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Exploring the perspectives and expectations of faculty members, and senior and middle-level health system managers regarding the competencies of health economics graduates

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Abstract

Continuous curriculum revision is essential to ensure that academic programs remain responsive to evolving health system needs. In Iran, despite the establishment of Health Economics as an academic discipline, its professional role within the health system has not been clearly articulated, which may limit its effective utilization in decision-making and resource allocation.

This qualitative study was conducted using a conventional content analysis approach. Data were collected through semi-structured interviews with key informants selected via purposive sampling until data saturation was achieved. Interviews were audio-recorded, transcribed verbatim, and analyzed iteratively using MAXQDA software to extract codes, categories, and overarching themes.

Analysis yielded three main themes: (1) analytical competencies and economic evaluation (e.g., cost-effectiveness analysis, economic modeling, Health Technology Assessment, and budget impact analysis); (2) managerial and resource planning skills (e.g., hospital cost analysis, financial management, identifying inefficiencies, and supporting operational planning); and (3) policy and governance roles (e.g., contribution to benefit package design, priority setting, strategic purchasing, and evidence-informed policymaking). The extracted conceptual model indicated that these dimensions function as an interactive cycle, in which strengthening each domain reinforces the others.

Health Economics is a pivotal field for improving efficiency, equity, and financial sustainability in Iran's health system. Institutionalizing health economics functions—particularly through dedicated units in hospitals and insurance organizations, stronger data infrastructure, and practice-oriented curriculum revision—can enhance the application of economic evidence in management and policymaking.

Keywords: Health Economics, curriculum development, qualitative study, content analysis, competency, Iran.

Introduction

In recent years, educational institutions worldwide have faced the necessity of revising their curricula due to increasingly complex work environments, rapid technological advancements, and escalating competitive pressures. These changes have rendered many traditional educational programs—particularly in medical sciences—inadequate in meeting the contemporary requirements of clinical, hospital, and managerial settings. Consequently, effective, systematic, and efficient curriculum revision has emerged as a critical prerequisite for enhancing the quality of medical education; a revision that must be grounded in real-world professional needs, with a focus on developing the scientific, managerial, and practical competencies of graduates (1).

All nations, regardless of their developmental status, undergo significant transformations and encounter complex challenges that necessitate strategic planning and the continuous updating of educational policies and methods. In the past decade, several leading educational systems have emphasized decentralized curriculum planning, content modernization, and the integration of flexibility into educational processes (2).

For developing countries, such as Iran, the formulation of curricula aligned with labor market demands and the systematic revision of higher education structures are of paramount importance. Economic crises, fiscal constraints, and structural shifts in the healthcare system have increasingly compelled various healthcare sectors—including hospitals—to move toward privatization to alleviate the financial burden on the state (3). In such a context, the mere provision of educational infrastructure within universities is insufficient to ensure optimal graduate performance. What is essential is the training of capable, updated, and practically skilled human resources who can play an effective role in the health system through revised educational programs.

According to various studies, challenges within health systems are rooted in factors such as a shortage of specialized human resources, maldistribution of personnel, limited facilities and equipment, deficiencies in medical education, a lack of effective continuing education and internship programs, fiscal constraints, and a failure to align curricula with operational needs (4). Furthermore, a significant yet often overlooked issue is the inadequate participation of faculty members in the design, implementation, and updating of curricula—a factor that directly impacts the quality of higher education (5).

Against this backdrop, Health Economics serves as a pivotal discipline in the economic and social development of the healthcare system. The primary goal of human resource planning in health is to train efficient, specialized professionals who can address the needs of the health system at various levels through appropriate placement. In recent years, one of the significant challenges facing the Ministry of Health and Medical Education has been the shortage of competent professionals in financial and economic domains—experts capable of leveraging health economics knowledge to make optimal decisions regarding productivity enhancement, reduction of unnecessary costs, improvement of economic processes, and increased satisfaction among staff and patients (6).

