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Correlation between Intermediate Determinants of Health and Experiences of Postmenopausal Women in Iran

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Abstract

Aims: Menopause is one of the most important health issues in women's health. Postmenopausal health problems are affected by psychosocial categories. This study aimed to investigate the correlation between intermediate determinants of health and experiences of postmenopausal women in Iran.

Instrument & Methods: This is a descriptive correlational study that was carried out on 300 women referring to health centers in Mashhad city from 2018 to 2019. Sampling was performed by multi-stage and random sampling methods. Data were collected through menopausal experiences, access to health services and perceived social support, and Enrich marital satisfaction questionnaires. Data were analyzed using SPSS 25 software by Pearson correlation coefficient and regression model. In the statistical test, a 95% factor of safety ($p<0.05$) was considered**.**

Findings: The average age of the subjects was 54.07±5.26. The averages score of marital satisfaction, access to services, social support, and women menopausal experiences were 105.76±18.30, 11.14±7.51, 58.92±15.68, and 40.47±21.83%, respectively. The results showed an inverse linear relationship between marital satisfaction and social support with women's experiences (r=-0.067; p=0.024), (r=-0.176; p=0.002). There was a significant inverse linear relationship between access to services and women's experiences in menopause (r=-0.347; p=0.001).

Conclusion: According to the findings, perceived support and access to services predict 15% of the variance in menopausal experiences.

Keywords
Marital Satisfaction [Not Found];
Access to Services [Not Found];
Women's experiences [Not Found];
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Introduction

Menopause is one of the health issues in the spectrum of reproductive and women's health and as a biological public process has special importance. Menopause occurs in 45-55 years old and on average 51 years, following a decrease in ovarian activity at the end of a woman's reproductive period [1]. The World Health Organization estimates that taking into account the increase in life expectancy, about one billion women over the age of 60 will be in the world by 2050. Based on the statistical and demographic indexes, the aging in Iran has increased. With increasing life expectancy, the number of postmenopausal women and postmenopausal years has also increased [1]. Decreased estrogen and its side effects and lack of sex hormones during this period [3] have caused anxiety, and as a result, it has negative effects on women's health and quality of life [4]. However, menopause has been accepted as a historical and cultural concept; women usually experience different biological changes similar to menopause [5]. Menopausal experiences are defined by side effects such as physical, psychological, negative attitudes, negative emotions, and each person's concerns about menopause [6]. Several factors affect the experience of postmenopausal women [1], including intermediate social determinants of health, which arise from the combination of social classification [7]. Cultural norms, common social values, and personal perceptions of menopause also affect women's experiences during menopause [5]. Women's perception of menopause is a multidimensional issue, and this perception has changed from person to person due to physical changes, cultural and emotional influence [8]. Also, various demographic characteristics such as socio-economic level, social support, and the quality of family relationships affect women's feelings during this period [9]. According to the conceptual framework of the World Health Organization Commission, the social determinants affecting health are: 1- Structural determinants; 2- Interface social determinants. Indeed, Model 2 indicates that structural determinants do not directly affect a person's health; it exerts their effects through intermediate or interferes determinants. The intermediate factors determine differences in exposure to a dangerous condition which include living and working conditions, access to health services, diet and psychosocial factors (such as psychosocial stress), behavioral factors (such as smoking and alcohol consumption), lifestyle and social support, community habits and barriers to choosing a healthy lifestyle [7]. During menopause, health-related factors such as access to health services, daily stressful events, marital satisfaction, and social support also play a role in depressive symptoms [1]. Social support is the enjoyment of love, support, and attention of family members, friends, and close people [10]. Social support is an important factor in maintaining and promoting physical and cognitive health in the menopause period. Partner support is an important factor during menopause [9]. Numerous studies have shown that women who are more supported and satisfied with their marriage go through menopause more easily [11]. In the study of Jokar *et al*., the elderly with a high percentage of social support had more appropriate daily activities [12]. Spouse support and a healthy and trusting marital status improve coping with menopausal problems [9]. Also, marital satisfaction is the adaptation between the current situation and the expected situation in married life, and the objective feelings of satisfaction and pleasure of the couple with being married and being together, taking into account all aspects of marriage in their lives [13]. Marital satisfaction is effective in all aspects of life, especially on life satisfaction level [2], and marital compatibility predicts satisfaction level in various aspects of life in women [6]. Findings of a study by Nahir *et al*. showed that 27.4% of women, who experienced menopausal complications, had problems with marital satisfaction, and there was a relationship between perceiving the symptoms of menopause and marital satisfaction [15]. Whereas Bahri *et al*. showed that adaptation and self-sacrifice with the severity of menopausal symptoms and marital satisfaction are deeply rooted in cultural and traditional beliefs [16]. Various studies have shown that marital satisfaction is a function of the life cycle and follows a U-shaped curve during the life cycle; so in the last stages of the cycle, marital satisfaction has an increasing trend [14]. However, stressful events in middle age have negative effects on women's marital satisfaction [15]. Therefore, a continuation of problems in some areas shows the need to pay attention to the role of other factors, especially social factors and related strategies to health improve [17]. In this regard, marital satisfaction, social support, and the availability of health services play three basic roles in menopausal health [1]. However, the role of the health system is applied, especially through access to health services. On the other hand, the difference in access to health services has been effective on menopausal health, and it seems that postmenopausal health problems have also raised new expectations in the health field [17]. Also; menopausal experiences put a lot of pressure on the health care system's financial resources and spend about 28% of total health care budgets [18]. Universal coverage means that each person from a country can use the same range of services according to their needs and tastes, regardless of their income level, social status, and place of residence; so that people are empowered to use these services [19]. Empowered women understand their value in society and demand equal access to health services; they express their needs, insist on their rights, and act at the right time, which

