulty in concentration, and memory disorders. These symptoms can influence physical, psychological, and sexual health of women. In addition, they may have an impact on work, social activities, mood, relationship, enjoyment of life, and ultimately quality of life (QOL). In fact, women in perimenopausal period experience a transitional period. If the person feels unable to change the structure of her life, a growing crisis may occur for her, and the physiological changes of this transition period may have a profound impact on her personal feeling and life satisfaction. Researchers consider events in social life, such as illness, death of a spouse, marital dissatisfaction, as well as emotional intelligence influential on the incidence and exacerbation of mood disturbances. Therefore, the purpose of this study was to predict marital satisfaction based on emotional intelligence for postmenopausal women.
swings.\textsuperscript{5} Regarding marital satisfaction, it can be pointed out that family psychology researchers often consider marital satisfaction level as the criterion for evaluation of the quality of marital affairs.\textsuperscript{6} Marital satisfaction is one of the most important factors in achieving life goals that is influenced by couple’s emotional stability. Researchers regard marital satisfaction as objective feelings of satisfaction and the pleasure experienced by the husband or wife while considering all aspects of life.\textsuperscript{7} However, some researchers consider marital satisfaction a result of three factors, including general satisfaction of married life, sexual satisfaction, and emotional satisfaction. Evidence suggests that marital satisfaction has a fundamental impact on physical, and mental health. In fact, physical, mental, and emotional health depends on the health and sustainability of marriage and marital relationships.\textsuperscript{8} Abundant evidence shows that couples face many problems for maintaining and establishing intimate relationships and perceiving feelings by their spouses.\textsuperscript{9} Besides, it is evident that deficits in emotional competence of women during menopause adversely impacts their common life.\textsuperscript{10} Research shows that factors influencing marital adjustment are in three categories of personal characteristics (age, physical and characteristic conditions), situational factors (income, social class, education, and culture), and life events (premarital relations, stressful and risky events such as menopause).\textsuperscript{11,12} However, in recent years, utilizing emotional intelligence have been emphasized in evaluation of marital satisfaction as a contributing factor in improving marital satisfaction. Emotions and mechanisms for coping with them is part of the human personality that can influence health.\textsuperscript{13} Emotional intelligence is a kind of emotional processing that includes correct assessment of emotions of oneself and others along with expressing these emotions, and adjusting them adaptively in a way that lead to improvement in life. Therefore, emotional intelligence is a fundamental and influential structure for enhancing satisfactory marital relationships. Since by using this skill in their marriage, couples would be more capable to adapt and cope with mental stresses in their married life, A person with high emotional intelligence can think wiser in difficult conditions, therefore prevent wasting time due to emotions such as anger, anxiety, and fear.\textsuperscript{14,15} The present study aimed to investigate the relationship between emotional intelligence and marital satisfaction in postmenopausal women.

Materials and Methods

This descriptive correlational study was conducted to evaluate the relationship between emotional intelligence and marital satisfaction in postmenopausal women referring to health centers in Borujen (Iran) in May to December 2016. The sample size of 134 participants was estimated by considering a confidence interval of 95%, a power of 80%, and by assuming a correlation coefficient of $r = 0.25$ between emotional intelligence and marital satisfaction in postmenopausal women. Samples were selected by convenience sampling method, Data were collected using emotional intelligence questionnaire (Bar-on) and marital satisfaction questionnaire (ENRICH). Bar-on questionnaire is a self-report questionnaire to assess emotional and social intelligence related behaviors. Bar-on emotional intelligence questionnaire consists of 117 items that each item is scored from 1 to 5. This test is standardized in Isfahan (Iran) by Samoei\textsuperscript{17} with 90 questions. The reliability coefficient of 93% has been reported using calculation of Cronbach’s $\alpha$ and the reliability of 88% was reported using even–odd method, The mean reliability coefficients of indices were obtained between 58% (expression) and 9% (mental stress tolerance). Zare\textsuperscript{18} reported 0.76 as total mean of consistency coefficients in the questionnaire. In this study, the reliability coefficient of the questionnaire measured by Cronbach’s $\alpha$ was equal to 89%. ENRICH has been prepared by Powers and Olson and was revised by Olson in 2006. The revised scale contains 35 phrases and 4 subscales of Idealistic distortion, satisfaction, communication, and conflict resolution that can be used as a research tool. This questionnaire was evaluated in 2000 on 25,501 married couples and $\alpha$ coefficients of the questionnaire measured by Cronbach’s $\alpha$ were 0.86, 0.81, 0.84, and 0.83 and retest reliability of the questionnaire for the respected subscales were 0.86, 0.81, 0.90, and 0.92; respectively. In Asoodeh’s study,\textsuperscript{19} $\alpha$ coefficient of the questionnaire was measured as 0.68, 0.78, 0.62, and 0.77 for the aforementioned subscales, respectively. In this study, $\alpha$ coefficients were 0.72 for marital satisfaction, 0.65 for

