

## Facilitators and Inhibitors of Health-promoting Behaviors: The Experience of Iranian Women of Reproductive Age

Azam Baheiraei, Mojgan Mirghafourvand<sup>1</sup>, Sakineh Mohammad-Alizadeh Charandabi<sup>1</sup>, Eesa Mohammadi<sup>2</sup>

Department of Reproductive Health, Center for Community-Based Participatory Research, Tehran University of Medical Sciences, Tehran, <sup>1</sup>Department of Midwifery, Tabriz University of Medical Sciences, Tabriz, <sup>2</sup>Nursing Department, Faculty of Medicine, Tarbiat Modares University, Tehran, Iran

### Correspondence to:

Dr. Mojgan Mirghafourvand,  
Department of Midwifery, Tabriz  
University of Medical Sciences, Tabriz, Iran.  
E-mail: mirg1385@yahoo.com

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### ABSTRACT

**Background:** There is scant information on the facilitators and inhibitors of health-promoting behaviors among reproductive-aged Iranian women. This study aims to explore the experience of factors influencing health-promoting behaviors among Iranian women of reproductive age from a qualitative perspective.

**Methods:** This study was performed in Tehran in 2011, over about 8 months. Qualitative methods, specifically in-depth interviews, were used to gather data on 15 women of reproductive age. Data continued to be collected until introduction of new information ceased. The interviews were recorded, transcribed verbatim, and analyzed by conventional content analysis.

**Results:** The reported factors were categorized into four main groups and 12 subgroups: (1) personal barriers (lack of time, school or work duties, lack of preparation or motivation, physical disability); (2) socio-environmental barriers (family responsibilities, environmental pressures, high-costs and financial pressures); (3) personal facilitators (personal interest and motivation, experience of disease); and (4) socio-environmental facilitators (family and social support networks, encouraging and motivating environment, media, and public education).

**Conclusions:** In these women's experience, factors influencing health-promoting behaviors were either facilitators or inhibitors; most were inhibitors. The findings of this study show that, in addition to personal factors, the pursuit of health-promoting behaviors is affected by socio-environmental factors. These results will be useful in designing interventions and plans for women's health promotion that focus on the improvement of their environment and the modification of social factors.

**Keywords:** Experience of reproductive-aged women, facilitators of health-promoting behaviors, inhibitors of health-promoting behaviors, Iran

### INTRODUCTION

Women of reproductive age are defined as women aged between 15 years and 49 years by the World Health Organization.<sup>[1]</sup> Due to

very rapid changes in fertility rate in recent decades in Iran, they are the highest percentage (60%) of the total female population.<sup>[2]</sup> Women have been the main pillar of social development and the main axis of family health, and they have significant roles and duties in the family and the community. Strong mental and physical health is required to implement these roles and duties. Thus, women's health is one of the most important aspects of community development, and it has been identified as a general health priority. Women's health policy addresses all women's health issues across their lifetimes.<sup>[3]</sup> Although women have higher life expectancy than men, they experience more physical insults, in particular, both acute and chronic non-fatal diseases.<sup>[4]</sup> They report poorer health status and associated quality of life.<sup>[5]</sup>

Health-promoting behaviors can propel a community to better health and reduce vulnerability to diseases.<sup>[6]</sup> These behaviors provide a positive approach in life and are a way to enhance health and self-actualization.<sup>[7]</sup> This aspect of these health-promoting behaviors has particular importance because of its potential to prevent the development and progression and reduce the virulence of chronic disease, improve quality of life, and reduce the burden of healthcare on a society.<sup>[8]</sup> Engaging in health-promoting behaviors such as physical activity, proper nutrition patterns, and so on can be effective in reducing women's mortality and morbidity.<sup>[9]</sup> Thus, for the promotion of women's health, it is necessary to consider the factors influencing health-promoting behaviors and create favourable changes in lifestyle by removing barriers and fostering facilitating factors.

