



The Association between Sexual Self-Efficacy and the Quality of Life among Menopausal Women

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Objectives: The present study aimed to determine the association between sexual self-efficacy (SSE) and quality of life (QOL) among menopausal women.

Methods: In this analytical cross-sectional study, 558 menopausal women were enrolled. Consecutive and available sampling was performed for the sample collection. The instruments used for data collection included a three-part questionnaire consisting of demographic information, Menopausal-Specific Quality of Life Questionnaire (MENQOL), and SSE questionnaire.

Results: Overall, the maximum and minimum scores of SSE were related to sexual desire (2.88 ± 0.60) and orgasm (0.85 ± 0.17). The highest and lowest scores of QOL were related to psychosocial (4.14 ± 1.24) and sexual activity (3.03 ± 1.74) domains. A significant correlation was observed between the QOL and the domains of SSE ($P < 0.001$). The maximum and minimum correlation of QOL were related to sexual desire ($P < 0.001$, $r = 0.030$) and orgasm ($P < 0.001$, $r = 0.108$), respectively. Furthermore, a significant correlation was observed between the SSE score and all domains of QOL except for the vasomotor domain. With regard to the SSE score, the maximum association was found with the sexual activity score ($P < 0.001$, $r = 0.466$).

Conclusions: Based on the findings of this study, a significant direct correlation was observed between the QOL and SSE of menopausal women. Thus, further research and developing education and consultation as intervention programs for enhancing SSE can promote the QOL among women.

Key Words: Menopause, Quality of life, Sexual health, Self-efficacy, Women

INTRODUCTION

The goal of achieving optimal health outcomes for all in the 21st century is improving quality of life (QOL). QOL is a mental aspect of welfare and one of the indicators of health measurement [1]. Currently, well-being and health-related QOL are major concerns for health providers in public health [2] and one of the most important components of the general concept of health [3]. The issue of QOL is important across different classes of the society, especially those suffering special physical or psychological conditions and facing the stresses resulting from these conditions [4].

One of the vulnerable classes of society is the group of women reaching the menopausal age [5]. In spite of increasing life expectancy, the age of menopause is fixed. Thus, women in more developed countries pass almost one-third or 30 years of their lives in the menopausal period [6,7]. According to the statistics predicted by the Iranian management and planning organization, until 2021 in Iran the number of menopausal women would be 5 million [8]. Menopausal women usually suffer vaginal atrophy and dryness, diminished sexual desire or sexual arousal, and problems in achieving orgasm [9,10]. Thus, one of the common and principal health-related concerns in menopausal women is im-

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paired sexual functioning and its negative impacts on their marital satisfaction and QOL [6,11]. Based on the results of studies performed in Iran, the prevalence rate of female sexual disorders during menopause is 72.5% [12]. Hence, the prevalence of this disorder is high among menopausal women [10], and significantly affects their confidence, mood, relations with the spouse, and naturally their QOL [13]. Meanwhile, the low confidence of the person in sexual affairs or low sexual self-efficacy (SSE) plays a determining role in developing sexual function disorders [14]. The concept of SSE which is adapted from Bandura's self-efficacy theory is a multidimensional construction composed of the person's belief about their ability in performing effective sexual activity [15].

Researchers believe that in order to have a proper and desirable sexual functioning, SSE is essential, and those with a higher SSE have greater sexual perception and pleasure plus better psychosocial functioning [16]. They also believe that low SSE can have negative effects on the person's sexual function and behavior, resulting in avoidance of sexual activity [17]. Sex therapists also consider SSE as a predictive factor for sexual functioning [15,17] and boosting the SSE as a proper solution to prevent sexual problems, to improve sexual activity, and to ameliorate sexual adaptation [18].

Thus, the question arises here, whether by enhancing SSE among women, the QOL of menopausal women could be heightened through improving the sexual functioning. Hence, the aim of the current study was to determine the association between SSE and QOL of menopausal women referring to Alzahra education, research, and remedial center in Rasht, Iran.

MATERIALS AND METHODS

This study was carried out at Guilan University of Medical Sciences from April 2019 to February 2020. A cross-sectional comparative study was conducted which 558 menopausal women 40–60 years of age meeting the inclusion criteria participated. The inclusion criteria were as follows: natural menopause (no incidence of menopause following surgery), consent to participating in the study, at least one year past their menopause, having a spouse and sexual activity, no special disease (cardiovascular disease, epilepsy, diabetes, hypertension), not consuming drugs affecting the nervous system, no heavy psychological stress such as accidents or loss of first-degree family members over

the last three months. On the other hand, not responding to the questionnaire items completely was the exclusion criterion. The sampling method was consecutive and available. The data collection questionnaire in this research was an instrument consisting of three parts: 1) demographic information (age, age of menopause, level of education, occupation, spouse age, level of the spouse education, spouse's occupation, economic status, place of residence, number of family members, number of children); 2) Menopausal-Specific Quality of Life Questionnaire (MENQOL) developed by Hilditch et al. [19] with 29 items in four domains including vasomotor (3 items), psychosocial (7 items), physical (16 items), and sexual activity (3 items); 3) standard SSE questionnaire developed by Bailes et al. [20], composed of eight dimensions (interpersonal desire and interest, sensuality, personal arousal, interpersonal orgasm, affection, communication, physical acceptance, and refusal), whose psychometrics have been tested by Rajabi and Jelodari [21] in Iran.

