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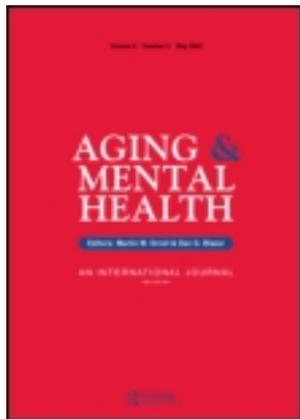
Aging & Mental Health

Quality of life and menopause: Developing a theoretical model based on meaning in life, self-efficacy beliefs, and body image

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PLEASE SCROLL DOWN FOR ARTICLE

Quality of life and menopause: Developing a theoretical model based on meaning in life, self-efficacy beliefs, and body image

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Goal: There are various views on variables that influence quality of life, such as meaning in life, self-efficacy, and body image (including body area satisfaction, health evaluation, and appearance evaluation), in menopausal women. This study looked at the relationships among these variables both in terms of their codetermination and intensity of relationship to quality of life.
Methods: The research study included menopausal women (45–55 years old) who lived in the city of Tehran and had at least a high school education. The sample consisted of 349 women selected at random from the attendees of cultural centers in the city of Tehran during June 2009–December 2009. Each participant completed four questionnaires, including a questionnaire on meaning in life [Salehi, M. (1994). *Evaluating the issue of adolescents and the youth from the view of humanistic psychologists* (Psychology PhD dissertation). Islamic Azad University, Research and Sciences Campus, Tehran.], general self-efficacy, multidimensional relation of self and body, and quality of life (sf-36). Structural equation modeling was used to analyze the relationships among variables. Path analysis was used to study the direct and indirect effects of variables as cause. A primary hypothetical model was developed that included the expected relationships among the variables. Confirmation or rejection of the expected relationships in the model was determined after executing the questionnaires and scoring the data.
Results: The model fitness was analyzed using various methods. Results showed that there is a significant direct relationship between quality of life and meaning in life, self-efficacy, body area satisfaction, and health evaluation. In addition, the model predicted 33% of quality of life variance in menopausal women. The best predictors were body area satisfaction, health evaluation, and self-efficacy. Step-by-step regression analysis confirmed the results.
Conclusion: Based on our results, there is a direct and meaningful relationship between the independent variables of this study and the quality of life. Therefore, in order to improve the quality of life in menopausal women, one or all of these variables needs to be improved.

Keywords: quality of life; menopausal women; meaning in life; self-efficacy; body image; body area satisfaction; health evaluation; appearance evaluation

Introduction

Menopause marks an extensive period of hormonal changes in women who establishes the end of fertility (Mishra & Kuh, 2005). Menopause affects the quality of life through alterations in hormones, moods, health, and overall physical condition (Chiu, Moore, Hsu, Huang, & Chuang, 2008). One may say that the quality of life consists of subjective and objective indexes. Subjective indexes would include, for example, satisfaction or feeling of pleasure as the result of an individual evaluating her life. Objective indexes would include environmental conditions that affect the quality of life (Androse & Zali, 1980, quoted by Afzalan (2002)). Individual self-reflection, including attitude toward life, medical treatment, and other perspectives, have great effects on the quality of life (Hartshorn & Byers, 1992).

Various viewpoints have been expressed on the effects of menopause on the quality of life. Some have described the experiences of women and the positive aspects of menopause, including having more freedom, personal growth, achievements, and gaining competency. On the other hand, there are negative aspects of an existential nature and negative physical changes (Hvas, 2006), which include psychological factors, lifestyle changes, and body image concerns. Inter-personal relationships and roles and social-cultural factors should not be ignored (Deeks, 2003).

Iranian culture bestows special value and importance on the elderly. The traditions and religion of Islam have placed great emphasis on respecting and valuing the elderly and their presence at all ceremonies and traditional activities and participation in grand decisions is of great importance. In this respect, older women have a significant place in the culture because of their extensive experience as mothers and wives. On the other hand, some of the values women hold in Iran might be at risk due to mood fluctuations and other changes during menopause. Emotional challenges might occur related to a wide range of concerns, such as loss of fertility, the discipline of young children, and personal contentment.

