



The Prediction of Quality of Life based on the Mindfulness of Middle-aged Women in Tehran, Iran

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Quantitative Study

Abstract

Background: Middle age can be the culmination of human life, provided that quality of life (QOL) and mental health are maintained and even improved in this period. The QOL in this period of life is susceptible to many biological, physical, psychological, and social changes and problems, and the consequences of these changes. This study was aimed at predicting QOL based on mindfulness in middle-aged women in Tehran, Iran.

Methods: This study was a descriptive-correlational research. The statistical population of this study included all middle-aged women who lived in districts 1 and 2 of Tehran in 2017. A total of 148 middle-aged women were selected using convenience sampling method. Data were gathered using the Mindful Attention Awareness Scale (MASS) questionnaire and 36-Item Short-Form Health Survey (SF-36). The collected data were analyzed using the Pearson correlation coefficient and multiple regression analysis in SPSS software.

Results: The mean (SD) age of the participants was 47.8 (6.2) years. The mean (SD) score of consciousness and QOL was 64.7 (13.4) and 66.9 (8.8), respectively. There was a direct and significant relationship between mindfulness and QOL ($P < 0.01$; $r = 0.38$).

Conclusion: The study showed that there was a relationship between mindfulness and QOL, meaning that the higher the mindfulness of middle-aged women, the better their QOL. It can be concluded that mindfulness is a predictor of the QOL.

Keywords: Quality of life, Defense mechanisms, Mindfulness, Middle-aged

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Introduction

Middle age, 45-65 years of age, is a bridge between youth and old age. This stage of life is the golden and fertile period of life (Serwinski, Salavec, Kirschbaum, & Steptoe, 2016; De Vito, Baer, Dart, Chiuve, Rimm, &

Colditz, 2015). Middle age can be the peak of human life provided that quality of life (QOL) and mental health continues to grow and expand in this period. In this period of life, QOL is susceptible to many biological, physical, psychological, and social changes and problems, and the consequences of these changes (Wong et al., 2017). Compared to men, women experience more changes and complications as they grow old. The most critical event for middle-aged women is menopause and loss of fertility. Menopause

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in middle-aged women has many consequences, including decreased libido and sexual satisfaction, sexual dysfunction, insomnia, increased risk of hypertension, cardiovascular disease (CVD), cancers especially breast cancer, and a variety of chronic and disabling diseases, which severely affect QOL. These problems cause mood, emotional, and interpersonal stress disorders and seriously threaten the QOL and mental health of middle-aged women (Chuni, & Sreeramareddy, 2011; Ayranci, Orsal, Orsal, Arslan, & Emeksiz, 2010). In fact, with increasing urbanization, the demographic transition to middle age and old age, and the increasing burden of non-communicable and chronic diseases, the prevention of these diseases and increasing of QOL in middle-aged adults is essential (Kim & Kang, 2015).

The most common diseases of middle age and old age are those that can be prevented by a healthy lifestyle and high QOL. For example, the two main causes of death (CVD and cancer) in middle age and old age are the same as the two major causes of general mortality, which can be prevented through the elimination of risk factors (Malekzadeh et al., 2013). Moreover, a healthy lifestyle, and consequently, a high QOL in middle-aged people affect their mental health, and change their communication patterns or their presence in social activities. Therefore, the QOL at this age is of great importance because of its ability to prevent disease and improve mental and physical health (Kim & Kang, 2015). QOL is a broad concept that encompasses all aspects of life, including health. The term 'QOL' is used to describe satisfaction, happiness, and social, emotional, physical, occupational, and financial aspects of personal life (Ayranci et al., 2010). One of the hallmarks of QOL, especially for middle-aged and elderly people, is awareness of the present moment and what is happening around them, which is referred to as consciousness.

