



Designing a structural equation model of marital satisfaction based on aging perception and demographic and clinical variables in Iranian elderly patients with coronary artery disease

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Original Article

Abstract

BACKGROUND: Marital satisfaction is an important variable in maintaining or promoting elderly health. Therefore, identifying the effective factors can increase life expectancy and quality of life. This study aimed to determine the relationship between aging perception and demographic and clinical characteristics with marital satisfaction in the elderly patients with coronary artery disease (CAD).

METHODS: This was a descriptive-correlational study. The sample size was 480 elderly patients with CAD who were referred to the heart clinics of hospitals in the west of Mazandaran Province, Iran, who were recruited by convenience sampling. Data were collected by a demographic checklist, ENRICH Marital Satisfaction Inventory, and Aging Perceptions Questionnaire (APQ). The data were analyzed by structural equation model (SEM) using Goodness of Fit Index (GFI and chi-square test. P-value less than 0.050 was considered as significant level.

RESULTS: The mean and standard deviation (SD) of marital satisfaction was 145.16 ± 12.12 , and the mean and SD of aging perception was 113.39 ± 12.74 . The results of the Pearson's correlation coefficient indicated that the highest correlation was between aging perception and marital satisfaction ($r = 0.68$, $P < 0.001$). The model fit indices of the hypothesized model met the criteria, with the GFI = 0.91, Comparative Fit Index (CFI) = 0.93, Normed Fit Index (NFI) = 0.94, and non-Normed Fit Index (NNFI) = 0.91.

CONCLUSION: Considering the psychological risk factors affecting marital satisfaction such as aging perception and suitable measurement can lead to marital health and improve treatment outcomes by increasing elderly motivation in self-care. Therefore, the elderly patients with CAD need more serious and long-term educational, counseling, and supportive interventions.

Keywords: Structural Equation Modeling; Marital Status; Satisfaction; Perception; Elderly; Coronary Artery Disease

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Introduction

Elderly population growth is one of the most important economic, social, and health challenges in the twenty-first century. In the next 47 years, the population over the age of 65 years will double, with 52% living in Asia.¹ Based on the census record in Iran in 2016, 9.23% of Iran's population is 60 years and older. It is estimated that seniors will make up more than 20% of Iran's population by 2050.²

As the elderly population increases, the prevalence of chronic diseases, including cardiovascular disease (CVD), also increases.³

About 85 million adults in United States (US) have one or more coronary artery diseases (CADs), of which about 43 million are over 60 years old. Approximately, two-thirds of CAD deaths occur in people over 75 years of age. CVD is one of the

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major causes of disability and death in the elderly. More than 17 million people die of heart disease worldwide annually.⁴ In Iran, the annual death rate due to ischemic heart disease (IHD) in the population over 40 years is estimated as 14 per 1000.⁵

Physical, psychological, and social stressors associated with disease diagnosis, treatment, and follow-up to multiple hospitalizations and treatment along with aging-related problems can threaten the health of the elderly in various aspects including family relationships.⁶ This is unique to each patient and has numerous consequences, including physiological, psychological, social, and spiritual damages that significantly change the patients' lifestyle. In this regard, it can be said that the disease will not only affect the elderly, but also his/her family, and especially his/her spouse.⁷

Learning new roles, such as taking care of the elderly, giving them medication, and interacting with the treatment team for family members who are facing stress related to diagnosis and treatment can create a great deal of stress that can interfere with their behaviors in interpersonal and marital relationships.⁸ Accordingly, one of the problems of the elderly with CAD is dissatisfaction with marital life.⁹

Major concerns related to the probability of dying and stress caused by the uncertainty and unpredictability of the illness outcome, frequent hospitalizations, need to follow the treatment process, financial burden, and disability can destroy marital life satisfaction in various dimensions including relationships and patterns of interaction between individuals, their intimacy with each other, as well as their sexual behavior.¹⁰

Personal variables such as age, personality traits, relationship, conflict between couples, illness, and financial management are associated with marital satisfaction.¹¹ Min et al. also suggest that one of the major threats to marital dissatisfaction among elderly couples is the existence of chronic illness and a decrease in physical health. Disease of one or both spouses can affect their balance and communication structure. Changes in the role of couples and their responsibilities due to illness can have a negative impact on the marital satisfaction of older couples.¹²