Life becomes meaningful for people only when they can maintain a role or keep a goal in mind in their life events (Jacobsen, 2008). Studies have shown that people with higher life-goal scores (i.e., greater meaning in life) have more self-acceptance (Crumbaugh & Maholick, 1969), greater life satisfaction (Reker & Cousins, 1979), bear greater responsibilities, and have more self-control (Simmon, 1980). It seems that having meaning in life is one of the effective factors in the quality of life.

Changes in the meaning of life may occur, for example, with retirement and having fewer consequential activities. The supposition that goals might not be reached, and the fear of death coming closer, are significant factors that affect the quality of life.

Self-efficacy is attributed to the feeling of value, self-esteem, feeling of sufficiency, and efficacy in handling the events of life (Bandura, 1982). Several studies have shown that self-efficacy has a relationship to the general feeling of well-being, that is, the quality of life (Bandura & Wood, 1989).

Changes that take place during menopause could affect the feelings of self-efficacy, capability, and potential. There are close relationships between physical conditions, self-efficacy, and anxiety. Nevertheless, some researchers have shown that there is no significant relationship between age and self-efficacy in the elderly. Bandura (1997) suggested that, although abilities may diminish in the elderly, their feeling of self-efficacy may increase considerably in comparable value.

Body image is the most important characteristic that undergoes judgment when individuals meet each other (Delamater, 2002). It also seems to have a close relationship to the quality of life. It has been stated that an individual's perspective on his/her mental image of the body, including views on their health and disease symptoms, is one of the main elements of the quality of life (Bolander, 1994).

There have been few studies on body image in post-menopausal women and the results of these studies have been contradictory. Some studies have shown that psychological and physiological changes usually occur with aging and entering into a menopause stage, which cause concerns about weight and nutrition (Lewis, 2001, quoted by Aminkhou (2008)). Clarke (2002) showed that in older age groups, health evaluation measures and health orientation were more important to them than physical appearance.

The results of a study carried out by Schneider, Maclennan, and Feeny (2008) revealed that menopausal status and related conditions could affect women's health, suggesting that age could affect the quality of life. Phillips, Menard, Fay, and Pagano (2005) found that people with dysmorphia had a significantly lower quality of life. Joseph (2004) found that there is a significant relationship between self-efficacy beliefs and having a goal in life. Dibaian and Karami (2006) showed a significant relationship between happiness and meaningfulness in life.

Compared to advanced countries, few studies have been carried out on the quality of life during menopause in developing countries in Asia (Ponyahotra, Dennerstein, & Lehert, 1997). Also, there are no reports analyzing and comparing the quality of life factors between advanced and developing countries.

In this study, the three factors influencing the quality of life, i.e., meaning in life (from logotherapy perspective), self-efficacy (from Bandura's cognitive-social approach), and body image (with the three categories of body area satisfaction, appearance evaluation, and health evaluation, taken from social-cultural theory), and their direct and indirect effects were analyzed. In addition, their predictive value in forecasting the quality of life was determined. The question addressed in this research was whether there was a significant relationship among any of the independent variables and the quality of life and whether the quality of life could be predicted by the independent variables included in this study.

Methods

Participants

The participants in this study were women who were menopausal. The women were 45–55 years old and had at least a high school education. Women who became menopausal as a result of disease or surgery and menopausal women with serious gynecological diseases at the time of recruitment were not included in this study.

