

Abstract

Background and objectives: Environmental scanning is the process of collecting, organizing, and analyzing environmental data. It can assist healthcare organizations in planning, decision-making, and evidence-based policymaking. Due to rapid changes, advances in science and technology, emergence of new issues, and the complexity of the healthcare system, the use of environmental scanning in health research is becoming increasingly important. It is essential for healthcare professionals to be aware of this approach. As comprehensive research in the Iranian healthcare system has not been conducted in this area and there is no scientific model for environmental scanning in the Iranian healthcare system, the aim of this study was to design a national model for environmental scanning.

Methods: The present study was a sequential, exploratory, mixed-methods (qualitative and quantitative) study conducted in four main phases. In the first phase, various environmental scanning models in healthcare systems worldwide were extracted using a limited scoping review. Excel and Endnote software were utilized in this phase. In the second phase, a qualitative study with an inductive approach and interviews was employed to identify the current status of environmental scanning and the existing challenges in the Iranian healthcare system. The software used in this phase was Maxqda. In the third phase, the initial model of the aforementioned framework was designed, and then, through a quantitative study using a questionnaire, the most prioritized factors influencing the healthcare system were determined and ranked. Finally, using the Delphi method, the environmental scanning model in the Iranian healthcare system was finalized and designed. In the third and fourth phases, SPSS software and dispersion and statistical indicators were utilized.

Results: Based on the first phase of this study, five different environmental scanning models in the healthcare system were examined, and the results can be summarized into three main categories: monitoring, alerting, and acting. The second phase of this thesis focused on

exploring the challenges and solutions of environmental scanning. According to the SPO model, the environmental scanning challenges in the country were identified and categorized into three main topics, seven categories, and 23 sub-levels. The categories included structure, resources and capabilities, human resources, technical information, management, and governance and performance. Additionally, based on the conducted analyses, three main topics, six categories, and 18 sub-categories were presented for the implementation requirements and necessities of establishing environmental scanning in the healthcare system. These included structure, resources and human performance, fully technical, support, and performance. In the third phase of this study, we focused on the most influential characteristics for prioritizing health-related phenomena. Based on the expert opinions, 15 characteristics were identified and ranked in this section, which can be used to rank health-related phenomena. Finally, in the last phase, the environmental scanning model for the Iranian healthcare system was finalized through the Delphi method, and it presented three sections: structure, process, and outputs of an environmental scanning system.

Conclusion: Environmental scanning systems work towards increasing the awareness of the healthcare system and preventing managerial negligence. Therefore, the use of environmental scanning in health research has gained greater importance. Environmental scanning can assist healthcare organizations in decision-making. The current model of environmental scanning was designed with an emphasis on the structure, process, and outputs of an environmental scanning system for monitoring, alerting, and taking action regarding environmental changes in the Iranian healthcare system. This model, along with the logic of prioritizing health-impacting phenomena, will help Iranian healthcare organizations and decision-makers in identifying, prioritizing, and striving to understand phenomena related to health and environmental changes in healthcare organizations. This will contribute significantly to the management, planning, and policymaking of the healthcare system.

Keywords: environmental scanning, model, health system.



**KERMAN UNIVERSITY
OF MEDICAL SCIENCES**

Faculty of Management and Medical Information

In Partial Fulfillment of the Requirements for the Degree (Ph.D.)

Title

Designing an environmental scanning model in Iran's health system

By

Khalil Kalavani

Supervisor/s

1- Dr. Reza Dehnavieh

Advisor/s

1- Dr. Abbas Vosoogh-Moghaddam

2- Dr. Abdurrahim Pedram

3- Dr. Mohammad Hossein Mehrolhassani

Thesis No: **()**

Date: **(February, 2024)**