In addition to the above factors, one of the important psychological variables related to aging and CAD is aging perception which can be considered as a mediator of marital satisfaction.¹³ Aging perception refers to each person's understanding of his/her own process of aging in the socio-cultural context; it is a measure of each

individual's satisfaction with his/her own aging and a reflection of adaptation to aging-related changes that can affect different aspects of one's life.¹⁴

The results of previous studies showed that health status during or before old age, functional capacity of the person, their interaction with others, mental attitudes, level of cognition and understanding of events, physical health, and spiritual beliefs influenced aging perception.^{15,16} Aging perception is associated with consequences such as social isolation, depression, unwillingness to interpersonal communication, and discontinuation of treatment due to hopelessness and despair of the future. Since marital satisfaction is an important variable in maintaining or promoting the health of the elderly in different dimensions, identifying the effective factors can help increase life expectancy, survival and quality of life, as well as adherence to treatment.¹⁷

Most studies on factors affecting marital satisfaction have assessed simple linear relationships between variables. They have focused on the relationship between marital interactions and marital satisfaction, personality characteristics and marital satisfaction, and attachment styles and marital satisfaction.¹⁸ Although these studies have sought the relationship between marital satisfaction and some variables, more studies are needed to elucidate the relationship between multiple factors and marital satisfaction and the percentage of changes in marital satisfaction that were predicted by the independent variables. In addition, the relationship between aging perception and marital satisfaction in the older individuals with CAD has not been investigated. Therefore, this study aimed to determine the relationship between aging perceptions and demographic and clinical data with marital satisfaction in elderly patients with CAD.

Materials and Methods

This was a descriptive-correlational study. Heart clinics ($n = 4$) in west of Mazandaran Province, Iran (hospitals of Ramsar, Tonekabon, Chalus and Noshahr Cities in the north of Iran) were the study setting. All the hospitals in these cities are affiliated with Mazandaran University of Medical Sciences, Sari, Iran. The study population consisted of all elderly patients with CAD referred to the heart clinics of hospitals in the west of Mazandaran Province, in 2019. We recruited 490 patients through convenience sampling. Due to the approximate equality of the number of hospital beds in the west of Mazandaran Province, individuals were selected equally from these hospitals (approximately 123

elderly patients from each hospital).

The inclusion criteria were a score of 6 or more by a Short Test of Mental Status,¹⁹ being 60 years old and older, a history of at least 6 months of CAD, and willingness to participate in the study. The exclusion criterion was failure to complete more than one-third of the questions in each questionnaire. This study was approved by the Ethics Committee of Babol University of Medical Sciences, Babol, Iran (IR.MUBABOL.HRI.REC.1398.131). All the details and study objectives were presented to all elders and then written informed consent was obtained. It was explained to the participants that they had the right to withdraw at any stage of the research. All information was maintained confidentially in the datasheets. All data would be published in bulk and without the name. The study data were collected through questionnaires. The questionnaires consisted of the following details:

Characteristics of demographic questionnaire included variables including age, sex, level of education, number of children, occupation, duration of marriage, age of spouse, income, duration of illness, underlying disease, and medications.

The short form of ENRICH Marital Satisfaction Inventory (Evaluation and Nurturing Relationship Issues, Communication, and Happiness) is a 47-item questionnaire including 12 subscales. A five-point Likert scale, with scores ranging from 1 (strongly agree) to 5 (strongly disagree) was used. The 19 questions are reversely scored. To obtain the overall score for the questionnaire, the total points for all questions are calculated. The scores less than 30 indicate severe dissatisfaction with marital life, 30-40 dissatisfaction, 40-60 relative and medium satisfaction, 70-60 high satisfaction, and scores above 70 indicate very high marital satisfaction.^{20,21} The 47-question form of this questionnaire was developed and confirmed by Arab Alidousti et al. in Iran ($\alpha = 0.74$).²² The questionnaire has been used in various studies to evaluate the marital satisfaction of the elderly.^{22,23} In the current study, its reliability was confirmed with Cronbach's alpha level of 0.78.