promotes the health of postmenopausal women [9]. Indeed, it is important to pay attention to menopausal experiences in the health of the individual and society due to its complications and subsequent health-threatening problems in women; while these complications can be prevented with social support, marital satisfaction, and access to health services. Therefore, due to the recognition of changes and needs related to middle age and menopause and the limited studies conducted in this area, this study was conducted to determine the correlation between the determinants of health and experiences of postmenopausal women in Mashhad in 2018.

Instrument and Methods

This is a cross-sectional descriptive study that was carried out on 300 postmenopausal women referred to health centers in Mashhad in 2018 to determine the correlation between health determinants and menopausal experiences. The sampling method was multi-stage and random. Sampling in this study was performed in the health centers in five areas of Mashhad (north, east, center, west, and south). Each place was selected taking into account the number of clients. Inclusion criteria included living in Mashhad, being 45-65 years old, living with a spouse, passing one year since the last menstrual period, lack of history of mental illness, no use of drugs, no experience of stressful events during the last 6 months, no use of drugs or alcohol and having a consent form to participate in the research. Exclusion criteria included incomplete filling out the questionnaires, unwillingness to participate in the study, and having a chronic illness or experience of an unfortunate event in the last 6 months. Data were collected using demographic questionnaires, Enrich's marital satisfaction scale, access to health services, perceived social support of MSPSS, and evaluation of postmenopausal women's experiences. The demographic form was validated by 10 faculty members and consisted of two parts: personal characteristics (age, education, occupation, housing status, and monthly income), obstetrics and gynecology characteristics (number of pregnancies, number of deliveries, number of children, menopausal age, duration of menopause).

Marital Satisfaction Questionnaire (ENRICH): This scale includes 4 subscales with 35 items, which can be used as a research tool including satisfaction, communication, resolving conflict, and distorting ideals. In this questionnaire, a high score indicates high marital satisfaction. A high score on the communication scale indicates the couple's awareness and satisfaction with the level and type of communication. A low score indicates a lack of satisfaction with the relationship. A high score on the conflict resolving scale reflects realistic attitudes about conflicts in marital relationships, and a low score indicates dissatisfaction with resolving conflicts. A high score on the ideal distortion scale indicates an unrealistic relationship about a marital relationship. Also, the validity and reliability of this tool have been confirmed by Asodeh *et al*. study in Iran. In the Asoudeh *et al*. study, the alpha coefficient of the questionnaire with 365 pairs and 730 people is equal to 0/68 (by deleting question 24, the alpha becomes 0.78), 0.78, 0.62, and 0.77, respectively [20].