The sample group was selected as follows. Ten cultural centers in Tehran were chosen at random and women who were participating in sports, cultural, educational, and religious classes or were members of women's club at the cultural centers were considered for the study. Forty subjects at each cultural center were selected at random from the list of names of women who were qualified for the study and who consented to participate in the study. The total number of individuals who received research questionnaires was 400; however, 50 of them were considered as supplementary subjects whose questionnaires would be used to replace uncompleted or unreturned questionnaires. One unanswered question in a questionnaire was considered acceptable; if more than one question was unanswered, then the questionnaire was rejected as unacceptable. Of the total 400 participants who received questionnaires, 349 completed questionnaires that were included in the analysis. After studying the research history on structural equation modeling (SEM) analysis, Loehlin (1992) concluded that for this class of models with two or four factors, the researcher should plan to collect minimum 100 or more cases up to 200. Using smaller size of samples might lead to failure in achieving convergence (i.e., the software will not be able to give satisfactory answers) and give unsuitable answers (such as negative estimation of error variance for measured variables) or lower

precision of parameter estimation and standard errors, in particular.

The standard error of SEM plan is calculated based on the assumption made for larger samples. When data distribution is not normal or has skewness (as it is usually the case), the researcher would need larger sample groups. The general suggestion is to collect as much data as possible (Hooman, 2005).

Among our participants, 163 individuals (46%) were working women and 186 (53%) were not working. 254 women (73%) had a high school education, 91 individuals (26%) had university degrees, and four subjects (1%) had graduate degrees. In addition, 66 women (18.91%) were in the 45–47-year-old age range, 77 women (22.06%) in the 47–49-year-old age range, 66 women (18.91%) in the 49–51-year-old age range, 78 women (22.34%) in the 51–53-year-old age range, and 61 women (17.47%) in the 53–55-year-old age range.

Research tools

Questionnaire for the quality of life assessment (sf-36): The sf-36 is a 36-item questionnaire for measuring the quality of life. Montazeri, Gashtasbi, and Vahdaninia (2005) translated the questionnaire and performed the necessary pscychometric studies to prepare this assessment tool to be used in Iran. The Cronbach's alpha, as reported for the eight dimensions of this tool, is in 65–90% range. The scale in this questionnaire includes eight dimensions of physical function, physical functioning, role limitation due to physical health, bodily pain, general health, vitality, social functioning, role limitation due to emotional problems, and mental health.

Meaning in life questionnaire

The 50-item questionnaire used in this study to assess the meaning in life was developed by Salehi (1994) with respect to the criteria of Frankle's theories that imply the existence of meaning in life. The reliability coefficient of the questionnaire for assessing meaning in life was 0.91 according to Cronbach's alpha. In order to achieve greater validity, the validity was re-calculated and the value 0.71 was obtained and duly confirmed.

General self-efficacy questionnaire

The questionnaire used in this study to assess self-efficacy was a 17-item questionnaire developed by Sherer et al. (1982). The reliability coefficient of the test obtained with a Spearman–Brown method was 0.76 and the split half method of Guttmann result was 0.76. The Cronbach's alpha, or the internal consistency of the questions' value, was 0.79, implying that it is a satisfactory assessment tool.

The multiple body and self-relationship questionnaire

This is a 69-item questionnaire developed by Cash (2000) that was designed to evaluate the individual's perspective of satisfaction or dissatisfaction with body image. The reliability of the 10 subscales in this questionnaire was reported to be 0.77–0.91 for males and 0.73–0.89 for females, based on Cronbach's alpha (Cash, 2000). In Iran, the validity and reliability of the test was determined by Bagheripour (2008). In order to determine the validity of the test, the convergent validity method was used. A significant correlation between Copper Smith's questionnaire and subscales of body image was obtained with 0.135 as minimum and 0.345 as maximum.

Research design

Multiple relationships among the independent, dependent, and mediating variables were analyzed using SEM. It is a very general and strong multiple variable analysis technique from the multiple variation regression family and gives a very precise expression of the general linear model, enabling the researcher to test a series of regression equations simultaneously. SEM is a comprehensive statistical approach to test hypotheses on the relationships among the observed and hidden variables and can also test traditional models (Hooman, 2005).

