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Association Between Perceived Social Support and Depression in Postmenopausal Women

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Background: The most common symptom in early menopausal women is depression. Depression is a type of chronic disease that impacts on postmenopausal women's life. Social support plays a protective role for women and enables them to solve their life problems and thus, feel less depressed.
Objectives: We assessed depression as a chronic disease and evaluated the association between perceived social support and depression in postmenopausal women.
Patients and Methods: This correlation-analytic study was conducted on 321 postmenopausal women using 2-stage cluster sampling in Ahvaz in 2014. Data collecting instruments were comprised of a demographic questionnaire, a depression scale (Beck Depression Inventory-II), and a social support questionnaire (PRQ 85-Part 2). Data analysis was done using SPSS, version 20. The Spearman correlation coefficient was used to evaluate the relationship between perceived social support and depression, and the χ^2 test was employed to assess the relationship between perceived social support and demographic characteristics.
Results: The Spearman correlation test revealed a significant reverse relationship between perceived social support and depression ($r = -0.468$; $P = 0.001$). There were significant relationships between perceived social support and some personal variables such as marital status, education level, and job status ($P < 0.05$). However, there were no significant relationships between perceived social support and some other personal characteristics such as income and ethnicity ($P > 0.05$).
Conclusions: We found a reverse relationship between perceived social support and depression in postmenopausal women. Raising awareness in society apropos the relationship between social support and depression in postmenopausal women can enhance their quality of life.

Keywords: Social Support; Menopause; Depression

1. Background

The last critical stage of a woman's life is menopause, which occurs following 12 months of amenorrhea resulting from the permanent cessation of ovarian function. The decline in ovarian function begins gradually at around 35 years of age. The decline in ovarian function and final menses are 2 signs which together herald the beginning of a transitional period. This period is often associated with symptoms such as hot flushes, night sweats, sleep disturbance, vaginal dryness, and depression (1, 2). Whereas some women find these symptoms bearable, others experience a large impact on their life quality (3).

According to the documents in Iran Statistical Yearbook, based on the latest census conducted in 2011, Iran has 5.2 million women aged between 45 and 60 years. It accounts for approximately 13.95% of the female population of Iran and has increased about 0.15% compared to 2006 (4).

Nowadays, health systems delineate their plans based on family health. Women are deemed the basis of family health (5). They have crucial responsibilities and roles in family as well as society; they, therefore, need complete physical and mental health to fulfill them. Every woman experiences different crises in her life and growth stages (6).

Chronic diseases are important challenges which healthcare systems encounter (7). Most elderly people have chronic diseases, which make their lives unmanageable, put their independence at risk, decrease their health-related quality of life, and potentially affect all aspects of their health (8, 9). According to the world health organization (WHO), by the year 2020, depression as a chronic disease will be the second significant condition globally in terms of disability-adjusted life years lost. The prevalence of these conditions in women can range from

1.5 to 3 times the prevalence in men. Several studies also have shown that during the transition to menopause, the risk of depression increases (10).

A study by Sagsoz et al. (11) revealed that the highest clinical signs of depression can be seen in women during postmenopause, when women suffer from hormonal changes in addition to physical and mental problems which may last for years.

Social support is defined as "an exchange of resources between at least two individuals and perceived by the provider or the recipient to be intended to enhance the well-being of the recipient". In addition, social support is usually defined as the existence or availability of people on whom we can rely people who pay attention to, take care of, and love us (12). Perceived social support is the most frequently assessed social support construct in the literature and can be assessed with regard to a specific support provider (e.g. parents, friends, teachers, and spouses) or with respect to the social network as a whole. The past research indicates that perceived social support is significantly more related to well-being than other structures of social support (13). Perceived social support is the individual's understanding of love and the support that he/she receives from his/her family, friends, and relatives. Miller believes that perceived social support is a predicting factor for health (14).

Although most women do not suffer from depression in the climacteric period, many of them are potentially vulnerable. The causes of depression in menopause are still unknown. The dangerous signs of it could include depression (after childbirth), vasomotor symptoms, and terrible events in life (15). A few studies have shown a negative significant relationship between social support and suffering from depression: Higher perceived social support correlates with more depression. However, some studies have indicated a relationship between over-success and over-social support with depression signs (16).

