



Community Assessment to Identify and Prioritize Health Promotion Interventions in Qazvin Province, Iran, in 2023

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Abstract

Introduction: Community assessment identifies a community's perceived needs by evaluating its health status and health service systems. This process involves collecting, analyzing, and disseminating information about the community's characteristics, strengths, and needs. This study aimed to conduct a community assessment in Qazvin province in 2023.

Methods: This descriptive cross-sectional study was conducted based on the national community assessment guideline of the Ministry of Health, using quantitative analysis of data collected from three respondent groups: the health team, community trustees, and the general population. The assessment was carried out under a program announced by the Health Education and Promotion Office of the Ministry of Health. These questionnaires were administered by teams comprising community members, health experts, and trusted individuals to identify priorities.

Results: In this study, 25,797 questionnaires were completed, including 1,966 from the health team, 1,483 from the trusted team, and 22,348 from the general population. Ten major health priorities, including cardiovascular diseases, hypertension, and obesity, were identified in Qazvin Province. Key environmental concerns included stray dogs, lack of welfare facilities, and social challenges. Health experts identified low health literacy and childlessness as major reproductive and family health issues. Across all respondent groups, lack of neighbourhood amenities and social harms were the leading social determinants influencing provincial health priorities.

Conclusion: Targeted strategies should include comprehensive cardiovascular disease prevention, blood pressure management programs, and improved access to recreational and welfare facilities in both urban and rural areas of Qazvin.

Keywords: Health assessment, Determinants, Priorities, Intervention, Cardiovascular disease

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Introduction

Each community has perceived needs that experts must identify. Community assessment is a process used to understand the community's health status, concerns, and health service delivery system by identifying, collecting, analysing, and disseminating information about the community's characteristics, strengths, resources, and needs. The best way to identify and prioritize these needs is to use accurate information and community-based intervention programs. This method is considered an essential foundation for promoting and improving public health; in fact, it provides a platform for health action and information and can lead to environmental changes.¹⁻³ In the community assessment process, collected information on the community's health and basic needs is used to help managers prioritize responses and allocate resources.⁴

⁵ The result of this process is a response to people's

demands based on the researcher's understanding of the region's problems, public opinion, and local priorities.⁶ This missing link in evidence-based needs assessment has been documented as a significant challenge in Iran's health planning system.⁵

In this regard, experts have suggested the health needs assessment method. In this method, people's health issues and problems are investigated and identified in a realistic and context-specific manner, and these issues are prioritized and selected for implementation according to criteria that improve productivity.⁷ Despite the importance of health needs assessment for the optimal use of resources, this process is unfortunately not conducted on a scientific basis in many developing countries. It is often influenced by the priorities of influential individuals, such as experts, local employees, or senior officials. Iran, like these countries, faces similar challenges, in which the absence

of systematic, evidence-based needs assessment practices affects the planning and distribution of medical and health education resources. Accordingly, the lack of needs assessment in the medical and health education planning system seriously threatens the effectiveness of educational programs. Following a specific scientific model facilitates the process and increases the accuracy and validity of needs assessment.^{8, 9} Although identifying needs and accurately measuring them are necessary and fundamental for improving the quality of medical and health education, planning and implementing needs assessment projects at any level requires following a specific practical plan and framework. Hence, we want to know how and with what methods and patterns it can be determined.^{10, 11} Despite growing national research, there is a lack of scientific and systematic assessments specifically focusing on the social determinants of health in Qazvin province.¹²

The Sabzvar and Michigan studies illustrate how health priorities vary considerably by local context, reinforcing the need for a province-specific needs assessment in Qazvin to ensure that interventions are locally relevant and evidence-based.^{13, 14} The importance and sensitivity of the needs assessment process are evident when we consider the limited budgets allocated to medical and health education in most countries. In such a situation, the issue of priorities and necessities arises, and policymakers and educational planners must choose among various, seemingly unlimited demands because existing facilities cannot meet all needs.¹⁵ Therefore, educational specialists and experts must meet specific criteria to identify the necessary issues and take action to address them.

Considering the importance of assessing health problems and determining health priorities in society to achieve social justice and create the necessary capacities for health promotion,¹⁶ the present study aimed to evaluate the community to identify and prioritize the needs assessment program and health promotion interventions. This study was conducted with an emphasis on the social determinants affecting health in Qazvin Province in 2023. A comprehensive literature review was conducted in 2023, covering international and Iranian sources up to June 2024.

Materials and Methods

This cross-sectional study was conducted in accordance with the implementation guidelines of the community health needs assessment program issued by the Education and Health Promotion Office of the Ministry of Health. The aim was to identify the health needs of the population of Qazvin Province by health center catchment area and to plan educational and non-educational interventions. For this purpose, the Education and Health Promotion Department of the Vice-Chancellor of Health at Qazvin University of Medical Sciences provided three separate questionnaires for the health team, neighborhood trustees, and the general population to health education and promotion experts at the health centers. This research followed a mixed-method design, quantitatively analysing

questionnaire data and qualitatively interpreting community feedback under the North Carolina model framework adapted by the Ministry of Health.

