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Original Article

Perception of the City Outskirts Women on the Barriers to Healthy Eating: A Qualitative Study

Mojtaba Hajipoor[1], Effat Saghi[2], Omalbanin Hajhoseini[2], Sajedeh Esbouchin[3], Mohammad Hajzadeh[2], Mohsen Zakerian[2], Ali Taghipour[4], Fatemeh Roudi[2*]

[1]Varastegan Institute for Medical Sciences, Mashhad, Iran
[2]Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
[3]Faculty of Engineering Science, Mashhad Unit, Islamic Azad University, Mashhad, Iran
[4]Health Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

*Corresponding Author: Fatemeh Roudi, Email: Roudif@mums.ac.ir

Abstract

Background: A crucial prerequisite for managing non-communicable diseases (NCDs) and their risk factors is community experiences and perceptions about the challenges of unhealthy eating. On the other hand, there is no literature on nutritional literacy in the city›s outskirts, which are the vulnerable parts of society. Thus, this study aimed to examine the barriers to healthy nutrition for resident women in low-income areas of Mashhad.

Methods: This qualitative study used 28 women as a representative sample of the residents of marginalized areas of Mashhad in Iran. Data collection was conducted using interviews between 2021 and 2022. Data analysis was done using a content analysis approach (open and selective coding).

Results: The most critical obstacles related to healthy eating were listed as follows: (a) low income, high expenses or expensive, (b) incorrect habits or lack of awareness, (c) food preferences, (d) lack of feeling of necessity and insufficient motivation, (e) lack of convenient access in the area, and (f) illness or physical condition. However, participants stated economic, social, and cultural issues as the main barriers to choosing healthy food among residents of low-income areas.

Conclusion: This study identified the main barriers to a healthy diet in marginal areas. Overcoming these obstacles can be a strategy for local and national planning to deal with NCDs.

Keywords: Barriers, Healthy nutrition, Nutritional literacy, Qualitative study

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Introduction

Nutritional transition in Iran is rapidly occurring due to rapid urbanization and changes in fertility and mortality patterns, and food insecurity exists among 20% of the population (1). Residents of low-income areas face several challenges in providing food baskets. The high cost of food preparation and its low quality are among the challenges in these fields (2). Studies have shown that unhealthy diets increase the risk of death from non-communicable diseases (NCD), including coronary heart disease, various cancers, diabetes mellitus, and various bone and joint diseases (3). NCDs are responsible for the death of 41 million people annually worldwide. Also, the leading cause of death in Iran is related to these diseases (4,5).

According to studies, lifestyle changes such as increased physical activity and eating habits are the most cost-effective and feasible approaches to controlling NCDs (6,7). Improper eating habits, such as eating unhealthy foods, skipping meals, and lack of proper eating patterns, are associated with nutritional problems (8,9). Therefore, awareness of appropriate dietary choices is a factor in maintaining a healthful diet (10,11). Also, when individuals know what they should consume and the consequences for their health, they will change their diet intermittently (12).

Various studies addressed the awareness of the consequences of food intake and the extensive range of consumer behaviors and characteristics related to food, consisting of attitudes, perceptions, and choices (13). Diet choices are determined by people's knowledge and understanding of nutrition. Nutritional awareness is directly related to diet quality and socio-economic factors such as education and income influencing food choices (14).

Most of the immigrant population of Mashhad lives on the outskirts of the city, and some have disabilities. Due to a lack of proper nutrition and insurance culture,

this population is usually among the high-risk groups in society (15). Since women are essential in preparing food for their households (16) and are a prerequisite for modifying the food pattern, we must understand their experiences and perceptions about the challenges of not eating healthily. We also believe that if these people have enough nutritional literacy, many diseases can be prevented in the future. On the one hand, policymakers are very interested in dietary interventions in the city's outskirts to improve the nutritional status. On the other hand, there is no literature on these areas' nutritional status and problems to decide on these issues. Therefore, we conducted this qualitative study to investigate the challenges related to nutrition knowledge in marginalized women of Mashhad city.

