

Original Article (Qualitative)

Identifying the Dimensions and Components of Organizational Black holes in the Educational System of Medical Universities

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Abstract

The present study was conducted with the aim of identifying the dimensions and components of organizational black holes in the educational system of medical universities in 2024. 20 semi-structured interviews were conducted with faculty members and education managers in medical universities. The purposeful sampling method was used with maximum diversity and continued until data saturation. The interviews lasted between 30 and 90 minutes. The results were analyzed using the qualitative content analysis method and MAXQDA 2020 software. The assessment of the validity and reliability of the information was carried out based on the Lincoln and Guba criteria. From the analysis of the interviews, codes were extracted and 23 initial concepts were formed. By merging concepts with similar meanings, eight main categories of knowledge black holes were created as follows: human resources, non-human resources, management, complex organizational structure, autocratic and unresponsive policymaking, laws and guidelines, and cultural vacuum. The research findings indicate that various black holes are influential in the inefficiency of the educational system of medical universities, and ignoring them has led to the waste of various public resources, both financial and human, and has slowed down the growth and development process in our country. Therefore, identifying them and formulating desirable and efficient policies requires a systematic approach by managers and experts in the field of education.

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Extended abstract

Introduction

The mission of medical universities is to train specialized human resources to respond to the needs of society and provide health and medical services to all levels of society (Shakiba & Nadi, 2023). Therefore, continuous evaluation of this valuable and effective system is considered a strategic necessity in order to identify its existing damages and then take action based on a targeted and comprehensive plan to eliminate them. (Farhadi, Moghaddasi, & Nasri, 2022) Some of the damages in the educational system of medical universities can be imagined in the form of black holes, where the manager is unable to see the root cause of the problem, but its destructive effects gradually appear in the organization. Organizational black holes are hidden and chronic challenges that consume the organization's resources inefficiently and require radical interventions and structural changes.

Studies indicate the existence of numerous challenges and problems in medical universities, focusing on which leads to the existence of black holes in this educational system. Dissatisfaction of faculty members with salaries and benefits (Mehrabian et al., 2021) and the high tendency of students and professors to emigrate (Haghdoost, 2022) are among the issues that, if ignored, lead to the gradual elimination of faculty members, students, and organizational resources.

It is difficult to identify black holes in medical universities, and management often deals with its apparent consequences instead of addressing the root cause of the problem. Some administrators and faculty members also knowingly or unwittingly contribute to the continuation of these black holes by behaviors such as denying the problem. Traditional approaches to identifying organizational problems have been ineffective; therefore, a systematic approach to understanding educational organizations and the ability to identify, locate, prevent, and control such problems in a timely manner is a real opportunity for organizational improvement (Yanez, Uruburu, Moreno, & Lumberras, 2019), and improving the quality of education.

Various studies warn about the existence of black holes in educational environments and their destructive effects. However, no study has been found that comprehensively identifies organizational problems as the first step in comprehensive planning to resolve them. In the present study, the educational system of medical universities is systematically examined, and all groups that play a role in the educational process, decision-making, and improvement of medical universities are considered. In the present study, the researcher seeks to answer the following research question: "What are the dimensions and components of organizational black holes in the educational system of medical universities"?

Theoretical framework

Organizational black holes are a metaphor transferred from astrophysics to the field of organizational management. In management literature, organizational black holes refer to phenomena that absorb organizational resources without having proper efficiency, cause waste of energy and power of the organization, are difficult to identify, and usually stabilize over time. In medical universities, organizational black holes can manifest themselves in the form of redundant bureaucracies, inefficient educational processes, or disjointed management structures. In the educational system, black holes refer to problems that may arise due to a lack of transparency, poor management, or ineffective management and educational methods, which reduce the quality of student education and learning. Several studies have examined the challenges of the educational system of medical universities, of which a few relevant studies are mentioned below:

(Haghdoost et al., 2022) showed in their study that the desire to migrate among students and healthcare professionals is very strong due to socio-economic issues.

Ahmadi (2021) also pointed out in their study that medical students have a higher than average desire to migrate.

The results of Mehrabian et al. (2021) study showed that faculty members at Gilan University of Medical Sciences are interested in their jobs in terms of their nature, but have moderate satisfaction with their salaries and benefits, psychological conditions, job security, and opportunities for promotion and personal growth.

Yaghobi et al., (2017) reported in their study that medical students are very little satisfied with the quality of education provided. Students expect much more from educational services than what is available, and a large gap is observed between the quality of educational services in the current situation and the desired situation.

Although these studies indicate the existence of problems in medical universities, there is no research that systematically examines organizational black holes in medical universities. This study uses the metaphor of a black hole to comprehensively analyze the challenges of the educational system.

Research Methodology

The present study aimed to “identify the dimensions and components of organizational black holes in the educational system of medical universities” through qualitative content analysis method and semi-structured interviews. Participants included 20 faculty members, specialists, and managers in the field of education at universities and medical schools in 2024. In this study, a purposive sampling method with maximum diversity (in terms of age, gender, management experience, and educational experience) was used and continued until data saturation. Inclusion criteria included having teaching, planning, and management experience in the field of education, and exclusion criteria included not cooperating in conducting interviews and providing information. Interviews lasted between 30 and 90 minutes. Data analysis was performed using MAXQDA software version 2020, and with a conventional qualitative content analysis approach (Granheim and Landman) in an inductive manner. The validity and reliability of the information were assessed based on Lincoln and Guba criteria.

Research findings

In this study, 20 interviews were conducted with experienced managers in the field of education and faculty members. The average work experience of the participants was 11.45 ± 6.04 and their average age was 43.3 ± 8.36 . The participants were faculty members of universities/faculties of Iran, Alborz, Ahvaz, Rasht, Gorgan, Mashhad, Neyshabur, Ardabil and Bojnourd medical sciences. After conducting interviews and after implementing and analyzing the information, codes were extracted and 23 basic concepts were formed by analyzing the integration of these codes. After putting together and merging items with similar meanings, eight main categories of knowledge black holes; human resources, non-human resources, management, complex organizational structure, autocratic and unresponsive policymaking, laws and guidelines and cultural vacuum were obtained.

Conclusion

This study aimed to identify the dimensions and components of organizational black holes in the educational system of medical universities. The results of the research of Rahbari & Abdolmohammadi (2021), Rajabi & Abdollahi (2021), and Aghaei Hashjin & Farrokhi (2024) confirm the results of the present study. The present study shows that weak knowledge management, exhaustion of human and non-human resources, and short-term policies have



created major challenges in medical universities. Also, the complex structure of medical universities, consisting of educational, therapeutic, and health units, makes coordination difficult, so that the separation of these units leads to the creation of black holes in the educational system. To reduce these challenges, it is necessary for universities to take effective steps to improve the educational system by reviewing the management structure, clarifying policies, developing human and non-human resources, amending laws, and strengthening organizational culture. These reforms not only increase the internal efficiency of universities, but also provide the basis for improving the quality of medical education and better responding to the needs of society. It is further suggested that future research should examine organizational black holes in more depth, conduct comparative studies between medical universities and other universities, and provide practical solutions such as designing flexible management models, reviewing policies, and strengthening organizational culture. Also, using mixed methods (qualitative-quantitative) and longitudinal studies to measure the impact of structural and managerial changes, as well as examining the role of technology and artificial intelligence in reducing knowledge and resource black holes, can be considered as effective new research areas.