Information on the selected population for the health needs assessment program was collected in January, February, and March 2023, and the data were analyzed until June 2024. The study included the entire population of Qazvin province, which has six counties (Abyek, Alborz, Avaj, Takestan, Buin Zahra, and Qazvin), 93 comprehensive health centers, and 260 health houses. The questionnaires were distributed online, and for illiterate respondents, the questionnaire was completed via a telephone interview or face-to-face questioning by a health worker.

Considering the structure of the health network, the needs assessment program and health promotion interventions were planned separately for the different levels of care. In this program, because interventions addressed both behavioral and non-behavioral factors, at least two priorities were identified for each rural health center. In urban areas, due to the implementation challenges and the complexity of needs, at least one priority was identified for each comprehensive health service center.

At the outset, a health needs assessment team was formed for each health center. The health team members in both rural and urban areas included a physician, a health care worker, a midwife, an environmental health expert, an occupational health expert, a psychologist, a receptionist, a supervising health care worker, a dentist, and a dental assistant at each center. These approaches were adopted to ensure the participation of individuals with varying literacy levels and access conditions; for illiterate participants, interviews were conducted by trained health workers using standardized protocols. The trusted team members included villagers, council representatives, local clergy, the principal or deputy principal of the school, police representatives, benefactors, members of non-governmental organizations, and well-known local figures. The validity and reliability of the instruments were confirmed in preliminary pilot testing ($r=0.82$).

After team formation and empowering the forces, the implementation phase of the first stage of the program was carried out under the framework of the official implementation instructions for health needs assessment from the environmental level to the ministerial level. In the second phase, the needs assessment was conducted at the rural ecological level, and the prioritized list of needs was sent from the health centers to the rural comprehensive health center. The selected list was then sent to the urban health center according to priority and separately for the covered health centers. In the third phase, in urban areas, needs assessment and the design of health promotion interventions were carried out at the level of comprehensive urban health centers and all comprehensive health centers. Based on the people covered by each center, questionnaires were prepared for healthcare workers and completed with the participation

of the community members, and the information was sent to the provincial health center. In addition, questionnaires were distributed online via Porsline, and the results were extracted by the education and health promotion experts at the provincial and city levels and submitted to the provincial Health Deputy.

In the fourth phase, the prioritized list of needs was announced to the urban health center. In the fifth phase, all environmental-level needs, along with the list of approved priorities, were sent to the university. In the sixth and seventh phases, the health education and health promotion experts in the University Health Department formed a technical subgroup for needs assessment and health promotion interventions, held educational and briefing sessions, and analyzed the needs and priorities of the urban centers. They also participated in designing interventions in the cities and supervised their implementation. Subsequently, they aggregated the priorities of the cities and selected at least one priority separately for the Health Department, the comprehensive health centers, and the health houses. Finally, the university's priorities were announced to the Ministry. The data were analyzed using Excel and SPSS version 25 and were reported as frequencies, percentages, and rankings for each health-related indicator.

Results

In this study, 25,797 questionnaires were completed: 1,966 by the health team, 1,483 by the trusted team, and 22,348 by the general population. The distribution of questionnaire data by county is presented in Table 1. Among the participants, 15,133 (59%) were women and 10,661 (41%) were men. Among the respondents, 46% (1,0351 participants) were homemakers, most of whom were women.

The gender distribution reflected typical patterns in community health surveys in Iran, due to greater accessibility of health workers to female respondents, a pattern acknowledged as a potential source of sampling bias and discussed later.

According to the opinion of all three respondent groups (the health team, the trusted team, and the general population) in the province, the most critical health problems were cardiovascular diseases (CVDs) and blood pressure, which were identified as priorities across all counties. Other health-related priorities are listed in

Table 1. Basic Information of Participating Groups by County in Qazvin Province

County	Health Team	Trusted Group	Public	Total	Percent
Abyek	184	165	2,443	2,792	11
Awaj	120	119	1,477	1,716	7
Alborz	338	233	3,452	4,023	16
Buin Zahra	339	173	2,619	3,131	12
Takestan	372	337	4,233	4,942	19
Qazvin	613	456	8,124	9,193	35
Total Counties	1966	1483	2,2348	25,797	100

Table 2. In addition, regarding problems in the place of residence (village/city), 10 priorities were identified from the perspectives of the general population, the health team, and the trusted team, among which stray and uncontrolled dogs were considered the highest priority (Table 3).