Methods

Participants and data collection

This qualitative study was conducted from July 22, 2021, to March 20, 2022, in Mashhad, Iran. The target population was women living on the city's outskirts. Two women (liaisons related to NGOs and knowledgeable about local women) with good communication skills screened the samples. The participants were selected purposefully according to the inclusion criteria. These criteria were female gender (due to more acquaintance with the residents), living in the same area, being known as a social activist in the neighborhood, having high and good public relations with the people, and their willingness to participate.

Their experiences. One hundred and twenty residents of the area, as the initial sample, were screened to participate in the research (using an easy access method). Eighty-six people entered the first stage (based on their level of education). Then, forty people were selected for the study so the rest could enter if necessary (people who met the other criteria we mentioned). Six left at the beginning due to unwillingness, and one did not continue in the middle of the interview. The rest of the participants were included in the study. Demographic characteristics of the participants are presented in Table 1.

Data was collected through face-to-face, in-depth interviews in a private room at the NGO centers on the outskirts. Women were interviewed via a semi-structured interview by the first author of this article (a male BSc student in nutrition sciences with experience in conducting interviews) without anyone else present. The interview was conducted once for each person and lasted approximately 45 minutes. Upon permission from the participants, the interviews were recorded by a voice recorder, and the interviewer took notes during and at the end of the interview, which were then transcribed verbatim. Data collection was continued until data saturation (we reached theoretical saturation in the 21st person). The interviews started with general questions, such as: "Is the nutrition in the area suitable? Yes or no? Why?" "What are the limitations or strengths?" In this manner, the respondents could fully explain their opinions, impressions, and personal experiences. Then, the interviews were continued using a guide to clarify and extract supplementary information. The guide was designed using a pilot interview of women (two residents of the area and eight activists of NGOs on the city outskirts) by the corresponding author and two NGO liaisons before the primary interviews. The guide's modified version was reviewed and approved in a group meeting involving all authors. The pilot participants were not included in the study. This guide was included: 1. Healthy eating, 2. Impact of healthy eating on lifestyle, 3. Food security, 4. Eating behaviors, 5. Dietary patterns, and 6. Food pyramids. For each of the items, the participant's opinions were collected. Then, they were asked to state the possible reasons for the challenges and problems related to the lack of proper nutrition in the area. Finally, by participant feedback from the results extracted from the data, the findings were rechecked to ensure the comments and interpretations' correctness and the data coding. It should also be mentioned that the interviewer explained the objectives and process to the participants.

Table 1. Demographic characteristics of women who participated in the study (n = 28)

	Number	Percent
Education		
Primary	19	70.4
Diploma	7	25.9
Higher	1	3.7
Marital Status		
Single	0	0
Married	21	77.8
Divorced/widowed	4	14.8
Missing Data	2	7.4
Occupation		
Employee	0	0
Housewife/Unemployed	23	85.2
Volunteer worker	2	7.4
Missing data	2	7.4

Data analysis

In this qualitative study, we utilized the content analysis approach for data collection and analysis, as no similar studies were available. Content analysis is a qualitative research method used to describe phenomena conceptually and analyze them systematically (it aims to provide new insights and represent related facts) (17).

The data were analyzed manually using comparative analysis. Open and selective coding was used for the data. Two authors (the first author and a skilled and

experienced person in community nutrition) converted the data into codes by examining the transcripts during and at the end of the interview. Similar codes were chunked into the same categories, and coding differences were addressed through discussions.

Data trustworthiness

In our study, long-term interaction with participants via interviews was applied for conformability. This led to participants trusting the interview environment and deepened their understanding of the situation. At first, the purpose of the study, choice of context, characteristics of the participants, and data collection strategy were discussed. The selection of participants with multiple reports helped us clarify the purpose of the research. Furthermore, two faculty members rechecked the interviews to confirm the extracted codes.