The goal of path analysis is to obtain quantitative evaluation of the casual relationship in a series of variables. The relationship among variables flows in a direction and is considered as distinguishable pathways. The concept of path analysis is that the path diagram reveals the probable causal binds among variables. In order to develop the diagram, the basic pathways of variables are written down and an arrow is drawn from each variable to another (Hooman, 2005).

This study was conducted from June 2009 to December 2009. Three months were spent on selecting the sample group and having subjects complete the questionnaires; three months were spent on the analysis and interpretation of data. Initially a hypothesis was developed based on theoretical information, previous findings, and scientific reasoning. Subsequently, questionnaires were completed for each variable and scores were calculated. The assumed paths were analyzed via the AMOS software program. Then, the general effects, direct effects, and indirect effects of the independent and mediating variables were analyzed. The fitness of the model was checked using various methods. The correlation matrix among variables was subsequently created. A stepwise regression analysis and predictor equations for each of the dependent variables were calculated accordingly.

Results

The final model obtained from the AMOS analysis is shown in Figure 1. The mean, standard deviation,
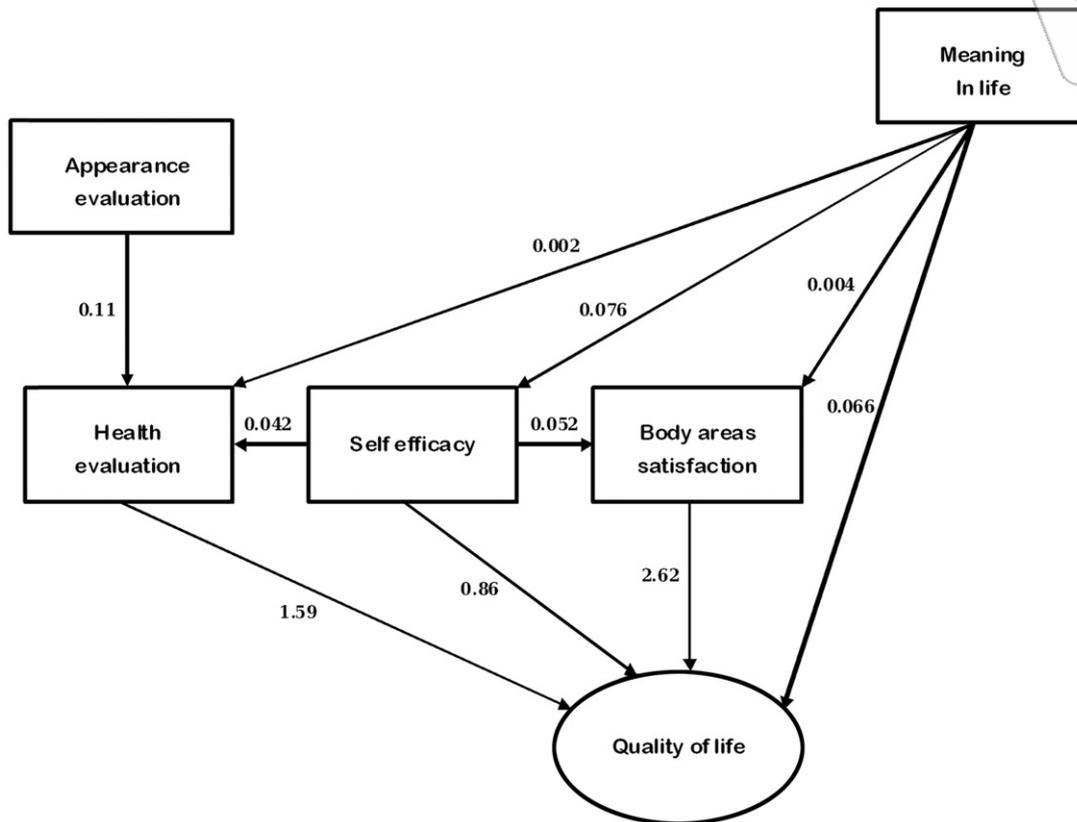
Figure 1. Final path model based on estimated coefficients.

