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# Survey of lifestyle and its relationship with health value of mid-aged women referring to comprehensive health centers of Isfahan in 2016

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## Abstract:

**INTRODUCTION:** Health needs a lifestyle upgrade. Lifestyle is important because it affects the quality of life and the diseases' prevention. This study aimed to investigate the lifestyle and its relationship with health-care value of mid-aged women.

**METHODS:** This descriptive-analytic study was conducted on 287 middle-aged women in Isfahan in 2016. Samples were randomly selected among the centers as well as from those referring to comprehensive urban health centers. Walker's Health-Promoting Lifestyle Profile II and a researcher-made health-care value questionnaire were provided to mid-aged women. Data were analyzed using descriptive statistics, Pearson's correlation coefficient tests, and multiple linear regression (MLR) analysis.

**RESULTS:** The average health value score in women was 59.6 and the total lifestyle score was 57.9 out of 100, which is in the semi-desirable range. The highest score among the lifestyle domains was related to the interpersonal relationship (67.6) and the lowest score was related to physical activity (39.4). Pearson's correlation coefficient showed that there is a direct relation between the health value score and the total score of lifestyle and all its domains ( $P < 0.001$ ). MLR model showed that the areas of responsibility ( $P < 0.001$ ), interpersonal relationships ( $P < 0.001$ ), and physical activity ( $P = 0.01$ ) have the highest predictive value for the health value score among the different domains of lifestyle score.

**CONCLUSION:** Lifestyle and health value of mid-aged women in Isfahan are in the semi-desirable range and lifestyle has a direct relationship with health value. Therefore, lifestyle enhancement can enhance the health value and take steps to improve health in the community.

## Keywords:

Lifestyle, middle aged, health value

## Introduction

One of the main pillars of health evaluation is evaluation of lifestyle.<sup>[1]</sup> Lifestyle is a combination of behavioral patterns and personal habits throughout the life including nutrition, mobility, and behavioral habits which would be formed due to the socialization process of the individual; therefore, selecting the type of lifestyle and

its related behaviors, besides having an essential role in individual's health, might lead to outcomes and results that could be effective in the performance and quality of physical, mental-psychological, and social health of the individual too.<sup>[2]</sup> Many life-threatening factors could be avoided by changing and improving the lifestyle. Hence, one of the goals of the World Health Organization is to improve individuals' lifestyle. According to the history of researches on modification of lifestyle,

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90% of type II diabetes, 80% of cardiovascular diseases, and 1.3% of the cancers could be prevented by weight control, nutrition modification, performing physical activities, and avoiding cigarettes.<sup>[3]</sup> Societies which are trying to achieve sustainable development through lifestyle and health improvement are unfortunately facing obscure structures of lifestyle; since they do not have a clear recognition and understanding of their population's lifestyle, they would not be able to find the appropriate strategy which would consequently lead to spending high costs in the field of health because despite the allocations of large budgets, the problem of lifestyle-related diseases is still not solved.<sup>[4]</sup>

Walker and Hill-Polerecky categorized the elements of lifestyle into six domains including taking responsibility toward health, physical activity, nutrition, interpersonal relations, stress management, and spiritual growth.<sup>[5]</sup>

Health does not mean merely not being sick or disabled but it also includes full physical, mental, and social welfare, so health is a relative concept and health criteria differ between different age groups and social and cultural classes. Hence, each country should be deciding based on their own norms and then search for ways to achieve the predetermined level of health.<sup>[6]</sup>

Health value means valuing the health by the individual. In other words, when one values their own health, they would express health behaviors meaning that health would have priority over other values to the individual.<sup>[7]</sup> Improving the concept of health value in the individuals is the final goal of providing health services which would decrease the costs in the field of health services and consequently improve the performance in providing health and therapeutic cares. This concept would be formed through mutual efforts between the caregivers and individuals during the entire period of receiving health-care services.<sup>[8]</sup>

Nowadays, due to the decreased rate of fertility and improved health of the population in most countries, life expectation had a significant growth and consequently the population of the middle-aged and the elderly is increasing.<sup>[9]</sup> Middle age is a period of life between adolescence and elderly which is usually considered between the ages of 41 and 60.<sup>[10]</sup> This definition has been changed in our country in a way that middle age is considered as the period between the ages of 30 and 59.<sup>[11]</sup> Meanwhile, women would face more challenges than men of their similar age; they have lower educational level, working experience, and income level than men and also, taking care of other family members is considered as their responsibility.<sup>[12]</sup>

Women would encounter physical, cognitive, and social changes during the middle age, so the first signs of chronic diseases such as hypertension, diabetes, cardiovascular diseases, and arthritis would appear during this period.<sup>[13]</sup> Furthermore, considering the incidence of menopause between the ages of 45 and 55 which is during the period of middle age, the importance of this period would be more signified.<sup>[14]</sup>

The condition of the elderly's lifestyle has been evaluated in Iran.<sup>[4]</sup> Since no similar studies in this field have been conducted in Iran and considering the differences in the elements of lifestyle in Iranian women compared to other countries, the present study was conducted to evaluate the lifestyle among middle-aged women and its relation with health value.