Barker et al.'s Aging Perceptions Questionnaire (APQ) is a multidimensional questionnaire consisting of two sections including 32 and 17 questions. The first section's scoring is a five-point Likert scale with 7 dimensions. The second section includes 17 questions as an objective subscale and assesses the number of health-related changes that a person has experienced health-related changes associated with aging as well as the number of health-related changes associated with aging (health-related changes

associated with aging. This part is scored as yes/no choices. Scores on these subscales range from 0 to 17. The total score is derived from the sum of the scores of the two sections of questionnaires.²⁴ Higher scores indicate better aging perceptions. The validity and reliability of this questionnaire was determined by Yaghoobzadeh et al in Iran.²⁵ In the current study, the reliability of Barker et al.'s APQ was confirmed in a pilot study ($\alpha = 0.88$).²⁴

The data were analyzed using IBM AMOS 24 software (version 18, SPSS Inc., Chicago, IL, USA) and structural equation model (SEM) technique.

To test the assumed model fitting of the data and to estimate direct, indirect, and total effect coefficients, the SEM technique with probability background method was used. To estimate the effect coefficients and model fit indices, chi-square test with degree of freedom (χ^2/df), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Adjusted GFI (AGFI), and Root Mean Square Error of Approximation (RMSEA) was done. The significance level was considered less than 0.050.

It has been suggested that RMSEA values less than 0.05 are good, values between 0.05 and 0.08 are acceptable, values between 0.08 and 0.1 are marginal, and values greater than 0.1 are poor.²⁶ Indices such as CFI, GFI, NFI, NNFI, and AGFI values greater than 0.90 are considered acceptable but if they are greater than 0.95, they are considered good. The ratio of χ^2 to df should be 3 and below.²⁷

Results

A total of 490 elderly patients with CAD participated in the study. Two participants withdrew from study and 8 participants did not complete more than one third of the questionnaires. So, data of 480 participants with CAD were analyzed. 57.0% of the sample were men. 91.9% of the sample had been married for more than twenty years (Table 1). The mean and standard deviation (SD) of age of the participants was 64.48 ± 3.10 years and the mean and SD of age of their spouses was 61.21 ± 1.10 years. The mean and SD of disease duration was 1.80 ± 0.70 years and the most prevalent used medication (29.60%) was related to beta blockers and vasodilator drugs.

The mean and SD of marital satisfaction was 145.16 ± 12.12 and the highest mean and SD (22.30 ± 3.71) was related to "marital satisfaction" dimension and the lowest mean and SD (6.47 ± 1.71) was related to the "equalitarian roles" dimension (Table 2).

Table 1. Demographic variables of participants (n = 480)

Demographic and clinical data	n (%)
Sex	
Male	267 (57.0)
Female	213 (43.0)
Age (year)	
60-69	290 (62.1)
70-79	131 (27.7)
More than 80	59 (10.2)
Length of CAD (year)	
1-5	180 (37.5)
5-10	194 (40.5)
More than 10	106 (22.0)
Job status	
Clerk	93 (19.4)
Labour	110 (23.0)
Farmer	145 (30.2)
Unemployed	66 (13.7)
Other	66 (13.7)
Education level	
Less than high school	277 (57.7)
Diploma	154 (32.0)
Bachelor or higher	49 (10.3)
Length of marriage (year)	
1-20	39 (8.1)
21-30	230 (47.9)
31-40	158 (32.9)
More than 40	53 (11.1)
Income	
Less than enough	195 (40.6)
Enough	215 (44.8)
More than enough	70 (14.6)
Underlying disease	
Diabetes	87 (18.1)
Digestive problems	81 (16.9)
Kidney disease	31 (6.5)
Epilepsy	1 (0.2)
Blood pressure	191 (39.8)
Arthritis	27 (5.6)
Respiratory diseases	26 (5.4)
None	36 (7.5)
Medication	
Beta blockers	142 (29.6)
Diuretic	46 (9.6)
Nitrates	106 (22.0)
Vasodilators	142 (29.6)
Blood sugar control drugs	44 (9.2)

CAD: Coronary artery disease

The mean and SD of aging perception was 113.39 ± 12.74 and the highest mean and SD of aging perception was related to "consequences negative" (17.28 ± 2.61) and "control negative" (16.79 ± 3.44) dimensions. The mean and SD of H-RCE was 7.29 ± 2.91 . 74.0% of sample had experienced "cardiac disorders" and only 17.0% of them had "muscular cramp". The mean and SD of H-RCA was 6.20 ± 3.10 (Table 3). Most common

changes in health were related to weight changes (8.0%) and least common changes were related to visual changes (4.0%).

