

Diagnosis, Prevention, and Control of Hypertension in Iran: A SWOT Analysis

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Abstract

Background: Hypertension is one of the most important risk factors of cardiovascular morbidity and mortality that holds a unique place in population health and health care.

Objectives: Given the exponential rise of high blood pressure as one of the major health problems, this study aimed to investigate the current situation and provide a strengths, weaknesses, opportunities, and threats (SWOT) analysis in the management of hypertension.

Methods: A qualitative study of 12 interviews was conducted with policymakers and managers. The sampling method was purposive sampling. Data collection was performed from January to July 2020. A thematic approach was used to analyze the data. The consolidated criteria for reporting qualitative research 32-item (COREQ-32) checklist was applied to ensure quality control in the study design, analysis, and data reporting.

Results: A total of 12 factors were identified as SWOT. The most important strengths included universal coverage of health services, provision of team-based care, and self-care training. The weaknesses were related to the therapeutic approach, long-term planning, and continuity of programs. Cooperation of other sectors with the health system and the existence of health management training centers were noted as opportunities to better implement hypertension management programs and confront threats such as conflicts of interest between guilds and organizations and crises.

Conclusions: High blood pressure can be prevented. The present direction toward health-oriented policies can be changed in all sectors by taking advantage of the existing strengths and opportunities.

Keywords: Hypertension; Prevention; SWOT Analysis; Policy; Health Services

1. Background

Hypertension is one of the main widespread chronic diseases that affect more than 30% of adults over 25 years of age annually worldwide. Due to the projected changes in the age distribution of people, this proportion may increase in the future. However, cardiovascular complications caused by hypertension can increase the rate of morbidity and mortality (1, 2). Although hypertension is a controllable risk factor (3, 4), strategies are not effective enough to prevent, diagnose, or control hypertension (1, 2).

In lower-middle-income countries (LMICs), a low number of patients (24%) with hypertension are aware of their condition, which is in line with the low control

rates. However, in some high-income countries, the awareness rate is greater than 70% - 80% (5). Such a discrepancy in the findings can be attributed to different potential sources/opportunities in LMICs and developed countries. In other words, limited accessibility, acceptability, and utilization of health services play the main role in developing countries since hypertension has traditionally been screened in the health care system, typically at clinics, leading to significantly poor diagnosis (6). Thus, many developing countries lack the capacity to adequately manage and treat hypertension (7).

In most LMICs, many risk factors (such as obesity, diabetes mellitus, high sodium consumption, tobacco



consumption, and sedentary lifestyles) can negatively affect hypertension. Other risk factors include low birth weights, poor access to health care facilities, decreased health literacy, and high levels of pollution (8). Hypertension risk factors can be greatly improved by implementing effective strategies at the national level (6). To mitigate these factors, several strategies have been employed, such as formulating national/regional campaigns on sodium reduction, especially in prepared foods (6, 9, 10), increasing population health literacy, and increasing access to parks and green spaces in urban centers (6). Other strategies are related to the concept of “best buys,” which is defined as a greater reduction of risk factors for the least cost. A clear instance of a “best buy” can be initiating or increasing the tax on certain items, such as tobacco, refined sugar drinks, and alcohol (6, 11). Accordingly, major cases of cardiovascular diseases can be prevented by preventing and controlling hypertension (12).

2. Objectives

In the present qualitative study, the prevention and management of hypertension were investigated in Iran. Furthermore, the strengths and opportunities in the health system were examined and analyzed to overcome the weaknesses and threats.

3. Methods

A strengths, weaknesses, opportunities, and threats (SWOT) analysis is a systematic tool used by specialists to evaluate programs (13, 14). It investigates the internal strengths and weaknesses of a system that should be addressed but tries to use and avoid opportunities and threats as external factors or elements of a system, respectively (14). The SWOT analysis is defined as a strategic management matrix tool used by policy makers to develop and implement strategies using resources (15, 16). The SWOT analysis helps organizations to revise/improve strategies to overcome the main problems (17).

Individual, one-to-one, semi-structured qualitative interviews were performed with managers and health policy makers to collect the study data. We considered that the interviewees have at least 5 years of work experience in the health system. The interviewees were asked to provide their opinions about health services regarding the prevention and management of hypertension.

3.1. Participants

The data were collected from experts recruited from the Ministry of Health and Medical Education and 2

medical universities. The duration of the interview was 15 to 70 minutes, with a mean of about 37 minutes.

3.2. Recruitment

The participants included 10 men and 2 women selected using a purposive sampling method. Prior to the interviews, the study goals and procedures were explained to the participants; in addition, informed consent was obtained from all participants. Next, by arranging a mutually convenient interview time and method (telephone or face-to-face at the participant's place of work), the interviews were conducted, recorded, and transcribed verbatim. Interviews were continued until data saturation was achieved.