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communication, 0.78 for conflict resolution, and 0.83 for idealistic distortion. Postmenopausal women who were married, aged 45 to 60 years, had no suspected or confirmed pregnancy, did not use contraceptive pills or hormone replacement therapy, were relatively healthy, and had no history of chronic mental or physical illnesses were included in this study. After selecting the eligible participant, the researcher was introduced to them and the objectives of the study were elaborated for the participants. The informed consent was obtained from the subjects and they were assured that their information will remain confidential. Then, the questionnaires were given to them. The researcher read the questions for participants and recorded their answers in the questionnaire without any alteration. The selection of samples that lasted about three months, was continued until the estimated sample size was reached. Data was analyzed by SPSS package 18.0 for Windows (SPSS Inc., Chicago, IL, USA) using descriptive (frequency, mean, and standard deviation [SD]) and inferential (Pearson correlation coefficient and simultaneous multiple regression analysis) statistical methods.

### Results

The mean age of participants was 53.9 ± 5.75 years. The majority of participants had below diploma education (61.9%).
Twenty-three (17.2%) of them were employed or retired. While 111 subjects (82.8%) were housewives. Demographic characteristics of postmenopausal women in this study is presented in Table 1.

Mean ± SD of 115.35 ± 20.08 was reported for marital satisfaction and 335.18 ± 33.75 for emotional intelligence. Pearson’s correlation coefficient was used to evaluate the relationship between emotional intelligence and marital satisfaction in subjects. Based on the findings that are demonstrated in Table 2, a significant and positive relationship was noted between marital satisfaction and emotional intelligence ($r = 0.25$, $P < 0.05$). In other words, marital satisfaction improves by increasing emotional intelligence.

In order to predict marital satisfaction using emotional intelligence simultaneous multiple regression was used (Table 3). However, before using the regression, its hypotheses were evaluated. Durbin-Watson test was utilized for evaluation of errors, while histogram and Probability Plot diagrams along with nonparametric Kolmogorov-Smirnov test were used for evaluation of normal distribution of residuals. As it is shown in Table 3, the findings indicate that F test values for determining the effect of emotional intelligence on marital satisfaction was equal to 48.03 that was significant in 0.05 level. By considering the $R^2$, about 10% of the variance in marital satisfaction can be explained by emotional intelligence. The regression coefficient suggests that emotional intelligence ($\beta = 0.31$) can predict marital satisfaction positively and significantly.

### Table 2. Correlation matrix marital satisfaction and emotional intelligence

| Variable          | Marital satisfaction | Emotional intelligence |
|-------------------|----------------------|------------------------|
| Marital satisfaction | 1                    | 0.25                   |
| Emotional intelligence | 0.25                  | 1                      |

### Table 3. Regression analysis emotional intelligence and marital satisfaction by simultaneous entry

| Basis variable       | Predictor variable | $\beta$ | $B$   | $t$  | Sig | $R^2$ | R    | F    | Durbin Watson |
|----------------------|---------------------|---------|-------|------|-----|-------|------|------|---------------|
| Marital satisfaction | Emotional intelligence | 0.31    | 0.33  | 8.53 | 0.05| 0.10  | 0.32 | 48.03 | 1.04          |

$\beta$: standardized regression coefficient, $B$: unstandardized regression coefficient, $t$: t-test value, Sig: significance, $R^2$: squared multiple correlation coefficient, R: correlation coefficient, F: Fisher ratio