Table 2. The mean and standard deviation (SD) of marital satisfaction dimensions in the elderly with coronary artery disease (CAD) (n = 480)

Marital satisfaction dimensions	Mean \pm SD
Idealistic distortion	9.11 \pm 1.80
Marital satisfaction	22.30 \pm 3.71
Personality issues	8.61 \pm 2.22
Marital communication	13.63 \pm 2.31
Conflict resolution	14.91 \pm 2.64
Financial management	9.10 \pm 2.11
Leisure activities	11.72 \pm 2.54
Sexual relationship	10.73 \pm 2.40
Children and parenting	12.46 \pm 2.30
Equalitarian roles	6.47 \pm 1.71
Religious orientation	13.41 \pm 2.47
Family and friends	12.85 \pm 2.62
Marital satisfaction (Total)	145.16 \pm 12.12

SD: Standard deviation

The results of the Pearson's correlation coefficient indicated that the highest correlation was between aging perception and marital satisfaction ($r = 0.68$, $P < 0.010$). The results showed that aging perception, duration of marriage, occupation, spouse occupation, number of children, and type of medication were able to significantly predict marital satisfaction. Aging perception and marriage duration with standard beta coefficient of 0.34 and 0.22, respectively, had the highest regression effect on marital satisfaction. This means that with one unit increase in aging perception and duration of marriage, 0.34 and 0.22 increases in marital satisfaction occurs, respectively (Table 4).

Table 3. The mean and standard deviation (SD) of aging perception dimensions in the elderly with coronary artery disease (CAD) (n = 480)

Aging perception dimensions	Mean \pm SD
Timeline acute/chronic	14.44 \pm 3.34
Timeline cyclical	14.77 \pm 3.24
Emotional representations	15.16 \pm 2.84
Control positive	12.69 \pm 2.76
Control negative	16.79 \pm 3.44
Consequences positive	10.54 \pm 2.31
Consequences negative	17.28 \pm 2.61
Experience of health-related changes	7.29 \pm 2.91
Number of health-related changes attributed to aging	6.20 \pm 3.11
Aging perception (Total)	113.39 \pm 12.74

SD: Standard deviation

Table 4. The sixth stepwise regression model for predicting marital satisfaction

Independent variables	Beta standard coefficient	Non-standardized coefficients	t	P	F	Adjusted R ²
Intercept	-	0.650	2.43	0.013	8.80	0.48
Aging perception	0.340	0.680	8.17	0.001		
Duration of marriage	0.210	1.370	4.88	0.001		
Occupation	-0.105	-0.080	-2.52	0.012		
Age of spouse	-0.106	-0.010	-2.54	0.011		
Number of children	-0.110	-0.080	-2.62	0.009		
Medications	0.090	0.001	2.39	0.017		

Multiple regression with stepwise method was used to investigate the simultaneous effect of variables affecting marital satisfaction. Independent variables (duration of marriage, occupation, spouse occupation, number of children, and type of medication) were included in 6 models. The final model (the sixth model) was shown with the presence of all variables (aging perception, duration of marriage, occupation, spouse occupation, number of children, and type of medication) (Table 4). In the first step (model 1), the variable of age perception explained 21.0% of marital satisfaction changes. In the second step (model 2), with the entry of the variable of duration of marriage into the model, a total of two variables of aging perception and duration of marriage explained 32.0% of marital satisfaction changes. Similarly, in the last model (model 6), these 6 variables were able to explain 48.0% of marital satisfaction changes.

The conceptual model of research (Figure 1) was examined through SEM. A combination of absolute and relative fit indices was considered in this study. The results showed that the RMSEA was 0.065. The RMSEA values closer to zero indicated better

model fit. The GFI was 0.91 and the CFI was 0.93. In this model, the covariance of the index errors was 127.68. The AGFI was 0.99. The results showed that the model fit well (Table 5).