According to Sadat et al. (17), who analyzed the relationship between perceived social support and depression in menopausal women in Kashan, social support is a protective factor for depression caused by menopause.

Social support has positive effects on the physical and mental health of individuals. Considering the importance of menopause and its unpleasant effects on women's health, we sought to analyze the relationship between perceived social support and depression in menopausal women.

2. Objectives

The aim of this study was to assess the association between perceived social support and depression in postmenopausal women.

3. Patients and Methods

This correlation-analytic study was done on menopausal women in 2014 in Ahvaz, Iran. The sample size was 107 based on the population selection formula in correlational studies with a 95% confidence level, 95% expected power, and r of -0.34. In order to have more participants and increase the credit of the study, we multiplied the obtained sample size (i.e. 107) by 3 (i.e. the number of choices for age in the demographic questionnaire). The final sample size was 321. The 2-stage cluster sampling strategy was employed in this study. In the first stage of sampling, 5 health centers were selected randomly from among all heath centers of Ahvaz. In the second stage, even family file numbers were selected in the mentioned 5 centers by tossing a coin (once for all the centers). Afterward, the women were contacted and if they met the criteria for the study, they were invited to the center. The inclusion criteria for inclusion in the study were comprised of women whose last menstrual bleeding was more than 1 year previously, women who had natural menopause, and menopausal women who were at most 55 years old. Women who had severe diseases such as cancer and mental problems were not included in the study.

Data collecting instruments consisted of a demographic questionnaire, a depression scale (Beck Depression Inventory-II), and a social support questionnaire (personal resource questionnaire [PRQ 85-Part 2]).

The demographic questionnaire comprised 13 questions on personal information. The Beck Depression Inventory-II is a standard tool. The scientific validity and reliability of the Beck Depression Inventory-II was confirmed by Mohammadkhani (18). The questionnaire consists of 21 questions divided into 3 parts: cognitive, physical, and emotional signs. The questionnaire is a self-reported one. There are different groups of questions, and each question describes an individual's behavior. The participants were asked to carefully read the questions and choose the one which could best describe their feeling at that moment. Each question is given a score (0 - 3), and the total score of the questionnaire ranges from 0 to 63. A score between 0 and 13 denotes little or no signs of depression, between 14 and 19 low levels of depression, between 20 and 28 average levels of depression, and between 29 and 63 high levels of depression (18). Perceived social support was analyzed using the PRQ 85-Part 2. The scientific validity of this questionnaire has been previously checked by Rafiee and Hoseini (19). This questionnaire consists of 25 questions on a Likert-type scale ranging from strongly disagree (1 point) to strongly agree (7 points). The perceived points are between 25 and 175. The obtained scores regarding perceived social support are categorized in 3 groups. The points in the range of 25 - 75 are considered as low, 76 - 125 as moderate, and 126 - 175 as high levels of perceived social support (19).

In the data collection procedure, after obtaining an ethical code from Ahvaz Jundishapur University of Medical Sciences, the principal researcher introduced herself and her study objectives to the participants. Then, the participants filled out informed consent forms and also completed the questionnaires. During the completion of this form, the interviewers responded to questions and am-

biguities raised by the samples. The collected data were analyzed using statistical package for the social sciences (SPSS), version 20. The Spearman correlation coefficient was utilized in order to evaluate the relationship between perceived social support and depression in menopausal women ($P < 0.01$), and the χ^2 test was employed to assess the relationship between demographic characteristics and perceived social support ($P < 0.05$).

4. Results

Most of the study population (57%) were in the age group of 51 - 55 years. The lowest and highest frequencies of marital status were divorced women (5%) and married women (76.3%), respectively. In terms of job status, the majority of the women (70.4%) were unemployed. All these features are depicted in Table 1.

Among the samples of the study, 22 (6.9%) women had low levels of perceived social support (score, 25 - 75), 217 (67.6%) moderate levels of perceived social support (score, 76 - 125), and 82 (25.5%) high levels of perceived social support (score, 126 - 175) (Table 2).