The field of Health Economics in Iran was established in 2000, with the admission of the first cohort of Master's students at the School of Health Management and Information Sciences, Iran University of Medical Sciences. The objective was to train specialized human resources to analyze and monitor economic aspects of the health sector, evaluate hospital and insurance costs and revenues, facilitate economic decision-making in medical centers, and improve the effectiveness and efficiency of managerial units within the health system. Over the past two decades, this discipline has played a significant role in training experts and analysts in health economics; however, a persistent question remains: do graduates possess the necessary practical and specialized competencies to meet

the actual needs of clinical and managerial environments?

More than two decades after the establishment of this program, and given the increasing importance of cost management, economic analysis of health services, and hospital productivity, there is a pressing need to precisely examine the expectations of senior and middle-level health system managers regarding the competencies of Health Economics graduates. This study aims to identify these expectations, shed light on the gap between the current and desired status, and provide the necessary groundwork for improving curriculum planning, enhancing educational effectiveness, and developing the professional competencies of graduates. Undoubtedly, the findings of this study may serve as a significant step toward identifying facilitating factors and barriers to the development of this discipline, ultimately contributing to the improvement of public health standards.

Methodology

Study Design

This study employed a qualitative research design using the Conventional Content Analysis approach. The primary objective was to identify and elucidate the perspectives and expectations of experts and health sector managers regarding the competencies required for Health Economics graduates.

Data Collection

Data were collected through semi-structured interviews. An interview guide was developed based on the research objectives, featuring open-ended questions to allow participants to express their perspectives and experiences comprehensively. Interviews were recorded following the acquisition of informed consent and were subsequently transcribed verbatim. The interview process continued until data saturation was reached, defined as the point at which no new information emerged and thematic repetition was observed in the final interviews.

Sampling and Participants

The sample size was determined based on the principle of data saturation; therefore, no predetermined sample size was established. Participants were selected using a purposive (judgmental) sampling method. The inclusion criteria comprised having an academic background in Health Economics, Health Services Management, or Health Policy, and/or possessing relevant professional experience in hospital management, deputy of treatment, or health economics within medical universities. Furthermore, a minimum of five years of professional experience was prioritized in the selection process. Given the qualitative nature of this study, no statistical methods for numerical analysis or hypothesis testing were employed; the focus remained strictly on the content analysis of textual data.

Data Analysis

Following the verbatim transcription of the semi-structured interviews, data were analyzed using the Conventional Content Analysis method. Consequently, concepts and categories were derived directly from the data, without the application of any pre-existing theoretical framework. The data analysis procedure was conducted in the following stages:

1. Transcription and Immersion: Complete transcription of interviews and repeated listening to audio files to gain a comprehensive understanding of the overall content.
2. Coding: Identification of meaning units and extraction of initial codes from the interview transcripts.
3. Categorization: Grouping similar codes into subcategories and main categories based on conceptual similarities.
4. Thematic Development: Examining the relationships between categories and forming final themes that represent the key concepts of the study.
5. Final Review: A final review of the data to ensure conceptual coherence and the clarity of the themes.

The processes of coding, categorization, and data organization were performed using MAXQDA (version 10) software to systematically map the relationships between categories and the frequency of recurring concepts. The analysis results were synthesized into tables and a conceptual model, which served as the foundation for interpreting the findings.

Results

Following the transcription and implementation of the semi-structured interviews, the collected textual data were analyzed using the Conventional Content Analysis method. During the analysis process, the interviews were read multiple times, and initial codes were extracted based on semantic units. Subsequently, codes with conceptual similarities were classified into sub-themes and main themes. Ultimately, four main themes and eleven sub-themes were identified. These themes reflect the participants' most critical perspectives and attitudes regarding the position, role, and necessity of Health Economics graduates within the country's health education and management systems.

Detailed Analysis of Themes

1. Analytical and Decision-making Competencies in Health

This theme highlights the importance of analytical skills in health management and economic decision-making. Participants emphasized that health economics experts should contribute to macro-level health decisions by conducting cost-benefit and cost-effectiveness analyses of clinical interventions. Furthermore, understanding hospital performance indicators—particularly cost-to-revenue ratios and service utilization rates—is considered an essential skill.