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**Discussion**

There was a significant and positive relationship between emotional intelligence and marital satisfaction ($r = 0.25$). Couples with higher emotional intelligence can better understand each other and can better manage their feelings and behaviors. Therefore, these couples are more capable in controlling the emotions of themselves and their spouses and have better feeling in their married life. The findings of Anghel and Lavalekar et al. suggested that there is a positive relationship between emotional intelligence and marital satisfaction. In a study by Extremera and Fernández-Berrocal on 99 middle-aged Spanish women and the results showed a positive relationship between the three aspects of marital satisfaction and emotional intelligence. In their study that aimed to assess psychological problems and coping strategies in postmenopausal women Potdar and Shinde also found that there is a significant relationship between emotional intelligence and marital satisfaction and women often use these approaches during this period. Similarly, in their study of depression, anxiety, psychological disorders, and QOL in postmenopausal women, Masood et al. maintained that depression, anxiety, and psychological disorders during menopause can be influential on QOL of women, especially after marital satisfaction. In a study done by Burri et al., 2035 women were examined and the results showed no significant difference between women’s aging and emotional intelligence. Having a higher emotional intelligence leads to better management of emotions and enhanced ability to cope with daily problems that in turn leads to improved mental health. Menopause is associated with altering roles of the couple that affects them mentally. Various changes in the lives of postmenopausal women, such as changes in roles and responsibilities leads to alteration in demands and expectations from oneself and others. In Im et al.’s study, half of the women did not have
the favorable social support of their spouses and felt alone. While in Adler et al.,’s study, women declared the fear of losing their relationship. However, they did not consider sex as a reason, instead they believed psychological changes of menopause were culpable in lack of marital satisfaction and separation. The results of this study indicated that 10% of the variance of marital satisfaction is determined by emotional intelligence. In other words, people who have higher emotional intelligence, while face with events and marital issues, enhance their marital adjustment by maintaining a positive attitude and choosing an appropriate strategy to solve the problems. As a result, using the stress tolerance skill, a person can manage mental pressure in life. In this regard, a person can self-regulate anxiety and depression without leaving threatening situations, and improving the abilities to face and withstand these issues becomes an inseparable part of a person’s life. Tirgari et al., findings suggested that there is a significant difference between the levels of emotional intelligence and its related competences that is positively correlated with marital satisfaction of the couples. Therefore, by taking this results into account, it can be suggested that emotional intelligence is correlated with marital satisfaction, Smith et al., and Dildar et al., in their studies on relations between spouses also showed that the components of emotional intelligence influence marital satisfaction. Fitness suggested that emotional intelligence, or at least some aspects of it has the potential to enrich a stable marriage with optimal compatibility and people with higher emotional intelligence experience more marital satisfaction compared to people with low emotional intelligence. As a result, findings signs of incompetence in emotion, lines of thought, or wrong behavior along with the mood instability in life can lead a couple to separation and highlights the critical role of emotional intelligence in the survival of marriage. Due to the impact of cultural factors and social and religious values it is recommended that future studies be conducted by taking all these factors into account. Besides, similar studies in larger communities and by comparing menopausal and perimenopausal women can yield better results.

Conclusion

The findings of this study can be applied to design effective intervention programs. Therefore, it is suggested to resolve or reduce the underlying factors behind the problems of couples by holding training courses for promoting emotional intelligence in postmenopausal women and help them to experience better marital satisfaction.