## Methods

The present study was a descriptive-correlational study that was conducted in 2016 on 287 middle-aged women who referred to the comprehensive health centers of Isfahan. Participants were randomly selected from the middle-aged women who satisfied the inclusion criteria. The inclusion criteria were being able to read and write, being able to answer the questions, being in the middle age range (30–59 years old), and not being pregnant. The exclusion criteria were sample's unwillingness to participate in the study and flawed questionnaires in which more than two questions of each item would not be answered.

Based on the goals of the study, health centers were selected using simple randomized sampling. Sampling from each center was also conducted using simple sampling from the referees to the health centers at the day of visiting the center. Data were gathered using two questionnaires including Health-Promoting Lifestyle Profile II (HPLP II) by Walker and Hill-Polerecky and a researcher-made health value questionnaire that was designed based on the four-questioned questionnaire by Lau, Hartman, and Ware. The first part of the questionnaires contained demographic characteristics, and questions were closed or short-answered including age, job, educational level, and the underlying diseases. The second part of the questionnaire contained 52 questions about lifestyle in six domains of responsibility toward health, spiritual growth, interpersonal relationships, nutrition, physical activity, and stress management, and the third part contained 17 questions about the value of health. Both the questionnaires contained multiple-choice questions which were scored based on a 5-point Likert scale include of never = 0, rarely = 1, sometimes = 2, mostly = 3, and always = 4; or statistical analysis, they were, respectively, scored from 0 to 4. The scores of 0–33 were considered as undesirable,

scores of 33–66 were considered as semi-desirable, and scores of 66–100 were considered as desirable.

The HPLP II by Walker and Hill-Polerecky has been used by Aghamolaei and Ghanbarpour<sup>[15]</sup> in 2015 and its validity and reliability have been approved. The reliability coefficient for this questionnaire has been reported as 0.93 with a Cronbach's  $\alpha$  of 0.92. To approve the content validity of the health value questionnaire, it was given to 15 academic members of the Nursing and Midwifery Faculty of Isfahan University of Medical Sciences and then, their corrective comments were applied. To determine the reliability of the questionnaire, test-retest method was used. The questionnaire was distributed among twenty clients of a health center that was not selected for the study. The achieved correlation coefficient for all the items of the questionnaire was higher than 0.7.

Ethical considerations were regarded by taking permission from the ethics committee of the university and taking written informed consent from the participants.

Data were analyzed using SPSS software version 22 (SPSS Inc., Chicago, IL, USA) and statistical tests of mean, standard deviation, Pearson's correlation coefficient, and linear multiple regression analysis.  $P < 0.05$  was considered the significant level.

## Results

The mean age of the participated middle-aged women in the study was 40.5 years. Nearly 64/5% of the women were homemaker, 2/4% were illiterate, 69% had at most an educational level of diploma, and 25/1% had college degrees. Almost 12/5% of women had hypertension and 4/5% had diabetes.

The mean score of health value among the participants was 59/6% and the total score of lifestyle was 57/9 out of 100. From the domain of lifestyle, the highest score belonged to the domain of interpersonal relationships (67/6%) and the lowest score belonged to the domain of physical activity (39/4%) [Table 1].

Pearson's correlation coefficient showed a significant direct relation between the score of health value with the total score of lifestyle and its domain ( $P < 0/001$ ) [Table 2].

Multiple linear regression model showed that from the domains of lifestyle, domains of responsibility ( $P < 0/001$ ), interpersonal relationships ( $P < 0/001$ ), and physical activity ( $P = 0.01$ ) had the highest predictive value for the score of health value [Table 3].

## Discussion

Results of the present study showed that most of the participated women were homemaker, had an educational degree of under diploma, and had hypertension as an underlying disease.

Results of the present study revealed that the value of health among middle-aged women was in the semi-desirable range (scores of 33–66). Benedict in his study showed that health value was in the undesirable range (105–166) among the middle-aged group;<sup>[16]</sup> also the results of Pokhrel *et al.*<sup>[17]</sup> and Jackson *et al.*<sup>[18]</sup> indicated that health value in the adolescents (105–166) and the youths was in the undesirable to semi-undesirable range. Adolescence and youth are the periods prior to middle age, so undesirable health value during these periods could continue until the period of middle age. The mentioned results are in line with the results of the present study; but the present study was in contrast with the study of Shi *et al.*<sup>[19]</sup> which revealed that health value was desirable among men. The main reason for this difference was the difference between the genders of the studied population.