The concept of consciousness encompasses awareness and attention. Awareness is a

radar screen that constantly monitors the external and internal environment. A person may be aware of stimuli without heeding them. Therefore, attention is a process in which conscious awareness is concentrated. Consciousness and attention are intertwined, so that attention constantly pulls out forms of consciousness and keeps them at its center each time for a different period. Attention is a constant aspect of normal functioning, but consciousness is a heightened awareness of current experience or reality. In other words, it is a kind of awareness of and attention toward events and experiences (Desbordes et al., 2014). Moreover, through self-awareness, individuals recognize and facilitate their basic psychological needs (Zoogman, Goldberg, Hoyt, & Miller, 2015). Awareness is needed to make the individual aware of his/her basic needs so that they can be satisfied. Thus, the basic psychological needs and well-being of individuals provide the necessary conditions for their psychological development, cohesion, and psychological well-being (Zimmaro et al., 2016).

In a study on the impact of a mindfulness based program on the QOL of stem cell transplant survivors, it was found that this intervention increased their QOL (Grossman, Zwahlen, Halter, Passweg, Steiner, & Kiss, 2015). In a study on a mindful intervention based on well-being and QOL, it was reported that mindfulness intervention improved the QOL of patients suffering from heart disease (Nyklicek, Dijkman, Lenders, Fonteijn, & Koolen, 2014). In another study on the relationships between mindfulness, QOL, and psychiatric symptoms among gastric ulcer patients, it was concluded that mindfulness scores were significantly and inversely correlated with anxiety, depression, and perceived stress scores, and were positively and directly correlated with the QOL score (Jedel, Merriman, Hoffman, Swanson, Fogg, & Keshavarzian, 2013). Therefore, considering the importance of QOL and mindfulness in middle-aged people, the present study aimed to predict

QOL based on mindfulness in middle-aged women in districts 1 and 2 of Tehran, Iran.

Methods

This study was a descriptive-correlational study and the study population consisted of all middle-aged women residing in districts 1 and 2 of Tehran municipality in 2017. From among them, 148 middle-aged women were selected using convenience sampling. For sampling, 6 neighborhood halls were initially identified as accessible in districts 1 and 2 of Tehran. Then, questionnaires were distributed among the people who came to the neighborhood headquarters and were willing to participate in the study. The sample size was determined to be 40 participants for each level of predictor variables according to the correlation method. Since in this study mindfulness and QOL each had one component, 80 participants were required, but 148 were selected due to the possible loss of subjects. The inclusion criteria included ages of 45-65 years and being married. Questionnaires containing incomplete information were excluded. Before completing the questionnaires, individuals were informed about the aim of the study, were assured that all information would remain confidential and would only be used for research purposes. Participation in the study was voluntary and could be withdrawn at any time. A consent form was obtained from every participant, and questionnaires were completed anonymously.

Mindful Attention Awareness Scale: The Mindful Attention Awareness Scale (MAAS) was developed by Brown and Ryan in 2003 and is used to measure mindfulness. The MAAS consists of 15 items that are scored on a 6-point Likert scale ranging from "almost never" (with a score of 1) to "almost always" (with a score of 6). The total score of the MAAS ranges from 15 to 90. This scale has good internal reliability as it was performed on 7 sample groups and its Cronbach's alpha was reported between 0.82 and 0.87. The validity of

this scale was also reported to be highly correlated with many mental health variables (Kiken, Lundberg, & Fredrickson, 2017).

Moreover, the construct validity and criterion validity of this scale have been evaluated in cancer patients. This scale has been implemented in the Iranian society with a Cronbach's alpha of 0.82 and has been correlated with related variables such as self-knowledge and mental health in different samples (Phang, Mukhtar, Ibrahim, & Mohd Sidik, 2016).