Health-promoting behaviors and their association with perceived religious support has been studied in an elderly population in a small study in Yazd, Iran.<sup>[10]</sup> However, no study has been conducted on women of reproductive age. Risky factors related diseases such as physical inactivity and obesity is more prevalent among women than men.<sup>[11,12]</sup> According to a random sample of urban women in Iran, prevalence of overweight, and obesity was 33.2% and 21% respectively.<sup>[12]</sup> Furthermore, health problems such as mental disorders are more frequent in women than in men in Iran. In a mental health survey of a population sample aged 15 years and over, about a fifth of the population under survey (25.9% of

the women and 14.9% of the men) had mental disorders.<sup>[13]</sup> In a study, Iranian women reported significantly poorer health-related quality of life compared to men.<sup>[14]</sup> It has been shown that health promoting behaviors could decrease health problems and improve women's health.<sup>[11]</sup>

The results of quantitative studies have shown that women have less tendency than men to engage in health-promoting behaviors, particularly physical activity.<sup>[15-17]</sup> This shows the importance of identifying the factors, which effect the adoption of health-promoting behaviors. Despite the high importance of health-promoting behaviors in preserving and enhancing health and improving quality of life,<sup>[18]</sup> and vulnerability of women to health problems,<sup>[19]</sup> there has been no investigation (qualitative or quantitative) evaluating the factors effecting the adoption of health-promoting behaviors by women of reproductive age in Iran.

Exploring and describing the facilitators of and barriers to health-promoting behaviors can be effective in different areas of planning for development in women's health. Design and implementation of development programmes in health need both infrastructure and theoretical foundations to be successful, meaning that clarifying views on fundamental concepts such as health promotion matters as much as anything for the success of these efforts. Since quantitative approaches cannot access the depth of experience of the population in question or the details of their thoughts and viewpoints, the selection of a qualitative approach to assess the factors affecting health-promoting behaviors seems preferable. Accordingly, the researchers undertaking the present qualitative study tried especially to find and identify the facilitators of and barriers to health-promoting behaviors experienced by women of reproductive age in the social and cultural context of contemporary Iran.

## METHODS

### Participant selection and data collection

The present qualitative study is a content analysis aiming to explore the factors effecting health-promoting behaviors including nutrition, physical activity, spirituality, stress management, personal responsibility, social interactions and safe

and healthy recreations<sup>[20]</sup> in women of reproductive age; this method is able to clarify individuals' real understanding of their daily life phenomena.<sup>[21]</sup> This study was performed in Tehran in 2011, over about 8 months. Tehran is the biggest and most populous city of Iran, with 12 million inhabitants, including 3.8 million women of reproductive age.<sup>[2]</sup> The present study is the qualitative part of a mixed-method study using a sequential explanatory design, the Protocol of which has been published by BMC Public Health Journal.<sup>[22]</sup> Based on the mean score for health-promoting behaviors in the quantitative part of the study, the women whose scores were in the 10<sup>th</sup> and the 90<sup>th</sup> percentile (the highest and lowest 10%) were selected for interviews. The sample was selected using the purposive extreme case method. Extreme or deviant case sampling is learning from highly unusual manifestations of the phenomenon of interest, such as outstanding success/notable failures, top of the class/dropouts, exotic events and crises.<sup>[23]</sup> Participants who received high scores of health-promoting behaviors explored more than the facilitator's factors of health-promoting behaviors, whereas participants who received low scores explored more the inhibitor's factors of health-promoting behaviors.

The subjects' demographic data are shown in Table 1. Sampling was continued until data saturation was reached, which happened with the 12<sup>th</sup> interview; a total of 15 women participated in the interviews. Each interview lasted for about 1 h. The correspondent author conducted individual, in-depth, semi-structured interviews with open questions, which are better able to clarify individuals' understanding and experiences.<sup>[24]</sup> The participants were first asked open general questions: "What do you do to preserve and promote your health?" and "Which factors influence these actions and behaviors in you?" Then, they were asked a focused question that mentioned effective factors: "How do these factors influence your health?" Continuing the interview, according to the responses, in-depth exploratory questions such as "What do you mean?" "Why?" "Could you explain further?" and "Would you please give an example to help us better understand your meaning?" were presented in order to illuminate the depth of the women's experience. During the interview, the author recorded on a special sheet non-verbal data such as the

**Table 1:** Socio-demographic characteristics of participants

Characteristic	Number	Percent
Age (in years)		
15-24	5	33.3
25-34	6	40.0
35 or above	4	26.7
Education		
Elementary and secondary school	2	13.3
Diploma	4	26.7
University	9	60.0
Marital status		
Single	10	66.7
Married	5	33.3
Occupation		
Housewife	6	40.0
Employed	4	26.7
Student	5	33.3
Total	15	100

participant's tone, facial expressions, and position, as well as the time and the location of the interview. The study environment, appropriately for that of qualitative studies, was real and natural; therefore, the interviews were conducted wherever access to the participants and an appropriate situation were available, such as in a park, or at home, or school.

