

# Health Promoting Behaviors in Women of Khorramabad City in Western Iran in 2013

Khatereh Anbari<sup>1</sup>; Seyed Mohammad Mostafavi<sup>2</sup>; Kourosh Ghanadi<sup>3,\*</sup>

<sup>1</sup>Social Determinant of Health Research Center, Lorestan University of Medical Sciences, Khorramabad, IR Iran

<sup>2</sup>Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, IR Iran

<sup>3</sup>Department of Internal Medicine, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, IR Iran

\*Corresponding author: Kourosh Ghanadi, Department of Internal Medicine, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, IR Iran. Tel: +98-6613223004, Fax: +98-6616200133, E-mail: koroush.ghanadi@gmail.com

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**Background:** Health promotion is a process, which enables people to control and improve their health.

**Objectives:** The purpose of this study is to evaluate health promoting behaviors in women of Khorramabad City.

**Patients and Methods:** In this cross-sectional study, 500 women aged between 15 to 49, referring to Khorramabad health centers were studied by consecutive sampling method, using the standardized HPLPII questionnaire. t-test, one-way analysis of variance and multi-variable analysis (linear regression) were used for data analysis.

**Results:** Regarding health promoting behavior, 77.8% of women were in average condition, 14.4 % considered desirable, while 7.8 % found to have undesirable status. The mean score was  $129.2 \pm 20.9$ . Therefore, the physical activity and health care responsible were of lowest quality, where associability and spiritual growth proved to be in best condition. In linear regression test, the most important factors predictive of health promoting behaviors included the level of education ( $\beta = 0.15$ ,  $P = 0.004$ ), the number of children ( $\beta = 0.13$ ,  $P = 0.002$ ), and the marital status of the participants ( $\beta = 0.1$ ,  $P = 0.021$ ).

**Conclusions:** The health system of any society should pave the way for providing facilities, offering proper trainings, according with intersectoral coordination and following the principle of social justice, encouraging women to perform health-promoting behaviors.

**Keywords:** Health Promotion; Women, Behavior

## 1. Background

Health promotion is a process, which enables people to control and improve their health. Health promoting approach should enable people to take adequate responsibility of their own health, and consequently adopt the most appropriate lifestyle (1). Concern for women's health is an important goal of the Millennium Development and is the key priority of the World Health Organization (2). Despite the notion that women are more hopeful to life than men, their health quality is lower than that of men specially in developing countries. A healthy mother will give more pep to the family, which would subsequently promote the health of the society (3). Adopting a healthy life style greatly improves the quality of life, prevents disease, and consequently reduces the cost of treatment (4). On the other hand, reinforcing health promoting behavior, which is influenced by personal beliefs and cultural characteristics, is undoubtedly the responsibility of health establishments in any society (5). The results of various studies indicate that inappropriate life styles as well as high risk activities are the main causes of many chronic diseases. However, the health promoting behaviors ensure the best quality of health (6, 7). In fact, the health promoting behaviors reduce the health inequality (8). The health promoting

measures are crucial to consolidate health. Therefore the study of peoples' lifestyles and their health behaviors seem necessary for designing health-care promoting programs and preventing diseases. Globally, limited studies have been performed on the health promoting behaviors of various populations including health personnel and university students. Studies on health promoting behaviors are necessary to further establish the key role of women on family and society health, and the effect of mothers' lifestyles on the future development of children's health promoting behaviors (6-8).

## 2. Objectives

The purpose of this study is to evaluate health promoting behaviors in women along with the relevant effective factors in Khorramabad City in western Iran.

## 3. Patients and Methods

The population in this cross sectional study included women aged from 15 to 49 years; regularly referring to the health centers in Khorramabad during the second half of 2013. The sampling was carried out in consecutive stages.