The Medical Outcomes Study 36-Item Short-Form Health Survey: The Medical Outcomes Study (MOS) 36-Item Short-Form Health Survey (SF-36) is designed to assess health policies and overall health status in terms of physical and mental health. This questionnaire consists of 36 questions and 8 components, with questions such as: "How do you generally evaluate your health at present, compared to last year, to assess health-related QOL?" (Bogan et al., 2016). This questionnaire was designed and adjusted to measure health-related QOL. Individuals rate their response to each item using a 6-point Likert scale ranging from "almost never" (with a score of 1) to "all the time" (with a score of 6) (Gum, Glassman, & Carreon, 2013). Overall, the results indicated that the Persian version of the SF-36 has the reliability and validity to measure health-related QOL. Convergent validity, which is used to test the measurement assumptions using the correlation of each question with a hypothesized scale, also showed good results and all correlation coefficients were higher than the recommended value of 0.4 (range of coefficients varied from 0.58 to 0.95). The factor analysis test provided two main components that explained 65.9% of the variance between the scales of the SF-36 questionnaire. Researchers reported the validity of this questionnaire as 0.77 using concurrent validity and its reliability as 0.70 for most of the scales using Cronbach's alpha (Matcham, 2014). In the present study, the Cronbach's alpha of this questionnaire was

calculated to be 0.79.

Data were analyzed using descriptive and inferential statistics in SPSS software (version 22, IBM Corporation, Armonk, NY, USA). Descriptive statistics were used to calculate frequencies, determine central indices and dispersion, and draw charts, and graphs, and inferential statistics were used to determine the Pearson correlation coefficient and multiple regression analysis was used in order to evaluate the effect of predictor variables on the criterion variable.

Results

The mean (standard deviation) age of the participants was 47.8 (6.2) years; 89 (60.2 %) participants were between 40 and 50 years of age and 59 (39.8%) were between 40 and 65 years of age. Among the participants, 45 (30.4%) had a diploma, 73 (49.3%) had a bachelor's degree, and 30 (20.2%) had a master's degree. Moreover, 112 (75.6%) participants were married and 36 (24.3%) were single. Table 1 shows the descriptive indices of the study variables.

Table 1. Descriptive indices of study variables

Variable	Mean ± SD
Mindfulness	64.7 ± 13.4
Quality of life	66.9 ± 8.8
Physical functioning	36.3 ± 16.8
Physical role	16.5 ± 5.8
Bodily pain	20.3 ± 16.1
General health	28.8 ± 17.7
Vitality	28.6 ± 13.7
Social functioning	47.5 ± 29.3
Emotional role	19.3 ± 36.4
Mental health	46.2 ± 15.7

SD: Standard Deviation

Since all significance levels in the Kolmogorov-Smirnov test were greater than 0.05, the distribution of scores of the research variables was not significantly different from

a normal distribution ($P > 0.05$). Furthermore, the results of Levene's test and its significance level, which was greater than 0.05 in all cases, showed homogeneous variances. The Pearson correlation test was used to investigate the relationship between the research variables, and the results are presented in table 2.

Table 2. Matrix correlation of quality of life and mindfulness

Variable	Mindfulness	P-value
Quality of life	0.38	0.001
Physical functioning	0.22	0.001
Physical role	0.27	0.001
Bodily pain	0.19	0.010
General health	0.17	0.010
Vitality	0.29	0.001
Social functioning	0.41	0.001
Emotional role	0.32	0.001
Mental health	0.24	0.001

The results showed that there was a direct and significant relationship between mindfulness and QOL ($P < 0.01$). That is, the higher the mindfulness of middle-aged women, the better their QOL. By simultaneously incorporating the mindfulness variable as a predictor and QOL as a criterion variable, the variable contribution of mindfulness in predicting and the amount of variance was explained (Table 3).

The value of R is the measure of the correlation between the observed value and the predicted value of the variable. R squared (R^2) is the square of this correlation and shows the contribution of variance in predicting the criterion variable. In essence, it is a scale that shows to what extent one can predict the criterion variable by knowing the predictor variables. Therefore, given the amount of R^2 presented in table 3, the variable of mindfulness explains about 22% of QOL variations. The observed F and its significant level ($P < 0.001$) indicate significant predictive power.