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

References

1. Heidari M, Ghodusi M, Rafiei H. Sexual self-concept and its relationship to depression, stress and anxiety in postmenopausal women, J Menopausal Med 2017; 23: 42–8.
2. Shirvani M, Heidari M. Quality of life in postmenopausal female members and non-members of the elderly support association, J Menopausal Med 2016; 22: 154–60.
3. Zivdir P, Sobhet R. Effect of feelings of guilt and shame on life quality of women in menopause, J Menopausal Med 2017; 23: 5–14.
4. Kwak EK, Park HS, Kang NM. Menopause knowledge, attitude, symptom and management among midlife employed women, J Menopausal Med 2014; 20: 118–25.
5. Lim KY. The study of menopause-related quality of life and management of climacteric in a middle-aged female population in Korea, Public Health Wkly Rep 2013; 6: 609–13.
6. Woloski–Wruble AC, Oliel Y, Leefsm M, Hochner–Celniker D. Sexual activities, sexual and life satisfaction, and successful aging in women, J Sex Med 2010; 7: 2401–10.
7. Thompson WK, Charlo L, Vahia IV, Depp C, Allison M, Jeste DV. Association between higher levels of sexual func–
Emotional intelligence in postmenopausal women. J Am Geriatr Soc 2011; 59: 1503–8,
8. Ornat I, Martínez–Dea R, Muñoz A, Franco P, Alonso B, Tajada M, et al, Sexual function, satisfaction with life and menopausal symptoms in middle-aged women, Maturitas 2013; 75: 261–9,
9. Ho SC, Liang Z, Yu RH, Sham A, Association of life events and depressive symptoms among early postmenopausal Chinese women in Hong Kong, Menopause 2017; 24: 180–6,
10. Yeo JH, Correlational study on management of menopause, marital satisfaction, and quality of life in middle-aged women, Taehan Kanho Hakhoe Chi 2004; 34: 261–9,
11. Hoshyar N, Morovatisharifabad MA, Mihanpour H, Bahri N, Jargal KM, The effect of husbands’ education regarding menopausal health on marital satisfaction of their wives, J Menopausal Med 2017; 23: 15–24,
12. Morell MA, Apple RP, Affect expression, marital satisfaction, and stress reactivity among premenopausal women during a conflictual marital discussion, Psychol Women Q 1990; 14: 387–402,
13. Soleyman AA, Mohammadi A, A study of the relationship between emotional intelligence and marital satisfaction (Persian), Pazhouhesh–Nameye Tarbiati 2009; 5: 131–50,
14. Gottman JM, The science of trust: Emotional attunement for couples, New York, NY: W.W. Norton & Co.; 2011,
15. Shahbazi S, Heidari M, Vanaki Z, Today nursing need for emotional intelligence: Integrative review of literature, Q J Nurs Manag 2012; 1: 55–64,
16. Fata L, Mootabi F, Shakiba SH, Components of emotional intelligence: Social as predictors of mental health, Psychol Stud Sch Educ Psychol Zahra 2008; 4: 101–24,
17. Samoei R, Translating and norms for emotional intelligence questionnaire among university students, Psychology 2011; 5: 9–10,
18. Zare M, The study of emotional intelligence contribution in academic achievement [master’s thesis], Tehran, IR: Tehran Psychiatric Institute; 2001,
19. Asroodeh MH, ENRICH marital satisfaction scale, Tehran, IR: Azmonyar Pouya; 2010,
20. Anghel TC, Emotional intelligence and marital satisfaction, J Exp Psychother 2016; 19: 14–9,
21. Lavalekar A, Kulkarni P, Jagtap P, Emotional intelligence and marital satisfaction, J Psychosoc Res 2010; 5: 185–94,
22. Extremera N, Fernández–Berrocal P, Relation of perceived emotional intelligence and health–related quality of life of middle-aged women, Psychol Rep 2002; 91: 47–59,
23. Potdar N, Shinde M, Psychological problems and coping strategies adopted by post menopausal women, Int J Sci Res 2014; 3: 293–300,
24. Masood A, Rashid S, Musarrat R, Mazahir S, Depression, anxiety, psychological distress and quality of life in menopausal phase, Pak J Womens Stud 2016; 23: 77–89,
25. Burri AV, Cherka LA, Spector TD, Emotional intelligence and its association with orgasmic frequency in women, J Sex Med 2009; 6: 1930–7,
26. Shahbazi S, Hamzati M, Mottari M, Heidari M, Training problem solving skills and its effect on emotional intelligence of nursing students of Shiraz, Iran J Med Educ 2012; 12: 67–76,
27. Afghari A, Ganji ZH, Shirvan CA, Explanation of psycho–emotional challenges of menopause: A qualitative study, J Mazandaran Univ Med Sci 2012; 23: 27–38,
28. Im EO, Liu Y, Dormire S, Chee W, Menopausal symptom experience: an online forum study, J Adv Nurs 2008; 62: 541–50,
29. Adler SR, Fosket JR, Kagawa–Singer M, McGraw SA, Wong–Kim E, Gold E, et al, Conceptualizing menopause and midlife: Chinese American and Chinese women in the US, Maturitas 2000; 35: 11–23,
30. Tirgari A, Asgharnejad Farid AA, Bayanzadeh SA, Abedin AR, A comparison between emotional intelligence and marital satisfaction, and their structural relation among discordant and well–adjusted couples in Sari, Iran, J Mazandaran Univ Med Sci 2006; 16: 78–86,
31. Smith L, Ciarrochi J, Heaven PCL, The stability and change of trait emotional intelligence, conflict communication patterns, and relationship satisfaction: A one–year longitudinal study, Pers Individ Dif 2008; 45: 738–43,
32. Dildar S, Bashir S, Shouib M, Sultan T, Saeed Y, Chains do not hold a marriage together: Emotional intelligence and marital adjustment (A case of gujrat district, Pakistan), Middle East J Sci Res 2012; 11: 982–7,
33. Fitness J, Emotional intelligence and intimate relationships, In: Ciarrochi J, Forgas JP, Mayer JD, editors, Emotional intelligence in everyday life, Philadelphia, PA: Psychology Press; 2001, pp.98–112.