The estimated standard coefficients between indices with each construct were greater than 0.40 in all cases. The highest and lowest weighted regression coefficients of aging perception dimensions were related to “consequences negative” and “control negative”, and in the marital satisfaction dimensions were related to “marital satisfaction” and “religious orientation”. The model indicated that 65.0% of the marital satisfaction changes were explained by the model in the aging perception questionnaire. Standard regression coefficients indicated a strong negative relationship between aging perception and marital satisfaction; as aging perception increases, marital satisfaction decreases ($r = -0.81$). Also, the structural function model after fitting the data with the assumed pattern by age showed that aging perception in subjects under 70 years old had a more negative effect on marital satisfaction than those over 70 years old ($r = -0.68$, $P < 0.001$).

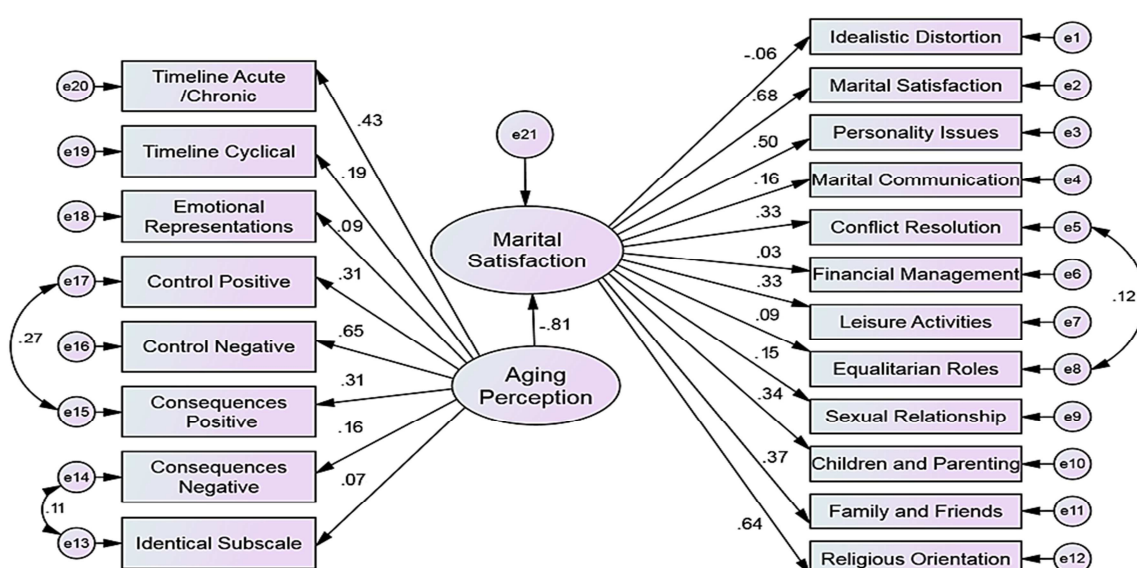
**Figure 1.** Structural function model after fitting the data to the assumed model

Table 5. The goodness of fit indices (GFI) of assessment model using structural equation model (SEM)

Index	χ^2	df	χ^2/df	GFI	CFI	NFI	NNFI	AGFI	RMSEA	P
Measurement model	144.31	75	1.92	0.91	0.93	0.94	0.91	0.99	0.065	0.550

Df: Degree of freedom; GFI: Goodness of Fit Index; CFI: Comparative Fit Index; NFI: Normed Fit Index; NNFI: Non-Normed Fit Index; AGFI: Adjusted Goodness of Fit Index; RMSEA: Root Mean Square Error of Approximation

Increasing length of disease led to an increase in the negative effect of aging perception on marital satisfaction ($r = -0.38$, $P < 0.001$) but in the regard of gender, no significant difference was observed in effect of aging perception on marital satisfaction ($r = 0.06$, $P = 0.210$) (Figure 2).