The scores of the MENQOL questionnaire span from 0 to 174 as a 6-point rating scale (not at all: 6, very rarely: 5, rarely: 4, below average: 3, average: 2, much: 1, extremely: 0). In each item, the person is asked whether she has had this problem over the past month or not. In case she did not have this problem, she would mark that option, while in case of positive experience, its severity would be responded from 0–6 according to the description above. The negative response to one item indicates a score of six in that item. The more severe that symptom, the lower the score assigned to that item. After calculation, the mean scores are determined in each of the domains of the questionnaire (vasomotor, psychosocial, physical, and sexual activity). The mean sum of the scores related to the questionnaire items represents the total score of QOL [19].

The reliability of the questionnaire measured by test-retest method was 98%. The internal consistency of the questionnaire measured by Cronbach's alpha was 0.81. Otherwise, she would leave the opposite columns blank, in which case the score would be zero. The scoring of questionnaire obtains of adding scores across all dimensions of SSE. The scoring of each dimension is also based on the mean value of scores of that dimension. The higher scores (the maximum score is 100) indicate greater SSE.

The internal consistency of the questionnaire measured by Cronbach's alpha was 0.88 [21]. The independent-samples *t* test, ANOVA, and Pearson correlation

coefficient is used to determine SSE based on socio-demographic variables of participants. Multiple regression analysis also be used to assess factors associated to SSE. Statistical analysis was performed using SPSS for Windows (ver. 16.0; SPSS, Chicago, IL, USA). *P* value was considered with $P < 0.05$.

RESULTS

The mean and standard deviation (SD) age (54.01 ± 3.95 years) of participants was with the range 41–60 years. The mean and SD age of menopause was 48.53 ± 3.99 years. Most participants (76.7%) had below diploma level and were housewives (81.5%) with average economic status (65.8%) and were city dwellers (67.2%) (Table 1).

Table 2 displays the SSE of our participants. The mean of SSE was 2.50 ± 0.53 with a 95% confidence interval (2.46–2.54). The lowest and highest total scores of SSE were 1.18 and 4.18, respectively. A Friedman test showed strong significant differences between the four subscales of SSE ($P < 0.001$). The lowest and highest scores of SSE subscales were related to orgasm 0.85 ± 0.17 and sexual desire 2.88 ± 0.60 , respectively.

The mean score of MENQOL among participants was 3.77 ± 0.95 , with the minimum and maximum being 0.79 and 5.79 respectively. The participants acquired the minimum score in the domain of sexual activity (3.03 ± 1.74), while the maximum was found in the psychosocial domain (4.14 ± 1.24) (Table 3).

The QOL of participants had a significant positive correlation with the total score in all domains of SSE ($P < 0.001$, $r = 0.306$). The maximum correlation of QOL was found with sexual desire ($P < 0.001$, $r = 0.030$), while the minimum was observed for orgasm ($P < 0.001$, $r = 0.108$). Also, the score of SSE had a significant correlation with all domains of MENQOL except for vasomotor domain. The maximum correlation of SSE was found with sexual activity ($P < 0.001$, $r = 0.466$) (Table 4).

SSE had a significant association with the level of education ($P < 0.001$), spouse's occupation ($P = 0.01$), and economic status ($P < 0.001$). Specifically, the participants with academic degrees (mean, 2.75; SD, 0.43; median, 2.68), with employed spouse and better economic status (mean, 2.76; SD, 0.57; median, 2.73) had a great score of SSE.

There is a significant linear relationship between the score of MENQOL and the level of education of

menopausal women ($P = 0.015$), spouse's occupation ($P < 0.001$), and economic status ($P < 0.001$). The participants with academic degrees (mean, 4.24; SD, 1.00; median, 4.34), with employed spouses and better eco-

Table 1. Sociodemographic characteristics of participants (n = 558)