Researcher-made questionnaire of access to health services: This questionnaire included 9 items according to the 4-points Liker scale (no effect, low score=1, medium score=2, high score=3). The scores of the items were added together and expressed as the score of access to health services between 0-27. The Perceived Social Support Scale developed by Zimet *et al*. In 1988 was used to measure social support [21]. This scale, which measures the levels of social support received by the subjects, has 12 terms that measure the support received from three sources: family (4 terms), friends (4 terms), and close people in life (4 terms). The range of scores is 12 to 84. The scores of 12-35, 36-59, and 60-84 indicated the low, medium, and high levels of perceived social support. The Cronbach's alpha was 0.83 in a 176 sample in a Persian version. In the family dimension, the items were 3-4-8-11. In the friend dimension, the items were 6-7-9-12. In the dimension of close people, the items were 1-2-5-10. A researcher-made questionnaire was used to evaluate menopausal experiences [23]. The questionnaire included 6 areas: anxiety, psychological complications, physical complications, feelings, attitudes, adaptation. Each area contained expressions scored by a 4-points Likert scale (none, low, medium, high, very high). The scores were in the 0-4 range and included 44 items (12 items of concern, 10 items of psychological, 11 items of physical, 5 items of emotion, 4 items of attitude, 2 items of adjustment). The scores of each domain were calculated and added together, and the total score was expressed in percentage. A higher score indicates higher negative experiences. Content validity and instrument reliability have been determined using the equivalence reliability method, by Hakimi in Tabriz. The stability of the instrument was estimated to be 0.78, and the internal consistency of the instrument was estimated to be 0.96 using Cronbach's alpha coefficient. Data were analyzed after coding using SPSS 25 software by statistical tests of analysis of variance and Pearson correlation coefficient (for normal variables) and regression model at a significant level of 0.05.

Findings

This study was carried out on 300 menopausal women aged 45-65, who were residents in Mashhad city. The average age, menstrual age, and menopausal age of the subjects were 54.07±5.26, 13.17±1.74, 47.95±4.53, and 5.82±5.42, respectively. The demographic characteristics of the subjects have been shown in Table 1.

Table 1) Demographic characteristics of research units (n=300)

Variable	Mean±SD
Age	54.07±5.26
Number of pregnancies	4.81±2.39
Number of deliveries	4.43±2.03
Number of children	4.16±1.84
Number of dead children	0.27±0.065
Age of first menstruation	13.17±1.74
Menopausal age	47.95±4.53
Duration after menopause	5.82±5.42

Table 2) Absolute and relative frequency distribution of demographic characteristics of the subjects (n=300)

Variable		Number	Percent
Job	Worker	25	8.3
	Employee	51	17.0
	Housewife	182	60.7
	Retired	40	13.3
	Freelance	2	0.7
Education level	Illiterate	50	16.7
	Primary education	98	32.7
	Intermediate education	36	12.0
	Secondary education	50	16.7
	Higher education	66	22.0
Spouse's job	Worker	39	13.0
	Employee	33	11.0
	Freelance	121	40.3
	Retired	95	31.7
	Etc.	12	4.0
Spouse's education level	Illiterate	25	8.3
	Primary education	63	21.0
	Intermediate education	46	15.3
	Secondary education	111	37.0
	Higher education	55	18.3
Housing status	Personal	250	83.3
	Rental	48	16.0
	Etc.	2	0.7
Monthly income	Less than adequate	75	25.0
	Adequate	198	66.0
	More than adequate	27	9.0
Social-economic status	low	93	7.7
	Medium	174	58.0
	High	23	7.7

The majority of the subjects were housewives (60.7%), and 32.7% had primary education. The husbands' jobs of 40.3% of the subjects were freelance. 37% of the subjects had secondary education. 83.3% of the subjects had personal housing, and 66% had sufficient income (Table 2).

Table 3 shows the score of women's physical-psychological experiences in menopause, social support, the level of access to services, and marital satisfaction. The level of perceived support was high in 57.7%, moderate in 32.5% and low in 9.8% of women.