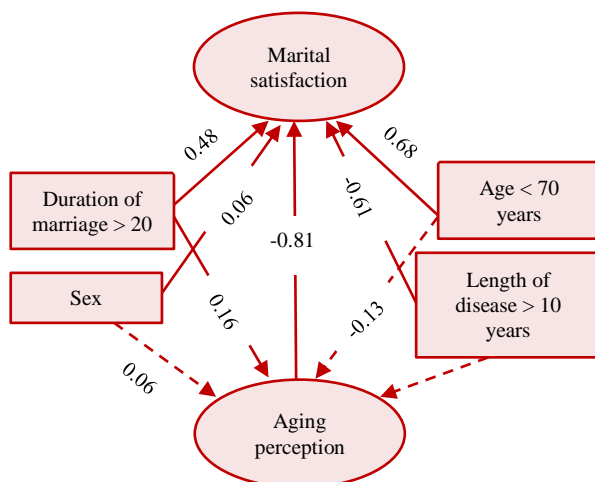


Figure 2. Structural equation modeling (SEM) results for marital satisfaction with aging perception and demographic and clinical variables

Discussion

The results of this study showed that the Iranian elderly with CAD had a low perception of aging. This finding indicates that most elderly had a negative view of aging. However, in the study conducted by Yaghoobzadeh et al., the mean score of aging perception was moderate.²⁵ In addition to cultural differences between the two populations, chronic disease in elderly in the present study is one of the possible reasons for the differences between the results of the two studies. The results of various studies show that chronic disease is one of the effective factors in aging perception. The results of Steverink et al.'s study show that aging perception involves two dimensions; the positive aspect of aging refers to personal growth and development, and the negative aspect is due to the physical and psychological deterioration in the elderly.²⁸

Positive perceptions of aging are associated with consequences such as increased life satisfaction, improved quality of life, decreased loneliness and depression, and negative perceptions of aging are associated with increased physical and psychological

deterioration and increased elderly dependence to family members and caregivers. This negative perception of aging requires interventions to change the attitudes of the elderly to facilitate and secure physical and mental health.²⁷ When the elderly have a chronic illness such as CAD, the elderly's aging perceptions can change due to the consequences of the disease, such as reduced daily living functions, increased patient dependency on the family, decreased ability to work outdoors, and increased disability.²⁹

Aging perceptions in the elderly is one of the important factors in predicting physical health and mortality and also a major factor in health outcomes such as quality of life and mental health³⁰ which can influence patient motivation to pursue treatment, adhere to diet,³¹ collaborate with the treatment team, and make efforts to promote self-management behaviors and maintain social and family life.³² Therefore, the importance of paying attention to this concept and providing effective interventions in the elderly with CAD is overemphasized.

The results of the present study showed that the highest mean scores of aging perceptions were related to "consequences negative" and "control negative" dimensions. In fact, the elderly subjects identify aging as a limiting factor in behaviors such as participating in social activities, doing daily activities, and maintaining independence, and consider their own role in controlling the aging process so little. However, the results of Kraskian-Mujembari et al.'s study showed that "consequences zpositive" (4.24 ± 0.78) and then "control positive" (4.14 ± 0.57) had the highest scores in aging perception.³³ The results of the Robertson and Kenny's study showed that when one felt that he/she could not control the aging process, there was no attempt to maintain or enhance the lifestyle.³⁴

The results of the present study showed that the dimension of "emotional representations" is another dimension of aging perception with a high average score. This means that the elderly in our study had negative thoughts about the process and consequences of aging, which led to negative emotions or behaviors such as anxiety, sadness, depression, and anger. Studies show that negative thoughts about aging can limit people's hope and motivation for maintaining and promoting health-promoting behaviors, and concern about aging may actually reduce one's ability to manage

problems associated with illness and aging.^{35,36}

The results of this study showed that the elderly had moderate satisfaction with marital life. Some studies have shown that lowered marital satisfaction scores are associated with illness and health problems.^{12,37}

In the present study, the highest mean score of marital satisfaction was related to "marital satisfaction" dimension and the lowest mean score was related to "equalitarian roles" dimension. In the "marital satisfaction" dimension, patients' satisfaction with the spouse's personality traits, interpersonal relationships, and spouse's feelings and loving have been evaluated. Perceived threats by elderly with CAD may trigger emotional and affective reactions. Sensitivity to emotional and affective behaviors and how spouses express their interests is common in elderly patients with CAD.⁸ The results of the study conducted by Holt et al. showed that married elderly had good marital satisfaction due to emotional support and were more likely to adhere to treatment regimen and participate in self-care programs.³⁸

SEM showed acceptable fit indexes for the data. The estimated standard coefficients between the indices with each construct are considered as an SEM. These coefficients indicate the extent to which indicators can measure a latent construct.³⁹ In this study, these coefficients were more than 0.4 in all cases, which is at a desirable level. This suggests that each of the variable dimensions of aging perception and marital satisfaction is a good criterion for measuring these variables.