Table 3. Simultaneous multivariate regression of quality of life based on defense and mindfulness

Predictive values	R	R^2	Modified R^2	SE	F	P
Mindfulness	0.47	0.22	0.20	11.84	10.13	0.001

SE: Standard error

Discussion

The present study showed that there was a direct and significant relationship between mindfulness and QOL; that is, the higher the mindfulness of middle-aged women, the better their QOL. These results were consistent with the studies by Grossman et al. (2015) on the effect of mindfulness treatment on QOL, Nyklicek et al. (2014) on the effect of mindfulness treatment on emotional well-being and QOL in patients with coronary artery disease, and Jedel et al. (2013) on the relationship between mindfulness, QOL, and psychiatric symptoms in patients with gastric ulcer.

In explaining the relationship observed between mindfulness and QOL in the present study, it can be said that mindfulness frees one from maladaptive-cognitive habits (Kiken et al., 2017). Mindfulness also reduces maladaptive reactions in the individual by removing depressive schemas such as helplessness or frustration. Mindfulness is likely to reduce stress and increase QOL in several ways. First, mindfulness is likely to have a direct impact on the initial evaluation process, thus reducing the threat level, and indirectly, reducing disaster. Second, mindfulness probably indirectly reduces disaster by affecting the process of secondary evaluation, and thus, assesses one's actual ability to cope with stressful situations. Ultimately, mindfulness is positively assessed by directly enhancing one's ability to reduce stress perception in the initial assessment.

Furthermore, according to the results of this study, the variable of mindfulness explained about 22% of QOL variations, which was in line with the findings of Fortney, Luchterhand, Zakletskaia, Zgierska, and Rakel (2013) and Hoffman, Ersser, Hopkinson, Nicholls, Harrington, and Thomas (2012).

In explaining this finding, it can be said that through mindfulness, one finds self-awareness of negative emotions, such as anxiety and stress in the body, and discovers their related thoughts, and learns the means to deal with these problems (Germer 2005).

When one can observe one's thoughts without any judgment and without reacting to those thoughts, one attains a state of comfort and rest in unpleasant situations (Kaviani, Javaheri, & Hatami, 2011). Relaxing in an unpleasant situation leads to reduced stress, well-being, and ultimately to a higher QOL. Mindfulness not only improves psychological and physical symptoms of anxiety through relaxation, but also reduces anxiety, improves stress resistance, and enhances self-coping skills by using a new perspective and focusing on the source of stress (Surawy, McManus, Muse, & Williams, 2015). This process involves focusing on one's stresses and anxieties. Mindfulness helps a person to be aware of what is happening to him/her at any given moment, and to respond more appropriately. Through mindfulness, the individual becomes aware of all his/her positive, negative, and neutral experiences and increases his/her QOL by reducing his/her suffering (Kaviani et al., 2011).

One of the limitations of the present study was the use of the available sampling method, which makes it difficult to generalize the findings. The limitation of the study population to middle-aged women in districts 1 and 2 of Tehran prevents the generalization of the results to other genders and other cities and regions. Researchers can also use other methods, such as interviews, to obtain accurate information. It is recommended that the present study be conducted as an empirical study to investigate the effect of mindfulness training and its impact on QOL in middle-aged women. It is suggested that a similar study be performed in middle-aged men to compare with the present study. In future research, the impact of other variables such as education, number of children, employment, and income may be examined on the QOL of middle-aged adults. In qualitative studies, researchers compare middle-aged people with good QOL to those with poor QOL to find out more about the factors affecting middle-aged QOL. Based on the results, it is suggested that health authorities consider the improvement of mental health and QOL

through education on a healthy lifestyle in middle age, especially for women as the priority of cultural, welfare, and health centers, and in other cities especially Tehran. It is recommended that middle-aged adults be made aware of the factors affecting their QOL so that they can improve their QOL by choosing a healthy lifestyle. Mindfulness training should be taught to middle-aged and elderly people in cultural centers, psychiatric clinics, and retirement centers to enhance their QOL, psychological well-being, and mental health; in addition, they should undergo self-knowledge skills training to improve their QOL.

Conclusion

The results of the present study showed that there was a relationship between mindfulness and QOL, meaning that the higher the mindfulness of middle-aged women, the better their QOL. It can be concluded that mindfulness is a predictor of the QOL.

Conflict of Interests

Authors have no conflict of interests.

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