3.3. Data Collection

Data collection was performed from January to July 2020. The consolidated criteria for reporting qualitative research 32-item (COREQ -32) checklist was used to ensure quality control in the study design, analysis, and data reporting (Appendix). Interviews were conducted by FA interviews involved 4 open questions. The questions used in the interviews were as follows:

In your opinion, what are the strengths and weaknesses in providing health services for the prevention and management of hypertension?

What are the possible opportunities that the health system should utilize or consider for the management of hypertension?

What threats does the health system face in providing health services to control high blood pressure?

3.4. Data Analysis

The thematic analysis method was used for the interview transcripts according to the dimensions provided by the SWOT analysis. According to this method, the interview transcripts were studied carefully by the researchers several times. Then, the main codes attributed to SWOT were determined. Next, the themes were analyzed systematically. To improve the data credibility, the interviewees were also asked to read and check the transcripts and make any necessary revisions.

3.5. Ethical Considerations

The Ethics Committee of Tabriz University of Medical Sciences approved this study (code: IR.TBZMED.REC.1398.887).

4. Results

A total of 12 factors were identified as SWOT. Figure 1 illustrates the SWOT analysis and the key issues under each dimension.

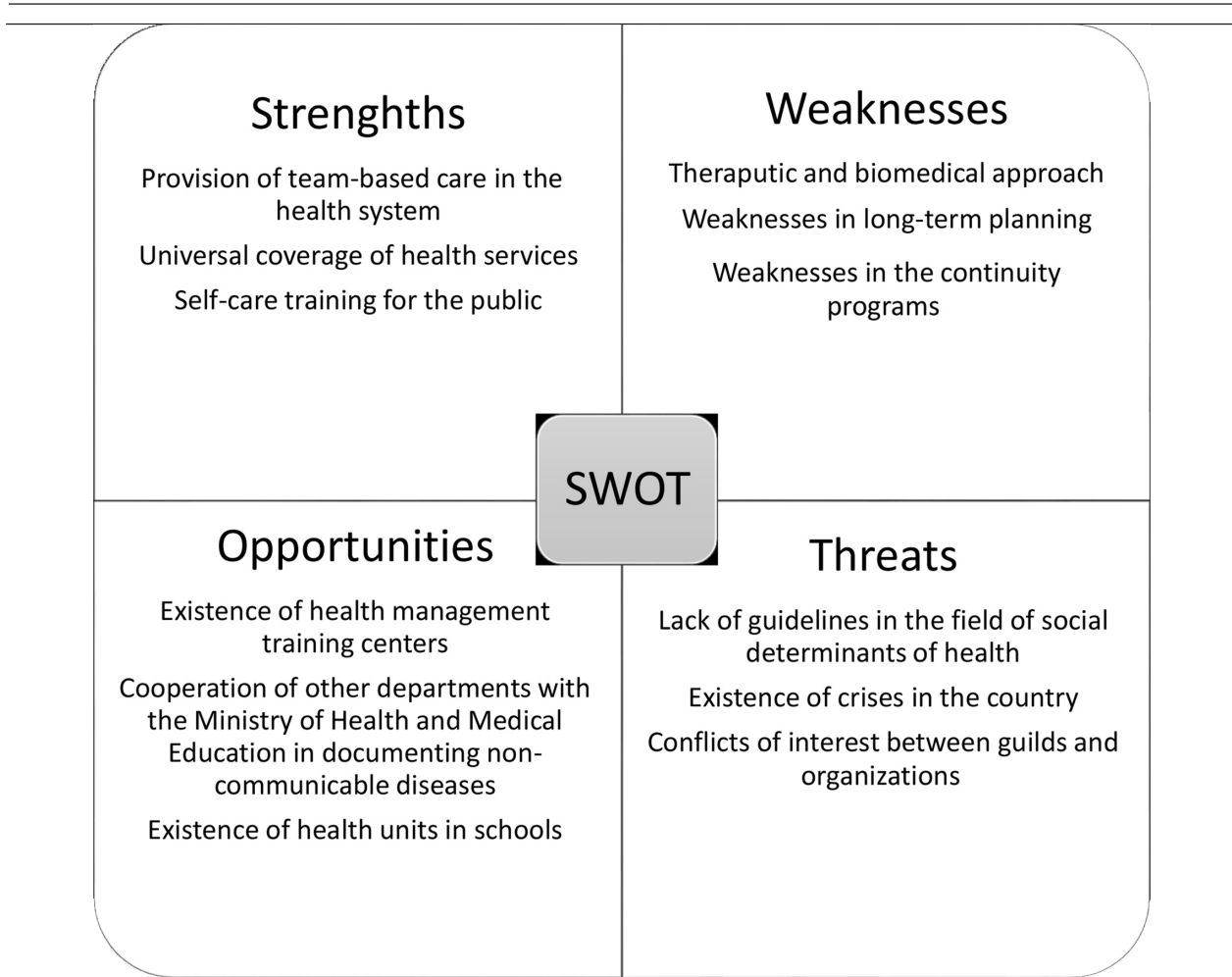


Figure 1. Findings according to the SWOT analysis

4.1. Strengths

4.1.1. Provision of Team-Based Care in the Health System

Health houses, health service centers, and human resources are among the strengths of the health system in Iran. In these centers, team-based care is provided through a referral system by health care providers, nutritionists, psychologists, and physicians. In this regard, one of the participants (M5) said, “we have the entire infrastructure; we wrote the programs The Ministry of Health does not need anything because everything is enough, and we are effective on 25%.”

4.1.2. Universal Coverage of Health Services

Followed by the implementation of the health transformation plan, access to services was facilitated for the public. One of the participants (HPM 4) said, “thank god, insufficient access to different sections of the society has been solved via the transformation plan.”

4.1.3. Self-care Training for the Public

Implementation of the blood pressure campaign provided people with opportunities for blood pressure screening, nutrition education, and a healthy lifestyle. It also helped the health staff and health service providers to hold training programs regarding self-care education. One of the participants (HPM1) mentioned, “the minister of health said that every house is a health house, which means that people should cooperate The Ministry of Health has introduced self-care for many years. Well, this is a strength.”

4.2. Weaknesses

4.2.1. Therapeutic and Biomedical Approach

Although prevention is more important than treatment, policies adopted in Iran are more focused on treatment. In other words, in addition to allocating reduced amounts of money to prevention and health sectors, no insurance coverage is available for counseling and prevention services in our country. One of the participants