Results

This study was conducted by face-to-face, semi-structured, in-depth interviews with 22 women living on the city outskirts aged 31 to 58. Data analysis revealed six main categories, twenty-eight subcategories, and the causes of each subgroup (Tables 2, 3, and 4). Six primary categories were 1) Low income, high expenses or expensive, 2) Incorrect habits or lack of awareness, 3) Food preferences, 4) Lack of feeling of necessity and insufficient motivation, 5) Lack of convenient access in the area, and 6) Illness or physical condition. Moreover, primary categories were explained separately as follows:

Group 1: Low income, high expenses, or high cost

The participants mentioned that not having enough income, high expenses, or high prices are among the main reasons for investigating the challenges related to nutritional literacy in residents of low-income areas of Mashhad. The instability of Iran's economic situation in recent years, which is caused by sanctions, has led to the increasing price of food and medicine, unemployment, and insufficient income. These conditions have put pressure on all sections of society, but poor people have suffered the most from these conditions, which has led to wrong decisions in choosing food, and instead of choosing rich food, cheap food is prepared for the family. For example, some of the quotes were like this: "I am a laborer with an unstable income, so we can't afford meat or dairy every day. As a result, we mostly consume plain rice or bread" or "We have only one meal during the day, which is mostly without meat. We don't have money to buy it".

Table 2. Primary barriers and related sub-categories in a healthy nutrition

Primary barriers	Sub-categories	Sub-categories causes
Low income, high expenses, or expensive	Paying for drugs	Drug costs
	Spouse's addiction	
	Not working	
	Husband not working	
	Paralysis and not having a guardian	
	Worry about spending	
	No or consuming less meat	High prices
	No or little consumption of vegetables	High prices
	No or low consumption of milk	High prices
Food preferences	Excessive consumption of harmful foods	Nervous problems, or stubbornness
	Not eating a single meal.	

Group 2: Incorrect habits or lack of awareness

Low literacy levels, lack of sufficient nutrition information, and lack of proper education have led to wrong nutritional decisions. When the mother does not have the correct information, she cannot guide her family to choose healthy foods, which leads to incorrect eating habits in all family members. Therefore, proper education and awareness about food can greatly benefit families.

Group 3: Food preferences

Some of the participants pointed out that the consumption of unhealthy food instead of healthy foods or incorrect food preferences, in general, can be due to various reasons, including false advertising, lack of sufficient information, easy access to unwholesome foods than healthy foods, better taste for children, and their stubbornness.

Group 4: Lack of necessity feeling and insufficient motivation

The participants mentioned that not knowing the importance of a proper diet and not leaving enough time for this aspect of life is another reason for choosing the wrong diet. It usually takes more time to prepare healthy foods than unhealthy foods, so people prefer to use unhealthy foods to save time.

Group 5: Lack of convenient access in the area

This study was conducted in the suburbs of Mashhad where access to food may be difficult, and this could explain the participants' wrong nutritional choices. Also, the fear of diseases transmitted through food was another reason for these families' refusal to prepare good food.

Group 6: Diseases or physical conditions

Some of the participants had digestive problems (lactose intolerance, which leads to not consuming milk) and dental problems (insufficient consumption of vegetables), which was one of the most important reasons for not consuming healthy food in this subgroup. Undoubtedly, this problem can be solved with proper education, such as consuming other dairy products if you are lactose

Table 3. Primary barriers and related sub-categories in a healthy nutrition

Primary barriers	Sub-categories	Sub-categories causes
Incorrect habits or lack of awareness	No consumption of breakfast	Children's unwillingness
		Children going to school.
		Inattention and lack of habit
		Stubbornness of children
		Sleeping late at night
	Not being able to buy nutrients	The importance of buying clothes instead of preparing wholesome food
	Consuming meat-containing foods only for guests	To save credit
	Not eating or skipping meals on time	
	Lack of nutrition awareness	
	No or little consumption of vegetables	The fear of spoilage
		Lack of interest
	No or low consumption of milk	Superstitions (wife's belief that they pour sodium hypochlorite into the milk)
		Traditional medicine orders (because the person is a cool temper try to eat less
		Lack of interest
		The fear of wasting milk
Not feeling the need and not having enough motivation	Not being able to buy nutrients	Being busy at work and not having enough time to buy
	Not eating lunch	Being busy at work
	No or low consumption of enough vegetables	Lack of preparation (due to busy work)
		Lack of patience to clean vegetables
		Lack of patience to prepare
	No or little consumption of fruits	Laziness and boredom

Table 4. Primary barriers, and related sub-categories in a healthy nutrition

Primary barriers	Sub-categories	Sub-categories causes
The lack of convenient access in the region	No or little consumption of meat	The lack of meat in the area
	No or low consumption of vegetables	The lack
		The lack of supply
	No or little consumption of milk	Fear of disease in local milk
		Shortage
Diseases or physical conditions	No or little consumption of vegetables	Digestive problems
	No or low consumption of milk	Digestive problems
		Depression
	No or little consumption of fruit	Tooth problems

intolerant or vegetables that are cooked and grated if you have dental problems.