The scores of physical-psychological experiences were inversely related to the level of perceived support and were also inversely related to access to services (Tables 4 & 5).

Table 3) Mean±SD of marital satisfaction, perceived social support, access to services, and menopausal experiences (n=300)

Variables	Mean±SD
Physical-psychological experiences	
Anxiety	16.24±10.10
Psychological disorder	17.49±12.39
Physical disorder	17.73±9.59
Feeling	8.30±5.28
Attitude	6.25±5.62
Compatibility	5.20±2.35
Experiences	71.23±38.43
Percentage	40.47±21.83
Support	
Family	21.64±5.70
Friends	17.94±6.83
Important people	20.14±6.17
Support	58.92±15.68
Access to services	11.14±7.52
Marital satisfaction	
Satisfaction	105.76±18.30
New satisfaction	3.11±1.01
New relationship	2.65±1.07
Conflict resolving	2.68±0.95
Ideal distortion	3.05±0.96

Table 4) Correlation of social support, marital satisfaction, and access to services with menopausal experiences (N=300)

Variables	Ideal distortion	Conflict resolving	Communication	Satisfaction	People	Friends	Family	Services	Support	Enrich	Experiences
Experiences	-0.239**	-0.086	-0.165*	-0.247**	-0.195**	-0.152*	-0.074	0.347**	-0.176**	-0.067	1
Enrich	0.823**	0.768**	0.891**	0.868**	0.345**	0.243**	0.403**	0.064	0.301**	1	
Support	0.341**	0.222**	0.338**	0.359**	0.865**	0.813**	0.848**	0.034	1		
Services	0.038	-0.014	0.028	0.012	0.179**	-0.004	0.186**	1			

**p<0.01 (2-tailed); *p<0.05 (2-tailed)

Table 5) Results of multiple linear regression analysis for simultaneous study of independent variables on menopausal women's experiences

Predictive variable	B	Std.E.	Beta	T	Sig
Constant	78.340	8.436	-	9.286	0.0001
Perceived social support	-0.462	0.131	-0.188	-3.531	0.0001
Access to services	1.804	0.272	0.353	6.620	0.0001

a. Dependent Variable: experiences; R=0.395a ; R Square=0.156; Square Adjusted R Square=0.150

The model shows that perceived support and access to services predict the percentage variance of menopausal experiences. In other words, social support and access to services predicted 15% of the variance of menopausal experiences. By increasing a standard deviation in the score of access to services, the score of menopausal experiences will increase by 0.353 standard deviations. Also, by reducing a standard deviation in the support rate, the score of menopausal experiences will be 0.188 higher than the standard deviation. Social support and access to services can predict menopausal experiences. The score of menopausal experiences is reported as the following linear formula:

Score of menopausal experiences=78.340+ (support level×-0.462) + (access to services×1.804)

Discussion

This study investigated the correlation between the determinants of health and experiences of the postmenopausal women in Mashhad city. The results showed that the majority of women were housewives and had primary education. Most men had freelance jobs, a high school education, and adequate income levels. The findings showed a significant inverse relationship between marital satisfaction and women's experiences in menopause. Consistent with our study, Sis *et al*. in Turkey found a significant inverse relationship between menopausal symptoms and marital adjustment [11]. Lee *et al*. reported that a two-way relationship with a partner was effective in the severity of menopausal symptoms in Korean women [24]. Dalos *et al*. reported that low levels of marital satisfaction were associated with high menopausal symptoms [25]. Also, Fielder et al. concluded that women with high levels of marital satisfaction have experienced a low level of menopausal symptoms [26]. Nehir *et al*. showed that 27.4 of women with experience of menopausal side effects had problems in marital satisfaction, and a significant relationship was reported between marital satisfaction and menopausal symptoms [15]. The results demonstrated that stressful events hurt marital satisfaction and increase negative experiences [27].