### Data analysis

MAXQDA 10 (Developer: VERBI GmbH; Initial release: 1995; Stable release: 10(R180811) August 18, 2011) was used for data management, and after each interview, the data were analysed using a conventional content-analysis approach. The advantage of a conventional approach in qualitative content analysis, as in the present study, is the ability to gather data directly from study participants without imposing pre-conceived categories and previous theoretical perspectives. In this method, knowledge generated from content analysis is based on the unique views of the participants and is rooted in text data.<sup>[25]</sup> Interviews were recorded on tapes, and non-verbal communicative acts like expressions were written down. The data were transcribed verbatim and analyzed to highlight the participant's experiences. The interviews were read and reread multiple times. Units of meaning related to health-promoting behaviors were identified and coded based on the participants' explanations. The codes were re-evaluated several times and classified into main categories and subcategories on the basis

of differences and similarities. There was constant comparison within and across categories and across interviews, where each code or category was checked against the rest of the data to establish and refine categories that reflected the nuances of the data.<sup>[23]</sup> An example of the content analysis and the derivation of the codes and categories are shown in Table 2.

### Ethics

This study was supported by the Ethical Committee of the Tehran University of Medical Sciences. The study's objective and procedure were fully described for the participants, and written informed consent was obtained.

### Trustworthiness

To increase the trustworthiness of the data, a good relationship was established with the participants and adequate time was allocated for data collection. Member check and peer check were used to increase trustworthiness of the data. Interview transcripts and the derived codes from each of the interviews were presented to the participants and their views about the nature and the meaning of the codes were asked; if they expressed opposing views, their corrective comments were applied. In addition to the study team, the text of the interviews

was presented to some of the researchers who were not involved in the study as external observers and they were asked to check the accuracy of the coding process. Furthermore, conformability, credibility, and transferability of data were established using triangulation method with maximum variance sampling in which, there were interviews with people of varying age, marital status, job, and education. Other factors which increased the credibility of the research included spending sufficient time to conduct the study through open discussion and developing close relation with participants who felt at ease to express their hidden worries and find emotional some relief.<sup>[26]</sup>

### Findings

Using content analysis of interview data and field notes, 116 codes and 12 sub-categories were extracted and classified into four main categories: Personal barriers, socio-environmental barriers, personal facilitators, and socio-environmental facilitators [Table 3].

### Personal barriers

Personal barriers are personal factors preventing participants from engaging in health-promoting behaviors. This category is extracted from these sub-categories: Lack of time, school or work duties,

**Table 2:** An example of the analysis process

Meaning unit	Code	Sub-category	Main category
When I want to think about my future, when I think about anything that will make me successful, I say that I have to have a healthy body and mind and if I want to have these I have to have healthy nutrition	Hope for success and a better future is a factor in healthy behaviour	Personal interest and motivation	Personal facilitators
I am a factor. I wanted to be a hero on the national team; this means that I wanted to play on our national volleyball team	A personal motivation to play on the national team is a factor in healthy behaviour		
I love the spirit of cooperation. I think if women experience this spirit they will not achieve a bad thing	Personal interest and motivation is a factor in helping others		
Women want to be mothers in the future; I want to be a healthy mother for my baby and raise a healthy baby	Becoming a mother and having a healthy baby is a motivator for good hygiene and getting medical checkups		
If a mother is physically and mentally healthy, she can better train her child. Maternal health may prevent abnormalities	Preservation of health for healthier children is a motivator for healthy behaviour		
I love martial arts. Taekwondo classes were organized in my father's workplace when I was in high school. I participated in those classes and liked them. I hope to continue	Personal interest is a factor in taking part in taekwondo		

**Table 3:** Classification of main categories and subcategories

Main categories	Subcategories
Personal barriers	Lack of time
	School and work duties
	Lack of preparation and motivation
	Physical disability
Socio-environmental barriers	Family responsibilities
	Environmental pressure
	High costs and financial pressure
Personal facilitators	Personal interests and motivation
	Experience of disease
Socio-environmental facilitators	Family and social-support networks
	Encouraging and motivating environment
	Media and public education

lack of preparation and motivation, and physical disability.