The first stage of sampling was carried out in six main health centers in Khorramabad. A total of 500 samples were collected where 70-90 were taken from each health center. In the next stage some information were gathered from the women consenting to participate in the study. The standard questionnaire of health promotion lifestyle II (HPLPII), designed in accordance with that of Pender's health promotion, was used to show how women followed favorable health promoting behaviors. This questionnaire helped the researcher gain a multi-dimensional evaluation of the health promoting behaviors. Included in the questionnaire were items on health quality, physical activities, food, spiritual growth and prosperity, interpersonal relationships and stress management. This tool includes 52 multiple questions in which answers are: 1) always 2) usually 3) sometimes and 4) never. The answers ranged from 52 to 208. The scores from 52 to 104 were classified as undesirable, between 105-156 were regarded as acceptable and those ranging from 158-208 were considered as desirable situations. The validity and reliability of the Persian version of this tool was analyzed and measured according to factor analysis in the previous study. The percentage of the expected aggregated variance and Cronbach's coefficient

for each area was calculated for 466 people aged over 18 years. The alpha reliability coefficient was 0.82 for the total scale and ranged from 0.64 to 0.91 for different areas of the questionnaire (9).

Another part of the questionnaire was related to personal and demographic data, information about any recorded chronic diseases and social and economic condition of every individual. Written informed consent was obtained from all participants in the study. The independent T-tests and one way analysis of variance (shefe post hoc) were used to analyze the information and multi-variate (linear Regression) was applied to study the effects of independent variables on health promoting behaviors. The P values less than 0.05 were considered as statistically significant. Statistical software SPSS version 19 was used for data analysis.

#### 4. Results

The mean age of the participants was 30.17 ( $\pm$  8.2) years while 62.4% (n = 312) were under 30 years of age and 63.2% were married. Among them, 47.4% (n=237) were high school students or high school graduates and 47% were housewives. The monthly income was \$192 to \$384 in 42.6% (n=213).

**Table 1.** Comparison of the Mean Scores on Health Promoting Behaviors in People Under Study According to Individual Characteristics<sup>a</sup>

Characteristic	Frequency	Health Promoting Behavior Scores	P Value
<b>Age</b>			0.2
< 30	312 (62.4)	130.1 $\pm$ 21.2	
30-49	188 (37.6)	127.6 $\pm$ 20.4	
<b>Marital status</b>			0.02
Married	316 (63.2)	129.6 $\pm$ 21.1	
Single	169 (33.8)	129.8 $\pm$ 19.9	
Divorced or widow	15 (3)	111.2 $\pm$ 26.8	
<b>Education</b>			0.001
Secondary school or lower	62 (12.4)	120.2 $\pm$ 21.4	
High school or graduate	237 (47.4)	128.7 $\pm$ 21.4	
Associate or bachelor	160 (32)	130.9 $\pm$ 20.3	
Master of art (MA) or PhD	41 (8.2)	134.3 $\pm$ 18.7	
<b>Job</b>			0.28
Housewife	235 (47.9)	127.8 $\pm$ 21.7	
Clerk	158 (31.6)	130.5 $\pm$ 21.3	
Worker	150 (39)	122.7 $\pm$ 20.8	
Free	32 (6.4)	128.8 $\pm$ 14.6	
Others	60 (12)	132.9 $\pm$ 1.6	
<b>Living conditions</b>			0.16
Living only with husband	80 (16)	131.2 $\pm$ 19.2	
Living with husband and children	191 (38.2)	128.6 $\pm$ 20.9	
Living with father or mother	17 (3.4)	118.3 $\pm$ 24.8	
Living with children	15 (3)	119.9 $\pm$ 23.2	
Living alone	133 (26.6)	130.3 $\pm$ 21.5	
Living with father and mother	38 (7.6)	128.2 $\pm$ 19.9	
Living with in-laws	26 (5.20)	129.1 $\pm$ 22.2	

<sup>a</sup> Data are presented as No. (%) or Mean  $\pm$  SD.