Discussion

The present study aimed to investigate the challenges related to the nutrition knowledge of women living in low-income areas of Mashhad. Economic, social, and cultural issues were the main obstacles to choosing healthy food. Women also reported problems with access to healthy foods and the food preferences of their family members.

The results of our study demonstrated that low income and economic problems are the fundamental factors that can affect the food choices of low-income Iranian families. The high cost of healthy foods and the relatively low cost of high-calorie fast foods and snacks have made these foods more accessible for low-income people (1). Previous studies have also stated that low income and high cost are barriers to adhering to a healthy diet (18). In recent years, due to the sanctions and economic problems, food prices in Iran have increased significantly (1). Although this issue is the main factor, it is not the only reason. Different factors also affect this issue. The lack of time to buy and prepare healthy food is significant, especially for working mothers. This has been reported in several studies similar to ours (19-22). In contrast to our findings, a study reported that among Europeans, 'lengthy preparation' was not important as a barrier, and the main perceived barriers were associated with time, including busy 'lifestyle' and 'irregular work hours'. These contradictory results may be because limited time will be more important for some populations than others; for instance, in the European population, it was shown that highly educated and younger subjects reported food preparation more frequently as a barrier to a healthy diet (23).

Misconceptions and superstitions about food or improper storage are two other critical factors in choosing unhealthy food, and the results of other studies align with our findings (24). Studies in different groups

stated that there is a positive relationship between a person's knowledge and their food choices (25,26). There are several superstitions according to religion, personal experience, legends, and old stories in the world. Among developing nations, social myths encompass traditional practices for the treatment of diseases, sham referrals, misconceptions of religion, and food myths (27). On the other hand, other studies stated that having sufficient knowledge does not necessarily end with the correct food choice (25,28,29). Various factors (food preferences, bad habits, and disease) affect food choices (30).

Children's food preferences considerably impact the family's food patterns. Choosing based on advertising, taste, and packaging of products over food value is very common among children and adolescents (31,32). Manouchehri et al. showed that parents' recommendations and family food patterns affected children in primary school. In other words, older children's food intakes barely reflect parental choices. Also, this study reported that older children make more independent food choices than younger children based on their knowledge (33).

Since this study was qualitative, its findings indicate a deep understanding of barriers to healthy eating among low-income Iranian families, findings that could not be achieved in quantitative studies. Diversity in sampling was one of the advantages of the present study. However, the participants in this study were residents of the marginal areas of Mashhad. Therefore, our findings do not reflect barriers to healthy eating in rural and urban communities. Additional studies in these areas are recommended.

Conclusion

The present study shows the barriers to choosing healthy food in low-income and marginalized families. Determining subsidies for beneficial food and more education to increase knowledge in the marginal areas of large cities seems worthwhile. Moreover, the results of this survey can help the country's economic planning and future policies.

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Authors' Contribution

Conceptualization: Fatemeh Roudi, Mohsen Zakerian.
Data curation: Mojtaba Hajipoor, Sajedeh Esbouchin, Mohammad Hajzadeh, Omalbanin Hajhoseini.
Formal analysis: Effat Saghi, Fatemeh Roudi, Omalbanin Hajhoseini.
Funding acquisition: Mohsen Zakerian, Mohammad Hajzadeh.
Methodology: Ali Taghipour.
Supervision: Fatemeh Roudi, Ali Taghipour.
Writing–original draft: Mojtaba Hajipoor, Effat Saghi, Fatemeh Roudi.
Writing–review & editing: Effat Saghi, Fatemeh Roudi.

Competing Interests

None to declare.

Ethical Approval

This study was approved by the Ethics Committee of Mashhad University of Medical Sciences (IR.MUMS.MEDICAL.REC.1402.328), and written informed consent was obtained from all participants.

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