The results of this study showed a high score of social support in women and a significant inverse correlation between support and women's experiences in menopause. It has been observed that menopause is associated with more anxiety, loneliness, and feelings of helplessness [28]. Women's psychological stress increases following empty nest syndrome during menopause [29]. On the other hand, feelings of low intimacy with the husband are associated with depression in women [30]. In addition, the husband's psychological support of the wife acts as a shield against stressful life events [27]. A review study by Hoge *et al*. showed that menopause is affected by personal challenges and changes in personal role in family and society [31]. So, older women, who connect with other people in society and use more information resources to solve their daily problems, have a higher vitality [32]. Also, in the study of Esmaili *et al*., those who enjoyed higher social support had more physical and mental health [33]. Meanwhile, the husband is the closest person who understands the woman during menopause and supports her with a correct understanding of her conditions [27]. A review study showed that the quality of the relationship with the spouse also affects the sexual function of postmenopausal women [34].

The study of Shariat Moghani *et al*. showed that the support of important people is one of the best predictors of women's menopausal experiences [27]. Also, the findings of this study showed that the mean score of access to services was inversely and significantly correlated with menopausal experiences. In the study by Marftoun *et al*., 80% of people had access to health services, and 20% were deprived [35]. Mirzaei *et al*. showed that the factors affecting access to health services are important barriers to equal care [36]. Also, in the study by Bahari *et al*. , patients' satisfaction with access to the services of educational centers was acceptable, and several factors were involved in satisfaction level [37]. However, postmenopausal women in this study did not show interest in using health services which one of its reason was the lack of information about providing services at menopause.

The findings also showed a higher score in the physical experiences than other experiences in menopause. In addition, the lowest score was observed in the experiences of adaptation. Studies have shown that Asian women usually have a more positive perception of menopause than women of other nationalities, and for this reason, they pass it more easily and adapt [38]. Women with high marital satisfaction compared to those with low marital satisfaction experience fewer psychological symptoms during menopause [39].

The results of this study showed that the subscales of ideal conflict and distortion, communication, and marital satisfaction had a significant linear relationship with the range of physical effects of menopausal experiences. Evidence has shown that controlling negative emotions during life events by women is affected by their husbands. So that the regulation of emotions is a predictor of marital satisfaction, and in marital conflicts, the constructive relationships of couples are important [40]. Evidence shows that women's quality of life during menopause is positively affected by marital adjustment, but there is a negative correlation between menopausal symptoms and marital adjustment [15]. It was also reported in a study (2018) that marital satisfaction during menopause has a positive correlation with women's quality of life and menopausal management [41]. In the study by De Souza *et al*. , it was stated that a good marital relationship was effective on women's health [42]. Marital life decreases the impact of negative events on individuals during their lives [43]. Marital satisfaction in couples creates a feeling of health and well-being in their old age [44]. So that the high level of marital satisfaction in middle age increases the meaning of life for the individual [45].

Findings in our study showed that education affected social support and marital satisfaction. In this regard, increasing social support and, consequently, marital satisfaction has played a role in reducing menopausal experiences and improving mental, physical health, and quality of life in women. The results of this study are in accordance with the findings of Carpenter *et al*. [46] and Behnam Moradi *et al*. [47]. Whereas, the study by Wang *et al*. does not confirm these results [48].

One of the limitations of this study was the low number of referrals and unwillingness of menopausal women to participate in the study, which affected the generalizability of the results. Therefore, it is suggested that health care providers, in addition to providing the necessary knowledge about menopause, cooperate in creating support groups to create a positive attitude and promote healthier behaviors in postmenopausal, and in the availability of health services for this age group.

Conclusion

The results of this study showed a significant relationship between marital satisfaction and social support and access to health services with women's experiences in menopause. Managers must pay attention to the quality of life of postmenopausal women and try to reduce physical-psychological complications, anxiety, stress, and vasomotor symptoms in this period and creating appropriate conditions for improving lifestyle, changing attitudes by considering women's living conditions and the relationship between marital satisfaction, social support and access to health services for women in menopause.

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Ethical Permissions: Our study has followed the rules and principles of ethics. At all stages, after being informed of the research processes, the participants signed a written consent and were provided complete assurance regarding the confidentiality of the information. The ethics committee of Shahid Beheshti University of Medical Sciences has approved this research with license number 1980/1000.

Conflicts of Interests: There is no conflict of interest between the authors.

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