Regarding the social determinants of health priorities, lack of neighborhood amenities was identified as the top priority in all cities of the province. Social harms were also reported as the second priority by all three respondent groups. Other factors are listed in Table 4 in order of priority.

Technical groups at the city and provincial levels classified health priorities into two groups: first and second priorities. In the subgroup concerning family health, reproductive health, and the youth population, 'childlessness' and 'single-child families' were ranked as the first and second priorities, respectively, aligning with the broader observation of a low total fertility rate (Table 5).

Discussion

This study was conducted using the adapted North Carolina Community Assessment Model, a mixed-methods approach that integrates quantitative community surveys with participatory input from local stakeholders. This framework enabled data triangulation and strengthened the validity of the final prioritization process.

The results of the present study showed that CVDs and hypertension were the leading health priorities among the general population of Qazvin Province, followed by overweight and obesity. In addition, the presence of stray dogs was identified as the most important public health problem in the province. Regarding the social determinants of health, lack of neighborhood amenities, social harms, and unemployment were ranked as the first, second, and third priorities, respectively. Furthermore, based on the evaluations of the technical groups, childlessness, having a single child, and a low total fertility rate were identified as the main first- and second-level priorities in the youth population, family health, and reproductive health subgroup, respectively.

The main innovation of this study lies in its participatory needs assessment model, which incorporates community

Table 2. List of Health Priorities Among the General Population in Qazvin Province

Priority	Health Disorders
1	CVDs and blood pressure
2	Overweight and obesity
3	Musculoskeletal disorders
4	Mental health
5	Diabetes
6	Tooth decay
7	Thyroid disorders
8	Hyperlipidemia
9	Gastrointestinal disorders
10	Tobacco, cigarette, and hookah use

Note. CVDs: Cardiovascular diseases.

members, health experts, and local stakeholders to identify and prioritize health problems using a multi-stage, data-driven approach at the provincial level—a strategy not previously implemented systematically in Qazvin Province.

A community assessment study by Gahramanloo et al in a village of Babol reported that the most important health priorities were lack of sports and recreational facilities, sewage disposal problems, and youth unemployment. These findings are consistent with the present study, particularly regarding unemployment as a key determinant of health in Qazvin Province.¹⁷ In recent years, the unemployment rate has increased in many provinces of the country, leading to higher rates of crime and mental health problems, including symptoms of depression, anxiety, mood disorders, and suicide.^{18, 19} A study conducted in Yazd Province reported that the severity of depression and anxiety symptoms was higher among unemployed individuals, with lower educational

attainment, and immigrants.²⁰ Unemployment can also affect life expectancy; therefore, creating new job opportunities and increasing people's incomes may improve social capital and contribute to the country's economic development.^{21, 22}

Although the relationship between urban green spaces and public health has been noted in various studies,^{23, 24} this study also identified the lack of recreational facilities and green spaces as the top social determinants of health priority in the province. In a study by Kondo et al, no positive correlation was observed between the presence of urban green spaces and public health or depression levels among individuals. However, a significant negative correlation was found between green spaces and urban recreational facilities and mortality rates, mood improvement, and physical activity.²⁵ Additionally, a study by Rahmani et al, assessing the health status

Table 3. List of Residential Problems (City/Village) in Qazvin Province

Priority	Residential Problems
1	Presence of stray dogs
2	Environmental health issues (animal waste, sewage, and so on)
3	Social harms (alcohol addiction, theft, insecurity, and drug abuse)
4	Livelihood and employment problems
5	Lack of neighborhood amenities (library, park, gym, and so on)
6	Lack of medicines, doctors, and hospitals
7	Air pollution
8	Water pollution
9	Mental health problems (depression, stress, and anxiety)
10	Food-related problems (food access and the cost of healthy food)

Table 5. List of Health Priorities by Technical Groups in Qazvin Province

List	Technical Groups	Subgroup	Priority	
			First	Second
1	Education and Health Promotion		Low health literacy	Self-care and its dimensions
2	Youth Population, Family Health, and School	Middle-aged	Physical inactivity	Common cancers in men
		Senior health	Hypertension, depression, and sleep disorders	Nutritional disorders
		Child and infant health	Respiratory diseases and diarrhea	Correct use of supplements
		Reproductive health and youth population	Childlessness and single-child status	Low total fertility rate (abortion and consequence of aging)
3	Network Development Management Center	Pharmaceutical affairs	Drug self-medication	Failure to recognize drug signs and symptoms
		Health in disasters	Low safety of buildings	Natural disasters (floods, earthquakes, fires, snowstorms, and lightning)
4	Oral and Dental Health		Poor oral and dental hygiene in all age groups	Tooth decay
5	Occupational Health		Excessive use of pesticides in agriculture	Occupational disorders
6	Environmental Health		Unhealthy drinking water	High prevalence of tobacco use (cigarettes and hookah)
7	Mental Health		Stress and anxiety	Cyber and social media harms
8	Community Nutrition Improvement		Improper nutritional patterns in different age groups	Overweight/ obesity
9	Prevention of Non-communicable Diseases		CVDs and hypertension	Physical inactivity
10	Prevention of Communicable Diseases		Respiratory diseases (flu, pneumonia, and COVID-19)	Lice, scabies, and dandruff

Note. CVDs: Cardiovascular diseases; COVID-19: Coronavirus disease 2019.