2. Managerial and Executive Skills in Health Organizations

Interviews revealed that health managers consider the lack of financial and executive skills within hospital management structures as a primary challenge. Specialists in health economics are expected to classify expenditures, identify sources of inefficiency, and propose budget optimization strategies. Additionally, proficiency in financial tools and negotiation techniques with insurance organizations is highly valued.

3. The Role of Health Economics in Health Policy and Governance

This theme addresses the key role of health economics in the policymaking process. Participants expressed a strong expectation for health economics experts to participate actively in drafting macro policies and to analyze national decisions from both economic and equity-oriented perspectives. Particularly in national initiatives like the Health Transformation Plan, the presence of these experts is crucial to prevent financial imbalances.

4. Organizational Status and Challenges

A prominent finding involves structural issues regarding the employment of health economics specialists. Participants stressed that these graduates, despite their advanced scientific training, lack official status in the organizational charts of universities and hospitals. This lack of defined positions leads to fragmented and non-strategic recruitment. All participants recommended the development of formal job descriptions and dedicated organizational positions for these professionals.

Conceptual Model of Findings

The conceptual model derived from this study illustrates that the role and status of health economics specialists in the health system are shaped by the interaction of three primary dimensions:

1) Analytical Competencies, 2) Managerial and Executive Skills, and 3) Role in Policy and Governance.

These dimensions function complementarily to facilitate evidence-based decision-making. Analytical competencies serve as the foundation, providing the tools (HTA, economic modeling, etc.) to assess the efficiency of interventions. Managerial and executive skills act as the bridge,

applying these economic analyses to operational hospital management and resource optimization. Finally, the role in policy and governance ensures that macro-level health decisions are economically and socially sustainable.

The findings suggest that the efficacy of the health system in managing resources and promoting equity depends on the simultaneous development and integration of these three dimensions. A lack of any of these components creates a gap between theory and practice, necessitating improved educational curricula and active inclusion of these experts in health sector management.

Table 1. Themes and Sub-themes

Main Theme	Sub-themes	Conceptual Description
Analytical and Decision-making Competencies	Cost-benefit and cost-effectiveness analysis; interpretation of hospital performance indicators; health technology assessment (HTA); economic modeling.	Health economics experts must support investment and resource allocation decisions with a scientific, evidence-based approach.
Managerial and Executive Skills	Familiarity with hospital financial processes; revenue and cost management; operational planning; operational budgeting skills.	Hospital financial structures require specialists to identify resource waste and optimize budgets.
Role in Health Policy and Governance	Financial evaluation of national plans (e.g., Health Transformation Plan); providing equity-oriented health analyses.	Macro-level policymaking should be proactive to anticipate and explain the financial and social implications of policies.
Organizational Status and Challenges	Lack of formal job descriptions; absence of designated organizational positions; fragmented recruitment.	Despite high scientific proficiency, graduates lack formal roles, necessitating clear recruitment mechanisms.

Discussion

The findings of this study demonstrate that the professional role of health economics specialists within the Iranian health system is defined by three key dimensions: 1) analytical competencies and economic evaluation, 2) managerial and resource planning skills, and 3) participation in health policy and governance. These dimensions are not only complementary but also form an interactive cycle that can significantly influence the performance of the healthcare system.

Regarding analytical competencies, the findings emphasize that health economics specialists must possess proficiency in cost-effectiveness analysis, Health Technology Assessment (HTA), economic impact analysis, and complex modeling. These findings are consistent with global literature. For instance, Tret et al. (2018) state that “economic analysis acts as the cornerstone of evidence-based decision-making in modern health systems,” noting that countries failing to utilize such analyses frequently suffer from resource waste and sub-optimal budget allocation (7). Furthermore, the World Health Organization (WHO, 2021) has repeatedly emphasized that nations must utilize economic analysis to select cost-effective interventions and policies.

In the realm of operational management and planning, the current study reveals that hospitals are in urgent need of personnel capable of analyzing cost structures, financial processes, sources of waste, and procedural cost-effectiveness. This aligns with numerous international reports regarding the financial crises in hospitals. According to studies by Miller et al. (2020), hospitals in many countries exhibit operational waste ranging from 20% to 30%, which could be controlled through scientific health economics management (8). Similarly, a World Bank report (2020) indicates that countries that have established health economics units within their hospitals have successfully reduced operational costs by 15–25%.