Participants especially, those were student or employed frequently mentioned lack of time as a barrier to health-promoting behaviors. Participants stated that lack of time prevented them from preparing meals in the house, caused them to omit meals, or left them without time for exercise. For example, two women stated:

*If we don't have time to prepare food, we will buy it from restaurants [p. 3].*

*Sometimes, I don't have enough time to eat lunch, especially in the first months of my work, when I was inexperienced and stressed [p. 4].*

School or work duties were another personal barrier preventing women from engaging in health-promoting behaviors. A number of participants indicated tiredness and the stresses of their jobs as barriers to health-promoting behaviors. For example, two employed participants made the following statements:

*In the first year of my job, I had much stress and did not have a good appetite, and sometimes even had a lack of sleep. I didn't have time for family [p. 4].*

*A major barrier for me is that I am at work until 5 PM every day and become tired, so I do not exercise [p. 5].*

Some respondents who were students said that education had taken most of their spare time, so that they had no time to engage in healthy activities. This is reflected in these statements:

*At present, I am working on my final thesis, and I am busy at my job, so I could not continue my exercise classes [p. 5].*

*Because of my busy university schedule, sometimes, I cannot cook, for example. But my education is only a barrier at exam time [p. 14].*

Lack of preparation and motivation was another personal barrier preventing women from engaging in health-promoting behaviors. This barrier frequently reported by participants that were single and young. One personal characteristic indicated by participants as a barrier to health-promoting behaviors was indolence. For example, a respondent stated:

*Honestly, I am lazy, and there is nothing more. My body needs exercise due to hypercholesterolemia, but I am too lazy to do it [p. 6].*

Lack of interest was another factor stated by the women to be a barrier to health-promoting behaviors; for example, a participant said:

*I am not interested in exercise [p. 4].*

Lack of appetite was also indicated as a factor militating against health-promoting behaviors. For example, a participant stated:

*I lost my appetite. If I drink a glass of milk in the early morning, I will not feel hungry until afternoon. I may feel weakness for 10-15 min, but after that I do not like to eat, and feel that I have just eaten a huge meal [p. 11].*

Physical complaints were reported as another barrier to health-promoting behaviors by midlife women. Two participants stated:

*For example, I had a corn on my foot due to too much walking, and about a month ago I had a minor surgery to remove it [p. 2].*

*Sometimes, I have severe pain in my foot and head and have to take painkillers. I cannot exercise at these times [p. 5].*

One woman identified menstrual periods and related fatigue or physical discomfort as a barrier to exercise. She said:

*Sometimes I am fatigued; particularly during my menstrual period, I am physically fatigued and would like to stay at home [p. 2].*

### Socio-environmental barriers

The socio-environmental barriers are social, economic and environmental factors that participants identify as reasons why engaging health-promoting behaviors are difficult. This category was extracted from these sub-categories: Family responsibilities, environmental pressure, and high costs and financial pressures.

Elements of family responsibilities included family problems and diseases, spouse disagreement, childcare, and family disputes, which prevented women from engaging in health-promoting behaviors. This barrier was frequently stated by married participants.

Social and environmental factors are important determinants of health; furthermore, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. In this regard, one respondent mentioned family problems as a barrier to mental health:

*Family problems make the most powerful people angry and sad and cause them to lose their mental health. My dad's illness has made me angry sometimes; problems have occurred for my family and loved ones [p. 3].*

Another participant stated, referring to her spouse as a barrier to her relationships with her friends:

*I do not have any friends because all my friends used to come round and my husband did not like these friendships. I left my friends in the 1<sup>st</sup> years after marriage [p. 6].*

Another participant identified maternal responsibility and having young children to be a barrier to travel:

*My daughter was very young a few years ago. I am very sensitive in all things. For example, I am not like others who bring neonates less than 40 days old into the street and everywhere. I am very sensitive, and I did not go anywhere for 2 years [p. 6].*

Another participant indicated family disputes and lack of attention to nutrition by her mother to be a barrier to healthy nutrition, stating:

*We don't have a faithful family, and my mother is tired of life. She works every day and doesn't care about us and doesn't make food for her family. The cause is the family environment. My father is not a good man. I think he has psychological disorders [p. 8].*

Another socio-environmental barrier extracted from the analysis of women's experiences was environmental pressure which prevents them from engaging in health-promoting behaviors. Weather conditions were one environmental barrier to health-promoting behaviors mentioned. One participant said:

*One barrier to exercise is weather, and in Tehran the weather is so bad people prefer to stay at home. Tehran does not have good weather that attracts people to walk, exercise, or run [p. 5].*

One respondent reported sociocultural expectations to be a barrier to riding bicycles or skating. She stated:

*I like riding bicycles and skating, but I cannot do that in the street because of the culture in my community. I prefer to exercise in sport halls because of the culture, so I cannot ride bicycles [p. 9].*

Long distances were another environmental barrier to health-promoting behaviors, as reflected in this statement:

*I like yoga, but I have not found an appropriate place near my home. There are many classes, but they are so far. I want to go to yoga to relax, but when I come back in the traffic, all relaxation will be lost. I have not found any appropriate club, but I like yoga [p. 9].*

Poor pool hygiene was stated as a barrier to swimming by some participants. For example, a woman said:

*I like swimming, but I do not go swimming because the pools are not clean [p. 9].*

An employed woman indicated inappropriate club schedules to be a barrier, saying:

*It makes me sad that women are working in society the same as men but when you are going to clubs they say that women's hours are from morning to 6 pm and from 6 pm to 11 pm is specified for men. What should employed women do? A problem in going to clubs or pools or meditation classes is that these classes are days-only for women and employed women cannot participate in them [p. 5].*

High costs and financial pressures were other socio-environmental barriers reported by most participants to discourage health-promoting behaviors, particularly exercising. For example, two participants said:

*I like yoga but that is expensive [p. 9].*

*The clubs' prices have risen and this is a barrier to their use [p. 5].*

### Personal facilitators

The next main category is personal facilitators: Personal factors which facilitate health-promoting behaviors. This category is extracted from personal interests and motivation and experience of disease.

The participants identified personal interests and motivation as the most common, most important factor facilitating health-promoting behaviors. The women frequently spoke about their interests and personal motivation as a facilitating factor

for health-promoting behaviors. For example, two participants said:

*When I want to think about my future, when I think about anything that makes me successful, I say that I have to have a healthy body and mind, and if I want to have these I have to have healthy nutrition [p. 1].*

*I am a factor. I wanted to be a hero on the national team; this means that I wanted to play on our national volleyball team [p. 2].*

Maternity was a personal motivator for health-promoting behaviors. Being a healthy mother and having a healthy baby motivated the women to engage in health-promoting behaviors. One participant stated:

*Women want to be mothers in the future; I want to be a healthy mother for my baby and raise a healthy baby [p. 14].*

Experience of disease was another personal facilitator encouraging women to engage in health-promoting behaviors. Some participants decided to engage in these behaviors following the experience of disease by themselves or others, in order to decrease the risk of disease or recurrence of disease. They felt vulnerable and wanted to promote their health. A woman who was a lupus patient said:

*I exercise to have a better emotional state and not be sad about my life, and so my illness does not hurt me [p. 5].*

One respondent mentioned medical check-ups as a reason, as follows:

*Despite good hygiene, I have had a gynaecological disease that was not due to poor hygiene, I do not know what the cause was. After that I decided to pay more attention to my health and have more doctor visits and check-ups [p. 14].*

### Socio-environmental facilitators

Socio-environmental facilitators include familial, social and environmental factors which facilitate health-promoting behaviors. This category has been extracted from family and social support, encouraging and motivating environment, and the effects of media and public education.