Among the samples, 235 (73.2%) women did not suffer from depression, while 36 (11.2%) suffered from mild depression, 20 (6.2%) suffered from moderate depression, and 30 (9.3%) suffered from severe depression (Table 2).

Based on the results of the Spearman correlation test, there was a significant and reverse relationship between perceived social support and severity of depression, with a 99% confidence interval ($r = -0.468$; $P = 0.001$) (Table 3).

According to Table 4 and using the χ^2 test, there was a significant relationship between perceived social support and age, with a 95% confidence interval ($\chi^2 = 9.758$; $df = 4$; $P = 0.045$). There was a significant relationship between perceived social support and marriage, with a 95% confidence interval ($\chi^2 = 16.066$; $df = 6$; $P = 0.013$). There was a significant relationship between perceived social support and job status, with a 99% confidence interval ($\chi^2 = 13.457$; $df = 4$; $P = 0.009$). There was no significant relationship between perceived social support and income ($\chi^2 = 5.597$; $df = 6$; $P = 0.470$). Perceived social support and education were significantly related, with a 95% confidence interval ($\chi^2 = 19.319$; $df = 8$; $P = 0.013$). There was no significant relationship between perceived social support and age at menopause ($\chi^2 = 6.088$; $df = 4$; $P = 0.193$). There was a significant relationship between perceived social support and the number of children, with a 95% confidence interval ($\chi^2 = 14.447$; $df = 4$; $P = 0.025$). There was a significant relationship between perceived social support and the number of childbirths, with a 95% confidence interval ($\chi^2 = 14.509$; $df = 6$; $P = 0.024$). There was no significant relationship between ethnicity and perceived social support ($\chi^2 = 8.199$; $df = 4$; $P = 0.085$). There was no significant relationship between perceived social support and husband's education ($\chi^2 = 5.839$; $df = 8$; $P = 0.665$). There was a significant relationship between perceived social support and residence status, with a 99% confidence interval ($\chi^2 = 37.937$; $df = 6$; $P = 0.001$).

Table 1. Distribution of the Individual Characteristics of the Study Subjects

Individuals' Characteristics	Frequency
Age, y	
40 - 45	56 (17.4)
46 - 50	82 (25.5)
51 - 55	183 (57)
Marital Status	
Single	22 (6.9)
Married	245 (76.3)
Divorced	16 (5)
Widowed	38 (11.8)
Job Status	
Employed	60 (18.7)
Unemployed	226 (70.4)
Retired	35 (10.9)
Income (US dollars)	
Less than 150$	10 (3.1)
150$ to 300$	184 (57.3)
300$ to 450$	62 (19.3)
More than 450$	65 (20.2)
Education	
High school	154 (48)
High-school diploma	109 (34)
Associate diploma	30 (9.3)
Bachelor's degree	20 (6.2)
Master's degree and higher	8 (2.5)
Age at Menopause, y	
40 - 45	163 (50.8)
46 - 50	116 (36.1)
51 - 55	42 (13.1)
Number of Children	
0	32 (10)
1	30 (9.3)
2	74 (23.1)
3 or more	185 (57.6)
Number of Childbirths	
0	32 (10)
1	32 (10)
2	66 (20.6)
3 or more	191 (59.5)
Ethnicity	
Persian	187 (58.3)
Arab	68 (21.2)
Other	66 (20.6)
Husband's Education	
High school	116 (47.3)
High-school diploma	88 (35.9)
Associate diploma	23 (9.4)
Bachelor's degree	14 (5.7)
Master's degree and higher	4 (1.6)
Residence Status	
Rented	60 (18.7)
Self-owned	251 (78.2)
Employer's house	8 (2.5)
Other	2 (6)

Table 2. Distribution of Perceived Social Support and Depression Intensity in the Research [a]

Variables	Frequency
Perceived Social Support	
Low (score, 25 - 75)	22 (6.9)
Moderate (score, 76 - 125)	217 (67.6)
High (score, 126 - 175)	82 (25.5)
Depression Intensity	
None	235 (73.2)
Mild	36 (11.2)
Moderate	20 (6.2)
Severe	30 (9.3)

[a] The values are presented as frequency (%).