At the level of policy and governance, the findings demonstrate that the presence of health economics specialists can improve the quality of

macro-level decisions. Countries such as the UK, Canada, and Australia concluded in the 1990s that without the active participation of economic analysts, health policies would not be sustainable in the long term. For example, the National Institute for Health and Care Excellence (NICE) in the UK serves as a successful model for integrating health economics into policymaking, having significantly reduced unnecessary health system costs (NICE, 2019). These global experiences suggest that integrating health economics in Iran could prevent costly policymaking errors.

Furthermore, the results indicate that structural challenges in the Iranian health system—including fiscal pressure, hospital inefficiency, lack of financial transparency, shortage of standardized data, and weaknesses in strategic purchasing mechanisms—have intensified the necessity of employing health economics. This is consistent with official reports from the Ministry of Health and the Parliament Research Center, which have repeatedly highlighted the inefficiency of resource allocation and rising unnecessary costs within the health sector.

On the other hand, the results show that the field of health economics in Iran remains nascent and has yet to fully secure its operational position within the health system since its establishment in 2000. This observation is reflected in domestic literature; for instance, Nikouei (2017) notes that "health economics has not yet been institutionalized within the decision-making structure of the Iranian health system, and a significant volume of macro-decisions are made without economic analysis" (9).

Based on this evidence, it can be concluded that the findings of the present study are consistent with global literature and hold significant practical implications. This study underscores that the role of health economics is not merely theoretical; it must be institutionalized across various levels of health system management and governance.

Conclusion

In conclusion, this study demonstrates that Health Economics is a pivotal discipline in enhancing the efficiency, equity, and sustainability of the healthcare system. Specialists in this field can directly impact the performance of the health system through economic analysis, resource management, and active participation in policymaking. The conceptual model developed in this study highlights that the three dimensions—analytical competencies, managerial skills, and policymaking roles—operate as an interactive cycle, where the strengthening of one inherently contributes to the advancement of the others.

To effectively leverage the role of Health Economics in Iran, it is essential to institutionalize this field within hospitals and health insurance organizations and ensure the increased presence of experts in macro-level policymaking and the development of health service packages. Furthermore, achieving these goals requires the development of standardized data and health information systems, the revision of educational curricula to align with practical system needs, and the enhancement of strategic purchasing processes through a cost-effectiveness approach. Ultimately, Health Economics can serve as a cornerstone for the Iranian health system's transition toward greater efficiency, equity, and financial sustainability, provided that its organizational and structural status is formally strengthened.

References

1. A, B. (2004). Management in health. Gap Publication.
2. A, M. M. P. (2003). Health graduate's nationwide employment status over the years 1375–1382. Journal of Semnan University of Medical Sciences, 4(2), 55–62.
3. Fathi Vajargah, K. M., & H, H. (2008). Investigation of the role of effectiveness factors in academic curriculum planning. Journal of Educational Planning, 1(2), 15–30.
4. Mchayekh, F. (2008). New perspectives in educational planning (8th ed.). Madreseh Publications.
5. Miller, P., Johnson, K., & Smith, D. (2020). Hospital operational inefficiencies: A systematic

review. Journal of Health Management, 22(3), 345–360.
6. Nikooyi, A. (2017). Health economics and policymaking in the Iranian health system. Journal of Health Economics, 5(1), 22–38.
7. Salsebily, N. (2007). The transition of Iran's curriculum planning system towards decentralization of curriculum design and curriculum development, with emphasis on school-based curriculum. Journal of Curriculum Studies, 1(4), 49–68.
8. Steinert, Y. (2012). Perspectives on faculty development: Aiming for 6/6 by 2020. Perspectives on Medical Education, 1(1), 31–42. https://doi.org/10.1007/S40037-012-0006-3
9. Trett, K., & Olsen, J. (2018). Economic evaluation as a foundation for evidence-based health policy. Health Economics Review, 8(1), 12–25.