(M8) said, “unfortunately, Iran is implementing a therapeutic and biomedical approach. The health promotion approach introduced in the Ottawa Charter in 1986, noting that countries should be required to empower people, has not been implemented in Iran yet.”

4.2.2. Weaknesses in Long-term Planning

The lack of policymaking in the field of social determinants of health (SDH) is one of the weaknesses in the Iranian health system. The authorities are only focused on solving cross-cutting issues. One of the interviewees said (M7), “interventions conducted in the field of SDH are long-term. They are not like placing nitrocontin tablets under the patient’s tongue, which immediately lowers the blood pressure.”

Another interviewee (M10) added:

In the health system, SDH are not a priority, so, the plans and policies are not made based on them. The main obstacle is that the health system does not have a proper understanding of the SDH regarding health and disease. The second obstacle is that the health system has no power to take such approaches in its planning.

4.2.3. Weaknesses in the Continuity of Programs

Irregularity and fluctuations in implementing health programs are other weaknesses of the Iranian health system. One of the interviewees (M7) noted that:

In the case of risk assessment of cardiovascular diseases, we started with a lot of enthusiasm and noise, but we subsided. That is to say, we are mainly like this, from the policy area to the practice and implementation areas.

4.3. Opportunities

4.3.1. Existence of Health Management Training Centers

One of the participants (M3) said:

We work in the national and regional centers of the World Health Organization and cooperate with the World Health Organization. We are going to teach management to the managers of the health system. The aim is to facilitate the process. Management experts should teach management to health managers.

4.3.2. Confirming Cooperation of Other Departments with the Ministry of Health and Medical Education in Documenting Non-communicable Diseases

One of the interviewees (HPM4) said:

I was a member in drafting the national document for the prevention and control of non-communicable diseases from the beginning In drafting this document, which also included blood pressure, different institutions and organizations were asked to cooperate and sign the document They signed the document since we all believe that is not the job of the Ministry of Health alone,

we are all responsible for this.

4.3.3. Existence of Health Units in Schools

Health units in schools can play an important role in the development of health culture by implementing various health programs and appropriate educational infrastructure.

In relation to the health sector, one of the participants (HPM 2) said, “in schools, we have health units, which help us to teach students the health culture and its components, especially in the field of blood pressure.”

4.4. Threats

4.4.1. Lack of Guidelines in the Field of Social Determinants of Health

The health system was not able to improve the performance of health care providers through the SDH approach. One of the interviewees (M8) commented: “We do not have the required guidelines with a plan for the determinants. Actually, such guidelines have been completely neglected. Unfortunately, we are just faced with a bunch of half-done tasks; practically, we have nothing to do.”