In regard to their living condition, 38.2% lived with their husband and children. Concerning the health promoting behaviors in general, 77.8% (n = 388) of the women had acceptable, 14.4% (n = 72) desirable and 7.8% (n = 39) undesirable conditions. The health promoting behaviors score was  $129.2 \pm 20.9$ . The mean score based on the desirability of health promoting behaviors was classified as acceptable. The individual characteristics and other aspects of participants' health promoting behaviors and their related scores are presented in Table 1. As the results show, no significant relationship was found between individuals' age, jobs or living conditions and the health promoting behaviors. However, in regard to widows and divorced women, there was a significant relationship between the amount of income and health promoting behaviors ( $P = 0.02$ ). As for the participants with secondary or elementary school educations ( $P = 0.001$ ) and incomes lower than \$96 ( $P = 0.004$ ), health promoting behaviors were considerably lower than other subjects. According to one-way analysis of variance, health promoting behaviors were considerably higher among women with two or three children than those having one or no child ( $P = 0.001$ ). The mean score and the level of favorable health promoting behaviors of women are studied in different aspects (Table 2), and as the results confirm, the score relating to physical activities is the worst,

while the best refers to a sound interpersonal relationship. With respect to physical activities, 58.4% (n = 291) of the participants were at an unfavorable state, while the majority of participants in the area of interpersonal relations (47.8%) were at a favorable condition. Also the majority of participants (42.2%) were in favorable position in the area of self-actualization. Only 29% (n = 145) of the women exercised three times a week and 70.6% (n = 353) had sufficient sleep, at least eight hours a day. As for driving, 45.2% (n = 226) used seat belts. Only 31.2% (n = 156) used overpasses while crossing the streets. On the other hand, 60% of the participants (n = 300) had annual health checkup and 56.6% (n = 283) managed to measure their blood pressure at least once a year. In addition, 1.6% (n = 8) of women were cigarette smokers, and 13.4% (n = 67) experienced violence at home, and 12.9% (n = 64) fell victim to high risk sexual behaviors. In linear regression the most important predicting factors on health promoting behaviors included education level ( $P = 0.004$ ,  $\beta = 0.15$ ), number of the children ( $P = 0.002$ ,  $\beta = 0.13$ ), and marital status ( $P = 0.021$ ,  $\beta = -0.1$ ). In other words, having higher education and more children had positive effects on health promoting behaviors while being a divorcee or a widow caused negative impacts. The effect of income on health-promoting behaviors was not significant according to the multivariable statistical analysis (Table 3).

**Table 2.** The Mean and the Level of Utility of Different Aspects of Health Promoting Behaviors in Women Under Study<sup>a, b</sup>

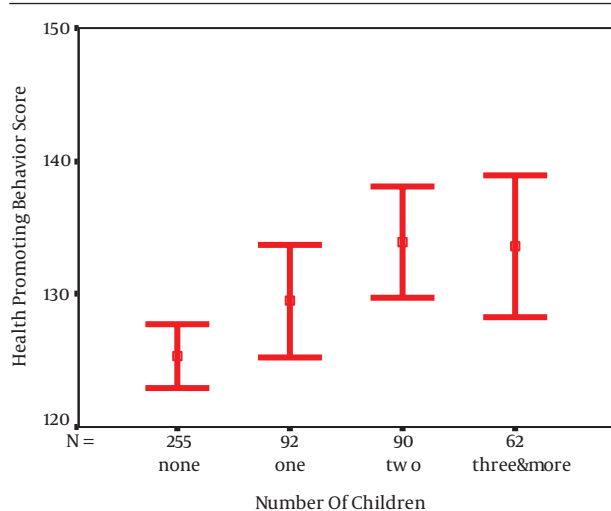
Domain	Score	Range of Attainable Scores	Level of Health Promoting Behavior		
			Good	Moderate	Weak
Spiritual growth and self-actualization	5.2 ± 25.1	9-36	211 (42.2)	234 (48.6)	46 (9.2)
Feeling responsible about health	6.9 ± 34.1	13-62	25 (5)	344 (68.8)	131 (26.2)
Interpersonal relationship	5.2 ± 25.5	9-36	238 (47.8)	232 (46.6)	28 (5.6)
Stress management	3.7 ± 14.9	6-24	113 (22.6)	307 (61.5)	79 (15.8)
Physical activities	4.4 ± 12.9	8-32	33 (6.6)	174 (34.9)	291 (58.4)
Suitable food	3.5 ± 16.6	7-28	215 (43.2)	252 (50.6)	31 (6.2)
Total	20.9 ± 129.2	52-208	72 (14.4)	388 (77.8)	39 (7.8)

<sup>a</sup> Data are presented as No. (%) or Mean ± SD.