Family and social support has been indicated to be a factor effecting health-promoting behaviors. The roles of spouse and family in level of health-promoting behaviors were a highly personal factor, and participants emphasized the characteristics and support of their families and

spouses. A woman identified her husband as a supporter of health-promoting behaviors:

*My husband takes care of me and my health. He worries even more than me. He always encourages me to exercise, and even comes with me to walk [p. 6].*

Another socio-environmental facilitator was encouraging and motivating environment, which encourages women to engage in health-promoting behaviors. For example, a participant reported that religious belief and living environment affect exercise:

*I was an athlete from adolescence because there was no other recreation in our small city and our family's religious belief propels us to healthy activities. Particularly important was that my mother was a teacher and always said that exercise is the best activity for teenagers [p. 2].*

Another participant stated that sport facilities encourage exercise:

*When I go to these spaces and see the people who are exercising, I would be encouraged to exercise, if I was alone, in this "sport group" [p. 5].*

One respondent mentioned good weather as a facilitator of healthy nutrition:

*When I go to a place with good weather, I eat more fruits and healthy foods. In Tehran, the weather is not good and I do not have a good appetite. But when I go to the north or a small city, the weather increases my appetite [p. 5].*

Media and public education were other social facilitators identified by educated women. For example, two respondents stated:

*I use the Internet to get information on healthy nutrition and diet foods. I try to study in different areas [p. 15].*

*Media, magazines, and newspapers have informed me about food's harms; for example, they said that fast foods are not appropriate nutrition [p. 4].*

## DISCUSSION

The present study is the first study in Iran to address women's experiences regarding facilitators and inhibitors of health-promoting behaviors. Barriers to healthy behaviour are known to be important predictors of behaviour change.<sup>[27]</sup> There is evidence that women face a range of barriers that prevent them from engaging in healthy lifestyle activities. There is substantial evidence from research conducted over a number of decades that "perceived barriers" are a significant predictor of health-promoting behaviour.<sup>[28]</sup>

Johnson and Nies (2005) have reported that the barriers of health-promoting behaviors for African Americans were cost, lack of time, and lack of motivation, which is consistent with the findings of the present study.<sup>[9]</sup> Timmerman (2007) has divided barriers of health-promoting behaviors among underserved women into three groups: Internal barriers, including lack of time and motivation, unawareness, enjoyment of the “bad” behaviors, inconvenience, tiredness, and lack of conviction to modify their behaviour; interpersonal barriers, including the care role women often play in the family, interpersonal relationships that encourage unhealthy behaviors, lack of social support, and encouragement to take part in unhealthy behaviors at family celebrations; and environmental barriers, including high prices and lack of access to transportation to buy healthier food.<sup>[27]</sup> Some of these factors were similar to the findings of the present study, however, the underserved women have more personal and interpersonal barriers to modifying their life-styles. Therefore, we can say that personal characteristics, experiences, and culture probably all influence women’s perceptions of their ability to alter their health behavior. Poverty, racism, immigration, inadequate housing, violence, and lack of access to healthcare for underserved women may result in stress, low self-esteem, and depression; thus, these women may have more personal and inter-personal barriers to health than do other women.<sup>[27]</sup>

Nuss *et al.* (2004) reported lack of time, university responsibilities, and cost as barriers to healthy lifestyles in male and female medical students.<sup>[29]</sup> Based on the findings of the present study, these factors have been indicated by the participants to be effective in fostering health-promoting behaviors. Additionally, in another qualitative study, lack of time because of family responsibilities and work commitments and the high cost of healthy food were reported as barriers to healthy nutrition in women.<sup>[30]</sup>

High costs and lack of time are reported as barriers in all previous studies as well as the present study. Based on the statements of the participants regarding Iranian culture, in which women are responsible for housekeeping, upbringing of children, shopping, and similar tasks, it is clear that they do not have enough time to pursue health-promoting behaviors. The inhibitory factor

of environmental pressure is uniquely reported in this study, and the other studies conducted in this field have not mentioned it. Environmental pressure is something that could affect the health. All these “global environmental changes” are due to increased pressure on the environment, of which the main drivers are population growth and an increase in per capita resource use and waste production. Climate change and other changes to the atmosphere, land use changes and soil degradation, freshwater depletion and contamination, and biodiversity loss are four important categories of global environmental change, each of which form potential, although partly or largely unknown, threats to human health.<sup>[31]</sup>

The women participating in the present study declared that Tehran’s air pollution, inappropriate schedules at sports facilities, especially for employed women, and social and cultural conditions were barriers to health-promoting behaviors such as exercise. These factors have not been reported by previous studies. Issues such as immigration to metropolises and rapid urbanization, rapid growth of education among women and related duties, women’s employment outside the home, lack of sharing of responsibility by men in housework and childrearing, and lack of adequate social-support systems such as good kinder-gardens and appropriate sport facilities could be the roots of the barriers to health-promoting behaviors in Iranian women.