Table 3. Relationship Between Perceived Social Support and Depression Intensity in the Research

Variables	Spearman Correlation
Perceived social support	-0.468 [a]
Depression intensity	-0.468 [a]

[a] $P < 0.01$.

Table 4. Assessment of the Relationship Between Perceived Social Support and Personal Characteristics of the Subjects

Individual's Characteristics	Social Support Statistics Values		
	χ^2	df	P
Age	8.084	6	0.232
Marriage	23.072	9	0.006 [a]
Job status	19.062	6	0.004 [a]
Income	23.955	9	0.004 [a]
Education	22.875	12	0.029 [a]
Age at menopause	14.783	6	0.022 [a]
Number of children	11.910	9	0.218
Number of childbirths	13.535	9	0.140
Ethnicity	16.621	6	0.011 [a]
Husband's education	19.663	12	0.074
Residence status	25.598	9	0.002 [a]

[a] $P < 0.05$.

5. Discussion

The present study was conducted to assess the association between perceived social support and depression in postmenopausal women. We found a significant reverse relationship between perceived social support and depression in postmenopausal women. There are several studies showing that social support is an important factor affecting the mental state of patients (20). A study on postmenopausal women in Kashan by Sadat et al. (17) concluded that social support is a protective factor for depression caused by menopause. The results of these 2 studies are similar, supporting the hypothesis that there is a relationship between perceived social support and depression in menopausal women.

Several studies have demonstrated a relationship between perceived social support and depression (16). According to a study by Duche et al. (21), psychological and physical symptoms in a woman around the age of menopause are related to perceived social support. The lack of understanding and absence of social support bring women to the doctor's office and hospital in many cases (22). Understanding the symptoms and problems of postmenopausal women and providing them with support, accordingly, can play a positive role in improving their mental condition. Social support can reduce stress levels in individuals who receive it, and satisfaction with social support can play a critical role in the prevention of depression (23).

Social protection acts as a shield in stressful situations and decreases the negative effects of stressful events. Even when individuals are not under too much stress, social support, in itself, has a positive impact on health. Social support systems are able to adjust the negative effects of stress on physical and mental health (24-26). Lu believes that social support moderates the effects of stressful events and enables individuals to experience positive emotions. He also contends that social support is positively correlated with happiness and mental health (27). On the role of social support, some researchers have noted that lower quality social support has a significant relationship with mental health prediction (28). Delongy and Halzmn underscored the importance and role of social support in stress alleviation (29). The results of Strazdins and Broom's study (2008) showed that social support can improve mental health (30).

The results of the current study highlighted a significant relationship between perceived social support and marital status inasmuch as the married women reported better perceived social support, which is consistent with the results of studies done by Salehi and Mahmodifar (31) and Rambod and Rafii (32).

The findings of the present study showed a significant relationship between the level of education and perceived social support, which chimes in with the results of studies by Rambod and Rafii (32) and Salehi and Mahmodifar (31). In this regard, Rambod and Rafii, (32) and Rafiee and Hoseini (19) found that individuals with high education levels have a better understanding of social support. An increase in the level of education can augment not only compatibility but also given the bilateral nature of social support social communications and social support (33).

Our results showed a significant relationship between perceived social support and job status, which is concordant with a study by Salehi and Mahmodifar (31). In contrast, this relationship was not significant in studies conducted by Rambod and Rafii (32) and Rafiee and Hoseini (19). The inconsistency between the results of these studies may be in consequence of the different characteristics of the samples. In the present study, as well as that of Salehi and Mahmodifar (31), the majority of the samples were unemployed, while in studies carried out by Rambod and Rafii (32) and Rafiee and Hoseini (19), the majority of the samples were retired.

In the present study, we faced some forms of restriction. For example, finding qualified postmenopausal women for the study was a difficult task not only because of their scarcity, but also because they do not tend to refer to health centers. In addition, due to their low education levels, the participants had many questions in order to fully understand the questionnaires, which proved extremely time-consuming. Furthermore, there were some ethical differences between the participants and the researchers, rendering communication very difficult.

The results of the current study showed a significant and reverse relationship between perceived social support and depression in postmenopausal women. It can, therefore, be concluded that with a rise in perceived social support, depression levels in postmenopausal women reduce.

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