<sup>b</sup> For total score: score between 52 to 104 and 105 to 156 were classified as undesirable and acceptable situations respectively, and a score from 158 to 208 was considered desirable.

**Table 3.** Linear Regression Analysis of Factors Affecting Health Promoting Behaviors of Women

Model	Unstandardized Coefficients		Standardized Coefficients	Sig	95% CI for $\beta$	
	$\beta$	St. Error			Beta	Lower bound
Age	-2.06	1.69	-0.086	0.098	-6.3	0.26
Marital status	-3.68	1.53	-0.1	0.021	-7.01	-0.5
Education, y	4.09	1.4	0.15	0.004	1.31	6.8
Job	0.3	0.77	0.02	0.69	-1.21	1.82
Resident	-2.8	3.16	-0.042	0.36	-9.05	3.3
Income	0.72	0.97	0.036	0.46	-1.22	2.68
Number of children	3.94	1.34	0.13	0.002	1.42	7.12



**Figure 1.** The Mean Score of Health Promoting Behavior According to the Number of Children

## 5. Discussion

Women's awareness of different aspects of health provides great stride to implement preventing measures, improve their lifestyle and offer much wider choices of health-related services (9). According to our study, and based on the range of health-related scores, the performance of health promoting behaviors in women was acceptable, a finding consistent with the mean score 135 reported by McElligott et al. (10). In the current study, the lowest score was associated with physical activities, which was in agreement with the results of McElligott et al. and Edrisi et al. studies (10, 11). Scully et al. and Rahnavard et al. showed that the lifestyle of adolescent girls, particularly in terms of exercise and nutrition was at an undesirable level (12, 13). In regard to undeniable impact of exercise on peoples' health, physical activity should be included in programs concerned with health promotion. Therefore the cooperation of health centers with other organizations is necessary for enhancing physical education, and providing sporting equipments. Women should be encouraged to use sport facilities and to take part in physical activities such as walking and hiking in groups which have great impacts on their health promoting behaviors. Cautioning people by mass media against the threats of various diseases and emphasizing on regular health check-ups help people feel more responsible for their health. In this study the highest score belonged to interpersonal relationship and spiritual growth. In the study of Edrisi et al. on health promoting behaviors, the interpersonal relationship and food gained the highest scores (11). Moreover, a direct relationship has been found between spiritual growth and life quality in different aspects (10). The study on the relationship between individuals' characteristics with their health promoting behaviors showed that married women gained higher

scores than the widows and divorced peers. This indicates that married women have higher motivation to feel responsible and keep healthy. On the other hand, the high scores gained by women with two children or more, comparing with women lacking children, is indicative of caring about their health and responsibilities. This is reflected in the fact that women love their children for whose sake and the family they try to keep healthy and avoid any risky behaviors. On the other hand, the women with higher education scarcely take risky actions, since they are sufficiently aware of health threatening factors and also health promoting behaviors, which is proved by the results of this study. The limitation of this study is that the population studied was not representative of all women living in Khorramabad City, and the results obtained applied only to women referring to health centers. Further studies using larger sample sizes and involving high response rates to questionnaires, are thus needed to corroborate the findings of the present investigation. Healthy lifestyle, education of women and raising awareness about health promotion strategies play undeniable roles in improving the health of women and children in every society. The awareness about health promoting behaviors through national and local media helps improve the lifestyle of women, especially those with lower education. Therefore family and social support of vulnerable women especially widows and divorcee is crucial in promoting women's health and improving the quality of their lifestyle.

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## Authors' Contributions

Khatereh Anbari developed the original idea and writing protocol, and has done statistical analysis. Kourosh Ghanadi prepared the manuscript and supervised the project; Mohammad Mostafavi contributed to protocol development and collected data for the study.

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