Variable		Value
Age (y)		
Women		54.01 \pm 3.95
Age of menopause		48.53 \pm 3.99
Partner		57.29 \pm 6.21
Body mass index (kg/m ²)		28.73 \pm 11.15
No. of children		
Without children		19 (3.4)
1–2		173 (31.0)
3–4		277 (49.6)
> 5		89 (15.9)
Education		
Women	Primary or secondary school	112 (20.1)
	High school	316 (56.6)
	Diploma	105 (18.8)
	University education	25 (4.5)
Partner	Primary or secondary school	59 (10.6)
	High school	303 (54.3)
	Diploma	131 (23.5)
	University education	65 (11.6)
Economic status		
Weak		145 (26.0)
Moderate		367 (65.8)
Good		46 (8.2)
Substance use		
Women	No	554 (99.3)
	Cigarettes	3 (0.5)
	Opium	0 (0)
	Alcohol	1 (0.2)
Partner	No	467 (83.7)
	Cigarettes	74 (13.3)
	Opium	5 (0.9)
	Alcohol	12 (2.2)
Residency		
City		375 (67.2)
Rural		183 (32.8)

Data are presented as mean \pm standard deviation or number (%).

Table 2. The sexual self-efficacy levels and their subscales among participants

SSE	Mean	SD	Median	Min.	Max.	95% CI		P value
						Lower limit	Upper limit	
Sexual desire	2.88	0.60	2.85	1.38	4.62	2.83	2.93	< 0.001 ^a
Arousal	2.62	0.66	2.67	1.00	4.50	2.56	2.67	
Affection	2.37	0.79	2.40	1.00	4.80	2.30	2.43	
Orgasm	0.85	0.17	0.83	0.67	2.33	0.83	0.86	
Total score	2.50	0.53	2.50	1.18	4.18	2.46	2.54	

SSE: sexual self-efficacy, SD: standard deviation, Min.: minimum, Max.: maximum, CI: confidence interval.

^aFriedman test.

Table 3. The menopausal specific quality of life levels and their subscales among participants

MENQOL	Mean	SD	Median	Min.	Max.	95% CI		P value
						Lower limit	Upper limit	
Vasomotor	3.14	1.88	3.67	< 0.001	6.00	3.26	3.57	< 0.001 ^a
Psychosocial	4.14	1.24	4.29	0.43	6.00	4.03	4.24	
Physical	3.81	1.04	3.88	0.88	5.88	3.73	3.90	
Sexual activity	3.03	1.74	3.00	< 0.001	6.00	2.89	3.18	
Total score	3.77	0.95	3.83	0.79	5.79	3.69	3.85	

MENQOL: Menopausal-Specific Quality of Life Questionnaire, SD: standard deviation, Min.: minimum, Max.: maximum, CI: confidence interval.

^aFriedman test.

conomic status, had a higher MENQOL score.

The regression coefficients predicting the factors associated with QOL of menopausal women based on multiple linear regression models on the unmatched model indicated that from among the four domains of SSE, only sexual desire ($P < 0.001$, $\beta = 0.483$) predicts the QOL of menopausal women. In this regard, with one score increase in the sexual desire domain, the QOL score of menopausal women will grow by ($\beta \pm$ standard error = 0.483 ± 0.06) on average.

The multiple linear regression model in the matched model showed that age ($P = 0.031$, $\beta = 0.021$) and economic status of the family ($P = 0.045$, $\beta = 0.143$) predicted the MENQOL, while the unemployment of the spouse has an adverse effect on the QOL of menopausal women ($P = 0.006$, $\beta = -0.596$).

In the current study, control for confounding factors done with multiple linear regression. Multiple regression analysis is also used to assess whether confounding exists. Since multiple linear regression analysis allows us to estimate the association between a given independent variable and the outcome holding all other variables constant, it provides a way of adjusting for (or

accounting for) potentially confounding variables that have been included in the model.

Table 5 shows the regression coefficients predicting factors related to the QOL of postmenopausal women based on the multiple linear regression model in the matched model. In this model, in order to match and eliminate the effect of the intervening variable on the relationship between the main variables, all individual, social and intervening variables were entered in the initial model with $P < 0.1$. Based on the information in Table 5, in the final model, the score of sexual orientation ($P < 0.001$, $\beta = 0.455$) was still significant, as well as age ($\beta = 0.021$, $P = 0.031$) and family economic status ($\beta = 0.143$, $P = 0.045$) is considered as a predictor related to increasing the QOL score. But the unemployment of the husband had a negative effect on the QOL of postmenopausal women ($\beta = -0.596$, $P = 0.006$).