In the present study, standard regression coefficients showed that there was a strong negative relationship between aging perception and marital satisfaction, which with increasing aging perception score, the marital satisfaction score decreases. If the elderly have a negative perception of aging, they neglect many of their abilities in the management of life and their adaptive power in interpersonal communication, especially with regard to spouse, is diminished.³⁴ A negative perception of aging reduces the elderly's motivation to participate in marital life decisions, limits the elderly to social and family roles, also diminishes marital relationships, and makes them often reluctant to receive psychological counseling to maintain and promote sexual behaviors.^{40,41} Hart and Buck suggested that healthcare providers with effective interventions could alter the elderly's aging perception and its consequences. This will improve the patient's life expectancy and quality of marital life.⁴²

The results of the present study also showed that in people under 70 years old, aging perception had more negative effect on marital satisfaction than

those over 70 years old. Aging perception at different stages of the aging cycle is different (young elderly, old elderly, and very old elderly).⁴³ Negative perception of aging in young adults is associated with consequences such as early decline in sexual activity, decreased ability of the elderly in resolving conflicts with spouse, and ultimately decreased marital satisfaction.⁴⁴ The results of this study are different from those of Barker et al. who found that elderly people of 75 years and older had more negative attitude towards aging.²⁴

The results of the current study showed that increasing the disease length increases the negative effect of aging perception on marital satisfaction. Increasing the disease length by increasing the involvement of the elderly patients and their family, especially the spouse, with negative consequences of the disease, the costs of treatment, and multiple hospitalizations can threaten marital satisfaction.⁴⁵ As the duration of the illness increases, the burden of long-term care for the elderly also increases, which can disrupt relationships between couples. In such circumstances, the patient's negative perception of aging limits his/her assistance and participation in self-care behaviors and fosters disagreements between couples.³⁴

Health-related changes that are related to aging are another dimension of the APQ which has a high mean score in this study. In fact, the elderly in our study attributed physical problems such as CAD, bone and articular problems, joint pain, respiratory problems, as well as psychological problems such as depression and anxiety to aging. Studies show that adherence to treatment is low in the elderly who attribute physical problems to the aging.^{46,47}

Negative perception of aging and attributing most of the physical and mental problems to aging lead this group of elderly to often finding these problems natural and not trying to cure them.⁴⁸ The results of Kraskian-Mujembari et al.'s study showed that the mean score of health changes attributable to aging in elderly was 4.52 ± 3.45 ,³⁵ which is lower than the mean score of the current study. In the current study, the elderly subjects were ill and the nature of the chronic disease and its associated problems could support the negative findings of the two studies.

Conclusion

The results of this study showed that the elderly had a low perception of aging. Therefore, there is a need for comprehensive efforts to change the attitude of the elderly towards aging. The results also showed that there was a strong negative relationship between

aging perception and marital satisfaction. Therefore, considering the psychological risk factors affecting marital satisfaction such as aging perception and suitable actions can lead to marital health and improved treatment outcomes by increasing elderly motivation in self-care. The results of the present study also showed that increasing the duration of the disease increased the negative effect of aging perception on marital satisfaction.

Therefore, it is necessary to pay attention to related interventions to increase marital satisfaction in addition to considering the elderly patient's perception of aging on the duration of illness. The results of this study showed that age under 70 was an important variable in the relationship between aging perception and marital satisfaction. Therefore, they require more serious and long-term educational, counseling, and supportive interventions than those aged 70 and over with CAD. In the present study, the health-related changes associated with aging have a high mean score. This requires changing the attitudes of the elderly by providing comprehensive and continuous education.

Limitations: The confounding effects associated with culture could not be controlled. Data were collected through a self-report questionnaire. Disease severity may affect marital satisfaction as a confounding variable that has not been investigated in this study.

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Conflict of Interests

Authors have no conflict of interests.

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