Table 1. The statistical indexes of meaning in life, self-efficacy, body area satisfaction, appearance evaluation, health evaluation, and quality of life.

	Meaning of life	Self-efficacy	Body areas satisfaction	Health evaluation	Appearance evaluation	Quality of life
Mean	140.59	50.35	2.56	3.15	2.92	95.05
Median	145.00	51.00	2.50	3.16	3.00	69.00
Standard deviation	2.84	7.80	0.66	0.43	0.47	15.45
Variance	521.79	60.85	0.43	0.18	0.22	238.81

and variance of the scores for meaning in life, self-efficacy, body area satisfaction, appearance evaluation, health evaluation, and quality of life are presented in Table 1.

The results obtained through path analysis showed there is a significant relationship between the meaning in life variable ($p < 0.01$, $t = 3.04$, $B = 0.19$) and quality of life. In addition, self-efficacy ($B = 0.32$, $t = 4.04$, $p < 0.01$), health evaluation ($B = 0.09$, $t = 1.83$, $p < 0.05$), and body area satisfaction ($B = 5.34$, $t = 4.59$, $p < 0.01$) had significant direct relationships with the dependent variable, that is, quality of life. The appearance evaluation variable had an indirect relationship with the quality of life through the health evaluation variable ($B = 0.12$, $t = 2.56$, $p < 0.05$).

The results showed that there is a significant relationship between meaning in life and self-efficacy ($B = 0.61$, $t = 8.88$, $p < 0.001$), meaning in life and body area satisfaction ($B = 0.12$, $t = 1.73$, $p < 0.05$),

meaning in life and health evaluation ($B = 0.1$, $t = 1.43$, $p < 0.05$), self-efficacy and body area satisfaction ($B = 0.22$, $t = 2.79$, $p < 0.01$), and health evaluation and self-efficacy ($B = 0.01$, $t = 3.65$, $p < 0.01$).

As shown in Table 2, the relationships meaning in life and self-efficacy, meaning in life and body area satisfaction, self-efficacy and body area satisfaction, health evaluation and meaning in life, health evaluation and appearance evaluation, health evaluation and self-efficacy, quality of life and meaning in life, quality of life and body area satisfaction, quality of life and self-efficacy, and quality of life and health evaluation had a significant positive relationship ($p < 0.01$). There was no significant relationship between meaning in life and appearance evaluation. The previous equations for the above relationships in the final model are presented in Table 3.

As shown in Table 3, 25% of the self-efficacy variable variance was determined by meaning in life. Furthermore, 11% of the health evaluation variance

Table 2. Correlation matrix of the variables.

Variables	Self-efficacy	Meaning of life	Health evaluation	Appearance evaluation	Body areas satisfaction	Quality of life
Self-efficacy	1					
Meaning of life	0.51**	1				
Health evaluation	0.29**	0.27**	1			
Appearance evaluation	−0.03	0.14	0.14**	1		
Body areas satisfaction	0.26**	0.26**	0.12*	−0.36	1	
Quality of life	0.46**	0.46**	0.26**	0.08	0.37	1

Note: *Significance at 0.05; **significance at 0.01.

Table 3. Standard deviation equation and explanatory coefficients of dependent variables.

Dependent variable in model	Equation	Standard deviation	Representation coefficient (%)
Self-efficacy	$Y_1 = 25.816 + 0.175x$	6.71	25
Health evaluation	$Y_2 = 1.76 + 0.01x_2 + 0.003x_1 + 0.12x_3$	0.41	11
Body areas satisfaction	$Y_3 = 1.09 + 0.01x_2 + 0.005x_1$	0.63	8
Quality of life	$Y_4 = 22.14 + 0.16x_1 + 5.34x_4 + 0.46x_2 + 3.74x_5$	12.67	33

was determined by self-efficacy, meaning in life, and appearance evaluation variables. The body area satisfaction variance was determined by meaning in life and self-efficacy variables up to 8% and, finally, 32% of quality of life variance was determined by the variables meaning in life, self-efficacy, body area satisfaction, and health evaluation.