DISCUSSION

The minimum and maximum scores of SSE were related to orgasm and sexual desire respectively. These results did not concur with Zare et al. [22] findings. In

Table 4. Correlations between SSE scores and MENQOL scores

SSE		MENQOL				
		Vasomotor	Psychosocial	Physical	Sexual activity	Total score
Sexual desire	Correlation coefficient ^a	0.057	0.265	0.195	0.475	0.030
	<i>P</i> value	0.176	< 0.001	< 0.001	< 0.001	< 0.001
Arousal	Correlation coefficient ^a	0.086	0.224	0.180	0.374	0.271
	<i>P</i> value	0.042	< 0.001	< 0.001	< 0.001	< 0.001
Affection	Correlation coefficient ^a	0.046	0.215	0.151	0.407	0.246
	<i>P</i> value	0.275	< 0.001	< 0.001	< 0.001	< 0.001
Orgasm	Correlation coefficient ^a	-0.024	0.076	0.067	0.242	0.108
	<i>P</i> value	0.567	0.075	0.114	< 0.001	0.011
Total score	Correlation coefficient ^a	0.066	0.265	0.198	0.466	0.306
	<i>P</i> value	0.120	< 0.001	< 0.001	< 0.001	< 0.001

^aSpearman correlation coefficient.

Table 5. Multiple regression analysis to predict MENQOL score based on SSE

Variable	Beta	SE	<i>P</i>	CE	
				Lower	Upper
Constant	1.081	0.577	0.062	-0.053	2.214
Sexual desire	0.455	0.066	> 0.001	0.326	0.584
Unemployment of spouse	-0.596	0.218	0.006	-1.024	-0.169
Age	0.021	0.010	0.031	0.040	0.002
Economic family	0.143	0.071	0.045	0.282	0.003

MENQOL: Menopausal-Specific Quality of Life Questionnaire, SSE: sexual self-efficacy, SE: standard error, CE: coefficient of error.

their study, the minimum mean score was related to sexual refusal, while the maximum was associated with physical acceptance. The difference might be attributed to the studied population. SSE had a significant association with the level of education of participants, spouse's occupation, and economic status. The participants with academic degrees employed spouse, and better economic status showed a higher SSE score. These results concurred with Kafaie et al. [16] findings. In their study, women with younger spouses, higher levels of education, employed status, and higher-income enjoyed greater SSE scores.

SSE had an inverse association with the age of participants. This finding was in line with the results of Assarzadeh et al. [23].

The domain of sexual desire predicted the QOL of menopausal women. These results have been in accordance with the study by Madankan and Riyazi [24]. In their study, there was a positive and direct correlation between SSE and the QOL of menopausal women.

The participants acquired the minimum QOL score in sexual activity, while the maximum in the psychosocial domain. These results were not in line with the study by Nazarpour et al. [25]. In their study, the maximum and minimum scores were associated with physical health and psychological health respectively. This difference might be assigned to the sample size, menopause age of the studied women, and type of questionnaire.

Also, in the present study, most participants had an undesired QOL in the sexual domain, which concurs with the findings of Sheikhan et al. [26] and Abedzadeh Kalarhoudi et al. [27]. In their study, again, most women had an undesired QOL in this domain. Nevertheless, this finding does not match the results of Li et al. [28] as well as Sharifniya et al. [29]. In the Li et al.'s study [28], most participants had the desired QOL in the sexual domain, while in the study by Sharifniya et al. [29], most of them had an average QOL. In the researcher's opinion, this discrepancy in the findings can be due to social-cultural differences across various

societies regarding sexual issues. The QOL of the participants had a positive significant correlation with all domains of QOL except vasomotor. Also, the score SSE had a significant correlation with the score of sexual activity domain. The results of the present study have been in accordance with Zare et al. [22] and Gozuyesil et al. [30] findings.

The MENQOL had a significant correlation with the level of education, spouses' occupation, and economic status of participants. The participants with academic degrees employed spouses, and better economic status indicated the higher MENQOL scores. These results are in line with the findings of Fallahzade et al. [31]. Based on the results of the present study, the MENQOL of participants with lower levels of education, unemployed spouses, and the poor economic situation was low. In the study by Mohammadi Zeidi et al. [32], there was a significant association between the level of literacy and QOL, which does concur with the present study findings. The level of education can enhance women's awareness and better manage the changes of this period. Also, higher levels of education are mostly synonymous with higher income and greater opportunities in social life. Indeed, these women have greater access to health care services and possess greater awareness, and benefit from more medical consultation. Also, those who were satisfied with their economic status also showed a greater QOL possible because of proper nutrition and timely referral to physicians. Meanwhile, unemployed spouse had a negative impact on the QOL of menopausal women. In the study by Abdi and Solhi [33], there was a significant association between QOL and demographic variables including occupation and income.

In conclusion, the research findings indicated that the QOL of the menopausal period has a positive significant correlation with the total score and score of all domains of SSE. The maximum correlation was found between QOL and sexual desire, while the minimum was observed with orgasm. Also, the SSE score had a significant correlation with all domains of MENQOL except for the vasomotor domain. The maximum correlation for SSE was observed in the sexual activity domain of QOL. Thus, attention should be paid to awareness-raising and developing the grounds for familiarization with the provision of health care services with new concepts such as SSE and its association with the QOL of menopausal women.

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CONFLICT OF INTEREST

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

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