4.4.2. Existence of Crises in the Country

One of the participants (HPM9) noted:

Our main challenge that could have postponed dealing with these so-called infrastructural and important issues (such as blood pressure) is the issue of crises. The recent crisis in Iran included sanctions, followed by COVID-19. In fact, when a crisis occurs, many routine and infrastructural tasks should be abandoned.

4.4.3. Conflicts of Interest Between Guilds and Organizations

The existence of a fundamental and inherent conflict between interventions in SDH and the paradox between maintaining health and maintaining industry leads to the failure of health services. According to a participant (HPM11):

Every year, the Ministry of Health is obliged to provide a list of goods and services harmful to people’s health, prohibit the advertisement of such products, and subject some of these products to duties. In other words, when advertising of these products is prohibited, the industry suffers from economic loss with regard to that product.

For example, we worked a lot on the Zamzam drink and asked the company manager to use stevia (a sweetener that is 300 times stronger than sugar) instead of sugar. The manager (M5) said:

I will use stevia instead of sugar as long as you make a commitment to import stevia to Iran for 5 years; if stevia is not imported, I have to buy sugar more expensive from

the producer because they will remove my company from their list of customers.

5. Discussion

According to the findings, raising awareness and self-cooperation of people are the most important factors in preventing hypertension. Development of healthcare networks across the country and access to healthcare staff have provided the opportunity to conduct self-care training programs by implementing the hypertension campaign. Furthermore, these training programs can be followed by implementing the health ambassador program. Evidence suggests that blood pressure can be controlled by improving self-care behavior (18). According to the researchers, effective measures in the process of hypertension self-care include medication combined with a low-salt diet, smoking cessation, alcohol reduction, stress management, and adequate physical activity and exercise (19, 20).

Studies in Iran show that less than 10% of patients with cardiovascular diseases follow a low-salt diet, and less than 40% adhere to a medication diet and control their weight. Moreover, less than half of these patients exercise regularly (21). As a result, the Ministry of Health and Medical Education started taking measures in the field of self-care regarding hypertension.

Blood pressure self-monitoring, as a common part of the hypertension management program, can enhance controlling blood pressure. As a well-tolerated approach, blood pressure self-monitoring is a better predictor of end-organ damage compared to clinical measures (22). Self-monitoring studies have reported improved blood pressure control, especially in terms of additional co-interventions, including pharmacist trials and nurse-led training programs (22, 23). Although self-monitoring mainly focuses on effective communication between patients and physicians, about half of the patients do not report their self-monitoring to their physicians (22).

Self-care training programs, if performed purposefully to empower health management strategies, specifically in terms of hypertension, can encourage people to use preventive services provided in the Iranian health system. Based on our findings, universal coverage of health services is one of the strengths in Iran. Since the introduction of universal coverage of health services, Iran has included the components of this guideline in its national development plan, which has facilitated its access to health services.

Implementation of different transformation plans, along with making other health-related modifications in Iran, has resulted in significant achievements in various areas. In this regard, accomplishments were noted in rendering primary health care services, improving health indexes, controlling epidemics, preventing diseases, diagnosing and treating diseases, providing health care insurance, producing qualitative and quantitative

health resources, and improving health care quality (24). Hypertension prevention programs have also benefited from the implementation of this plan.

Other departments have cooperated with the Ministry of Health and Medical Education to document non-communicable diseases. Thus, this ministry, with the help of other departments, can change its approach to act on the social determinants causing high blood pressure instead of dealing with its consequences and problems. In addition to establishing management training centers, the Ministry of Health and Medical Education should train managers in the health system to prioritize the prevention of hypertension in their plans and policies and benefit from the cooperation and support of other departments. Various studies have indicated that affecting social determinants needs to take broad inter-sectoral and governmental measures (25, 26).

Although, conflicts of interest between guilds and organizations have negative effects on public health, for instance, the occurrence of some crises (such as sanctions) and the profitability of some food industries in producing and supplying salty and unhealthy food. However, the level of success in preventing high blood pressure may increase through mutual activity and cooperation among all sectors.

5.1. Conclusions

Universal coverage of health services and self-care training are strengths that can overshadow the therapeutic approach and lead to its weakening. In addition, long-term planning in the field of SDH is possible through health management training centers and cross-sectoral collaborations.

5.2. Limitations

Given the importance of hypertension, the findings of this qualitative study could not show all aspects of the problem comprehensively. To provide health policy makers and managers with the necessary data to plan and make more appropriate decisions, future studies are recommended to conduct some quantitative studies regarding SWOT dimensions.

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Data Reproducibility: The transcripts/data of this qualitative study are not publicly available due to confidentiality agreements with the participants.

Ethical Approval: This study was approved by the Ethics Committee of Tabriz University of Medical Sciences (code: IR.TBZMED.REC.1398.887). Written informed consent was obtained from all participants.

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