Barriers such as lack of time, school or work duties was more problematic for employed or students’ participants than for other participants. Furthermore, family responsibilities barrier was stated more by married participant. Barriers to health-promoting behaviors are different for each individual. Individual characteristics, personal experiences, and cultural background influence what is perceived as barrier along with its magnitude.<sup>[27]</sup>

To provide health-promotion interventions that have a chance of eliminating health disparities, barriers must be addressed.<sup>[28]</sup> Comprehensive plans for overcoming different types of barriers need to be an integral component of health-promotion interventions. Providing time management educational programs for employed women in workplace and students in universities, providing social support and health-promotion programmes,



including a focus on physical activity and proper nutrition in workplaces and universities, promoting and improving men's positive impact on enhancement of women's health through educating men about health promoting behaviors, particularly promoting social support for women and encouraging men to concern themselves with their wives' health, encouraging and motivating women to adopt health-promoting behaviors, providing appropriate exercise programmes for women with physical disabilities, making structural changes in the environment, such as the construction of sports facilities with appropriate costs and schedules in convenient places for all women (including employed women), and instituting affordable classes in stress-management techniques such as yoga and meditation could improve women's health.

Personal interests and motivation and experience of disease were facilitators of health-promoting behaviors among women of reproductive age. Health-care workers are in a unique position to effect improvement in health behaviors by spreading information, teaching skills, and reinforcing motivation.<sup>[32]</sup> Previous studies have also shown that people who have experienced chronic diseases are more likely to adopt healthier behaviors in order to prevent other chronic diseases.<sup>[33]</sup> This finding shows that women of reproductive age have understood the importance of these behaviors and their effect on health.

Family and social support network, motivating and encouraging environment, and the media and public education were identified by the participants as social and environmental facilitators of health-promoting behaviors. The importance of social support for individual empowerment with regard to health-promoting behaviors has been reported by all previous investigations,<sup>[34]</sup> and the influence of social support on health-promoting behaviors has been shown in many studies,<sup>[35-38]</sup> so it is clear that social and family support should be preserved and reinforced.

Training in health behaviors through media was a socio-environmental facilitator mentioned by the respondents. In one qualitative study, the Internet, mass media (e.g., television), and health-care providers have been reported as sources of information for health promotion.<sup>[39]</sup> Pullen *et al.* (2001) showed that repetition of health

messages from different sources give rural women incentives to start and continue health-promoting behaviors.<sup>[40]</sup> What is noteworthy is that some participants identified the Internet, in addition to traditional media, as a place to get information about health promotion. Recently, the Internet has become an important source of health information.<sup>[41]</sup> However, according to the latest statistics, 26.5% of the 18.8 million Iranian households use the Internet at home or in other places.<sup>[42]</sup> Based on this finding, women should be empowered to use the Internet in a systematic and correct way to search for health information. Appropriate websites promoting healthy behaviors should be developed and introduced to the general population.

According to the findings of this study, school or work duties was most mentioned barrier and family and social support networks and experience of disease were most mentioned facilitator by participants. Thus, these effective factors on health-promoting behaviors should be considered and addressed by health-care leaders.

Similar to other qualitative studies, the findings of the present study have low potential for generalization, especially because the present study was conducted on a limited number of women of reproductive age in Tehran. Moreover, most of the participants had a diploma or a university education; as a result, the findings should be cautiously generalized to other women.

## CONCLUSIONS

The findings of the present study suggest that the factors such as lack of time, school or work duties, lack of preparation or motivation, physical disability, family responsibilities, environmental pressures, high costs and financial pressures prohibit women from addressing to health-promoting behaviors. On the contrary, the experience factors such as personal interest and motivation, experience of disease, family and social support networks, encouraging and motivating environment and media and public education reinforce health-promoting behaviors in women; in fact, health-promoting behaviors are affected by society, environment, and community, as well as personal factors. So, in the effort to promote healthy behaviors in women,

we should adopt a holistic approach and consider behaviour as a consequence of the interaction between individual characteristics (biological and psychological) and environmental factors (social factors and facilities or physical environment). The results of the present study could be used to design interventions and plans to promote women's health, particularly by eliminating barriers and preserving and enhancing facilitators of health-promoting behaviors.

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