Discussion

Summary of results

Our results showed that there is a significant relationship between meaning in life and quality of life. Similar results have been obtained by Steger, Oishi, and Kashdan (2009), Ravindran, Matheson, Griffiths, Merali, and Anisman, (2007), Low and Molzahn (2007), Lee and Oh (2007), Skrabski, Kopp, Rozsa, Rethelyi, and Rahe (2005), Joseph (2004), Harlow, Newcomb, and Bentler (1986), Chamberlain and Zika (1988), and Reker and Cousins (1979). Correlation results showed that meaning of life has a close relationship with well-being in life while seeking meaning is associated with serious reduction of well-being in subsequent phases of life (Steger et al., 2009).

There is a significant relationship between quality of life and body area satisfaction. Our results are in agreement with those of Philips et al. (2005), Ragazzoni, Molinari, and Morosin, (1996), Cunningham (2002), Thompson, Covert, and Stormer (1999), Anderson (1995), and Tiggeman (1994). Some studies (Lewis & Conchelin, 2001; Shaw, Ebbeck, & Snow, 2000) have shown that older women are more vulnerable in terms of body image and this may have a negative impact on their values since their values might change from the accepted standards in the culture. Since quality of life, according to many researchers,

includes an individual's perspective on self, including mental image of the body (Padilla & Grant; cited by Bolander, 1994) and beliefs about the body, lowered body satisfaction might be associated with lowered quality of life.

There is a significant relationship between quality of life and self-efficacy. Our results are in agreement with the results of Levasseur and St-Cyr Tribble (2009), Kuhner and Burger (2005), Wyshak (2003), Anderson (1995), Altmaier, Russell, Koa, Lehmahn, and Weinstein (1993), and Dibaian and Karami (2006).

Researchers have shown that self-efficacy might have a relationship to the individual's feeling of well-being (Bandura & Wood, 1989). The feeling of well-being is considered one of the most important dimensions in the quality of life. On the other hand, women who have higher self-efficacy enjoy a higher quality of life through developing realistic goals that conform to their abilities and by working toward goals.

There is a significant relation between quality of life and health evaluation. Our results are similar to those of Levasseur and St-Cyr Tribble (2009), Schneider et al. (2008), Low and Molzahn (2007), Chiu et al. (2002), Gielen, McDonnell, Wu, O'Campo, and Feden (2001), Hays, Schoenfeld, and Balzer (1996), Dibaian and Karami (2006), and Niksirat (2005). Many theorists have considered health as one of the most important and main dimensions of the quality of life, without which the individual cannot develop a feeling of well-being (WHI, 1995, quoted by Oliver (1997)). However, different individuals might evaluate a similar health status in different ways. Nonetheless, this evaluation will have a considerable role in the feeling of peace, capability, and satisfaction.

There is a significant relationship between meaning in life and greater self-efficacy. Our results are similar

to those of Dewitz, Woolsey, and Walsh (2009), Joseph (2004), Reker and Cousins (1979) as well as Dibaian and Karami (2006). Higher self-efficacy encourages setting higher goals and feeling more commitment toward those goals (Bandura & Wood, 1989). In fact, accessible values and goals are the substructure of the meaning an individual gives to their own life (Jacobsen, 2008). Therefore, individuals with higher self-efficacy will render more efforts to establishing a meaningful life.

There are significant relations between meaning in life and body area satisfaction. Our results are similar to the results of Skrabski et al. (2005). Individuals who find meaning in life enjoy a feeling of high value. On the other hand, physical appearance and attractiveness in women have a direct relationship to their self-value level (Freedman, 1984). Therefore, individuals evaluate their body areas based on self-value assessment. Women with higher body satisfaction have a higher personal value assessment (Asevedo, 2004).