Table 4. List of Priorities Related to the Social Determinants of Health in Qazvin Province

Priority	Social Determinants of Health Problems
1	Lack of neighborhood amenities (library, park, gym, and so on)
2	Social harms
3	Employment and unemployment
4	Environmental pollution (air, water, construction waste, chemical and industrial waste, and sewage)
5	Literacy and culture (literacy level, language, accent of religion, access to reliable health resources, and internet access)
6	Access to healthy food
7	Health insurance and access to necessary health services
8	Housing and life necessities (water, electricity, and so on)
9	Child care and education
10	Air pollution

of the Jamkaran region in Qom Province, revealed that most health-related issues were related to urban health services, social and civil rights, economic and employment conditions, education, and culture. Among the identified issues, urban health services, lack of natural spaces, unemployment, non-communicable diseases, and absence of public libraries received the highest scores. This study aligns with research on social determinants of health, including the lack of recreational facilities and green spaces, as well as unemployment. This similarity can be attributed to the geographical proximity of the two provinces and the increasing unemployment problem among the youth in both settings.²⁶

In the current study, mental health was ranked as the fourth most prioritized health problem among people in Qazvin Province. This finding differs from that reported by Khosravi et al in the Bastam and Mehdi Abad regions of Shahroud.²⁷ In fact, according to respondents in Qazvin Province, the burden of mental disorders was perceived to be lower than that of other health problems. However, addressing mental health remains essential for improving quality of life and reducing other non-communicable diseases.²⁸

A community health assessment conducted in the Cheliche region of Chaharmahal and Bakhtiari Province identified water pollution and unemployment as the top regional priorities. In that study, the most critical health problems included overweight and obesity, depression and anxiety, and hypertension.¹² These findings are consistent with the present study in terms of major health problems, although they differ with respect to residential and environmental concerns. The variation in priorities across communities may reflect differences in cultural, economic, and social contexts.

In 2016, the prevalence of obesity and overweight among the Iranian population was reported to be 22.7% and 59.3%, respectively. These rates differed geographically, with body mass index (BMI) increasing from the southeast to the northwest of the country. Therefore, geographic variation appears to affect the prevalence of obesity in Iran.²⁹ The study conducted by Zamani Qomi et al also supports our finding, as the prevalence of obesity and non-communicable diseases was prominent in both studies.²² Obesity can lead to an increased risk of non-communicable diseases, including hypertension and CVDs.^{30, 31} The prevalence of hypertension has increased in developing countries, including Iran, where it is estimated at 25%. Despite technological and scientific advances, hypertension remains a hidden disease associated with substantial health consequences and economic burden for society.³²

The present study also indicated that a low total fertility rate was among the health priorities identified by the technical group for youth. This result is consistent with results reported among Iranian couples in northwestern Iran, where fertility scores were lower among dissatisfied couples and among those who married before the age of 30. Fertility knowledge was related to demographic and social factors. In addition, a study in Malaysia identified

four strategic priorities for reproductive health services and recommended integrating internal and external social and cultural contexts with policymakers' cooperation.^{33, 34}

Integrating diverse findings and prioritizing them from the perspectives of both the public and officials is essential for improving society's health. The main needs of the people of the province lie in the areas of health and the environment. Unless the fundamental problems of society are addressed, meaningful improvement in health indicators cannot be expected.^{1, 35} Similar studies have also emphasized that people, as the main pillar of society, should play an active role in identifying priorities and providing practical solutions to address community problems and needs.^{36, 37}

The major strengths of this study include its large sample size, robust participation from diverse stakeholder groups, and the use of both quantitative and qualitative data. However, the study also has limitations, including reliance on self-reported data and gaps in the availability of some secondary data sources.

Conclusion

Based on the findings of this study, comprehensive intervention programs should be developed to reduce the risk of CVD and improve blood pressure control, with separate planning for urban and rural areas of Qazvin. Active community participation should also be ensured throughout all phases of policy implementation and evaluation.

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Competing Interests

The authors declare no conflict of interests.

Ethical Approval

This study was approved by the Ethics Committee of Qazvin University of Medical Sciences (Ethical code: IR.QUMS.REC.1403.146). Written informed consent was obtained from all participants before enrollment. All methods were carried out in accordance with the Declaration of Helsinki.

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