Total score of lifestyle of middle-aged women was in the semi-desirable range (57/9%). One of the reasons for not achieving a desirable lifestyle is multifactorial nature of the lifestyle, but probably, factors such as lack of health knowledge, not sensitizing women toward their own health, and lack of appropriate awareness about the healthy lifestyle could also be effective. Results of the studies by Mahmudi *et al.*<sup>[20]</sup> and Rafiee *et al.*<sup>[21]</sup> which revealed that lifestyle was undesirable among the elderly (99–155) and women of reproductive ages (50/3%), were in line with the results of the present study.

Among the domains of lifestyle, the highest score belonged to the domain of interpersonal relationships (67/6%) which was in the desirable range. Babak *et al.*<sup>[22]</sup> in their study showed that men have more desirable (156–211)

**Table 1: Frequency of the scores of health value, lifestyle, and its domains in mid-aged women**

Variables	Frequency (%)							
	Health value	Total score of lifestyle	Responsibility toward health	Physical activity	Nutrition	Interpersonal relationships	Stress management	Spiritual growth
Undesirable	7 (2/4)	13 (4/5)	41 (14/3)	116 (40/4)	7 (2/4)	12 (4/2)	15 (5/2)	11 (3/8)
Semi-desirable	182 (63/4)	197 (68/6)	186 (64/8)	145 (50/5)	134 (46/7)	112 (39)	178 (62)	132 (46)
Desirable	98 (34/1)	77 (26/8)	60 (20/9)	26 (9/1)	146 (50/9)	163 (56/8)	94 (32/8)	144 (50/2)

**Table 2: Pearson's correlation coefficients between the score of health value and the total score of lifestyle and its domains in mid-aged women**

Variables	r	P
Lifestyle and health value	0/757	<0/001
Responsibility toward health and health value	0/713	<0/001
Physical activity and health value	0/554	<0/001
Nutrition and health value	0/591	<0/001
Interpersonal relationship and health value	0/646	<0/001
Stress management and health value	0.612	<0.001
Spiritual growth and health value	0.609	<0.001

**Table 3: Multiple linear regression model for predicting the score of health value based on the scores of lifestyle domains in mid-aged women**

Domains	Raw coefficients	Standardized coefficients	t	P
Responsibility toward health	0/29	0/38	5/92	<0/001
Physical activity	0/09	0/13	2/61	0/01
Nutrition	0/02	0/024	0/42	0/67
Interpersonal relationships	0/23	0/29	5/04	<0/001
Stress management	0/034	0/044	0/70	0/48
Spiritual growth	0/028	0/036	0/56	0/58

interpersonal relationships than women due to cultural issues, freedom, and more presence in the society. Mojadam *et al.* quoted from Namdari<sup>[23]</sup> in their study that interpersonal relationships are of great importance among women and are known as the basis for human growth, preventing personal damages and human developments; these results confirm the results of the present study.

Furthermore, among the domains of lifestyle, the lowest score belonged to the domain of physical activity (39/4%) which was in the undesirable range. Results of the study by Babak *et al.*<sup>[22]</sup> showed that physical activity is undesirable (42–98) among women. The study of Lippincott and Wilkins<sup>[24]</sup> revealed that women have low physical activity during their lifetime and especially, during their middle age, their physical activity would be decreased.

Results of the present study showed a significant direct relation between the score of health value and the total score of lifestyle and scores of its domains ( $P < 0/001$ ). From different domains of lifestyle, responsibility, interpersonal relationships, and physical activity had the highest predictive value for the score of health value. Stacey<sup>[25]</sup> stated that health value is an important factor in performing health-improving behaviors. Results of the study by Jackson *et al.*<sup>[18]</sup> showed that health value, social and friends' support, and self-efficacy in the field of health had a significant relation with more participation in having a health-improving lifestyle and health value would predict individual's participation

in health-improving lifestyle. The mentioned results confirm the results of the present study.

The lifestyle of middle-aged women is in the semi-desirable range and has a significant relation with health value, so paying attention to the lifestyle of middle-aged women, as half of the middle-aged population, is necessary. One of the strengths of the present study was evaluating the lifestyle of middle-aged women and also its relation with health value for the first time in the country. To achieve wider perspective in this field, it is recommended to evaluate this topic among other groups of women who do not refer to public health centers, such as employed women and those who refer to private clinics.

## Conclusions

Lifestyle and health value of the middle-aged women in Isfahan are in semi-desirable status; also, a significant direct relation was observed between health value and total score of lifestyle and all of its domains. This indicates more need for programming and educating by the policymakers in the field of health for this group of the population.

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## Conflicts of interest

There are no conflicts of interest.

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