There is a significant relationship between health evaluation and meaning in life. Our results are similar to those of Skrabski et al. (2005) and Harlow and Newcomb (1990). It should be noted that changes generated during menopause affect a woman's evaluation of her health. Elderly women with no health complications show greater ability to establish cognitive strategies in their achieving goals compared with those who have health problems (Efklides, Kalaitzidou, & Chankin, 2003; Gana, Alphilippe, & Bailly, 2004). The hormonal variations and mood changes that might occur during menopause (Short, 2003) could also be associated with a negative impact on self-evaluation that, in turn, may affect the quality of life.

There is a significant relationship between self-efficacy and body area satisfaction. Our results are similar to those of Tod (2007), Woodrow-Keys (2006), Frost (2004), and Pesa, Syre, and Jones (2000). Women who achieve cultural body standards have a greater sense of responsibility and control and they have a feeling of domination and competency toward their bodies (McKinely & Hyde, 1996). In addition, self-efficacy is an individual's judgment on her competency (Pajares, 2002). Therefore, if she does not achieve socially accepted body criteria, women feel incompetent which may result in lowered self-efficacy emotions (Tod, 2007). Changes in the quality of sexual relations due to physical and mental factors might affect both the feeling of attraction and body area satisfaction and, therefore, may affect self-efficacy in a feminine role.

There is a significant relationship between health evaluation and self-efficacy. Our results are similar to those of Pesa et al. (2000) and Woodrow-Keys (2006). The self-efficacy of an individual is largely affected by health since health determines abilities. Those who have doubts about their abilities may reduce their efforts and surrender to lower levels solutions. In addition, self-efficacy and health evaluation are

both cognitive attributes and when individuals become apt to have more negative thoughts about themselves, both variables become affected simultaneously.

There is a significant relationship between health evaluation and appearance evaluation. Our results are similar to those of Patrick, Neighbors, and Knee (2004). Individuals who constantly make appearance evaluations and compare themselves with societal ideals have higher conditional self-esteem. However, after making social comparisons, some may develop a worsening feeling because they essentially compare themselves with those who 'have the upper hand', and this, in fact, is a more confusing comparison, leading to lowered perceived attraction (Patrick et al., 2004). This confusion might affect the evaluation of their health as well.

Limitations of this study

A limitation of this study is the limited sample including only menopausal women with a high school education and executing the questionnaire only among women who live in Tehran.

Implications for research

In addition, comparing the quality of life between menopausal women and men of the same age, comparing the quality of life and other variables between menopausal and fertile women as well as studying other mental factors that could determine the quality of life in menopausal women are related areas of research that should be considered in the future.

Implications of this research study

Based on the results obtained in this study, establishing programs to familiarize menopausal women with the process of menopause and discussing the physical and mental effects of this stage of life are important. By aiming for improvement in acceptance and ability to cope with changes could contribute to the prevention of a reduction in the quality of life. In addition, establishing programs for menopausal women where they could discuss their concerns would give them a feeling of attachment and belonging to a group; hence, this would improve self-efficacy and, in turn, improve the quality of life. The government, in doing its part, could adopt policies that support establishment of activities that develop the potential for and create these experiences in this large segment of society. As such, these actions would both prevent lowered meaning in life and assist with self-efficacy to improve the quality of life.

Conclusion

With respect to the results obtained by path analysis in our study, there were four direct relationships and six

indirect relationships among the independent variables and the mediating variables of the research with, the dependent variable, quality of life. In particular, meaning in life not only affects quality of life directly, but it also indirectly affects the quality of life through health, self-efficacy and body area satisfaction evaluations. In addition, health, self-efficacy, and body area satisfaction might affect the quality of life separately and each might predict some part of quality of life. Self-efficacy could also increase its effects on the quality of life by affecting body area satisfaction and health evaluation. Appearance evaluation has no direct relationship with meaning in life and quality of life; however, it could indirectly affect the quality of life by affecting health evaluation. Ultimately, all these variables are beliefs or feelings that relate to each other and can produce peacefulness, happiness, a feeling of well-being, self-efficacy, capability, goal orientation, value, and, in general, a good quality of life in menopausal women.

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