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Original Article

Evaluation of Resources and Services Managements in Hospital Libraries: A Comparative Analysis Based on Iranian Hospital Library Standards

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Abstract

Introduction: In providing evidence-based services, as well as easy access to the needed information, hospital libraries hold a significant position in serving various users, including healthcare practitioners, patients, and their family caregivers. This study aims to assess the hospital libraries affiliated with the Ministry of Health and Medical Education (MOHME) in Iran, based on the national standard approved by the National Standard Organization in 2021.

Methods: This study is an applied research with a descriptive survey methodology. The statistical population comprises 213 hospital libraries from 60 universities of medical sciences affiliated with the MOHME of Iran. Data was collected using a researcher-developed checklist derived from the national standard book of hospital libraries. Data analysis was performed using SPSS software.

Results: The current research results indicate that most hospital libraries in medical universities across Iran meet the Resources Management. Conversely, the majority of hospital libraries do not meet Service Management standards. Specifically, more than half of these libraries comply with the requirements for Information Resources Management and Information Technology Resources Management, and less than half of the libraries Services Management standards.

Conclusion: MOHME-affiliated hospital libraries have fundamental weaknesses in the critical components of Service Management standards and have strength in Resources Management standards, i.e., Information Resources Management and most Information Technology Resource Management standards. In order to ensure the well-being of patients, their families, and users, it is imperative that officials and stakeholders take concrete steps to enhance services, improve the quality of patient care, and ultimately boost overall users' satisfaction levels.

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Introduction

Hospital libraries provide healthcare professionals with access to a wide variety of evidence-based resources such as medical journals, textbooks, clinical guidelines, and databases. These resources help physicians make informed decisions about patient care and stay up-to-date with the latest research findings (1). Additionally, hospital libraries take on the responsibility of providing educational support to healthcare professionals through educational sessions, workshops, and

access to online learning platforms. These valuable measures empower professionals to continuously enhance their knowledge and skills throughout their professional journey (2). By providing access to valuable health information, hospital libraries contribute to enhancing the overall patient experience and promoting patient-centered care. Patients who utilize these resources are better equipped to engage with healthcare providers, ask relevant questions, and actively participate in discussions about their health, improving the quality of care they receive and fosters a sense of empowerment and autonomy in managing their well-being (3). The role of clinical librarians in evidence-based medicine is crucial in providing informed evidences to medical staff and patients for informed decision-making. Additionally, clinical librarians play a crucial role in enhancing patient health literacy, increasing their understanding of their condition, providing essential education to both patients and their caregivers, and ultimately improving their overall health (4-7).

Nowadays, standards are crucial in individuals' daily lives and the advancement of societies (8). Scientific methods have gradually replaced traditional methods through the implementation of these standards. Hospital library standards are particularly essential as they ensure these facilities' effective and efficient functioning. Furthermore, these standards are integral in the accreditation process for continuing medical education, leading accreditation organizations to adopt specific library standards and involve librarians in the accreditation procedures (9). Moreover, the standards of practice for hospital libraries and librarians shed light on the crucial tasks undertaken by hospital librarians as they assist in the progression of information systems projects, ultimately leading to advancements in patient safety (10).

The significance of evaluating hospital libraries cannot be overstated, as it allows for the demonstration of their value to essential stakeholders such as hospital administrators and funding agencies. By gathering data on the impact of library services on patient care outcomes, research productivity, and cost savings resulting from access to reliable information sources, libraries can provide concrete evidence of their contribution to the overall mission of the healthcare institution. This evaluation process serves as a means to highlight the essential role played by libraries in the healthcare ecosystem (11). As technology evolves rapidly, it is imperative for libraries to assess their digital infrastructure and ensure that they provide access to up-to-date electronic resources and tools. Additionally, by regularly surveying users and conducting focus groups or interviews, libraries can gather feedback on user preferences and adjust their services accordingly (2).

Failure to adhere to hospital library standards can result in various adverse consequences, including insufficient technological infrastructure, problems with accreditation, restricted resource availability, absence of proper guidance, and compromised patient safety. Therefore, hospital libraries must comply with these standards to operate optimally and fulfill their crucial role as providers of Knowledge-Based Information (KBI) resources (12).

The evaluation of hospital libraries is crucial in ensuring that they meet the standards set by the world regarding independence and resources (10-11, 2, 12-13). Our previous research indicated the importance of evaluating hospital libraries of medical sciences regarding the evaluation of two standards of Organization and Resources Management (Human Resources and Physical, Environmental, and Equipment Resources managements). By assessing the organizational structure, financial independence, and the presence of specialized librarians and adequate facilities, this study provides valuable insights into the current state of MOHME-affiliated hospital libraries (14). Accordingly, the present study aims to assess two standards of Resources Management (Information Resources and Information Technology Resources managements) and Service Management Resources in hospital libraries based on national standards.

Furthermore, being the first national-level evaluation, this study offers a comprehensive overview of all medical science university hospital libraries, aligning them with the national standard. This evaluation serves as a foundation for further improvements and enhancements in the functioning

and quality of hospital libraries, ultimately benefiting the users and the overall healthcare system.

Methods

This evaluation study serves an applied purpose and adopts a descriptive cross-sectional study. The statistical population comprises 213 hospital libraries affiliated with 60 universities of medical sciences in Iran affiliated with the Ministry of Health. A checklist was utilized to collect the necessary data, incorporating parameters derived from the book "Standard for Hospital Libraries" (15).

The present study focused on evaluating the national Resources Management standard, including Information Resource Management, Information Technology Resource Management, and Services Management standards. The checklist consists of two main standards: Resources Management and Service Management standards.

1. Resources Management standard, including two sections: I) Information Resources Management, including six components: Existence of a documented collection policy, Acceptance of donated resources based on the policy of library services, Existence of a written weeding policy, Weeding based on the opinion of the managers of educational groups, Having a standard number of books and resources required by the library, and Regular evaluation of information sources; II) Information Technology Resources Management, including eight components: Existence of specialized library software, Existence of wireless Internet, Installation of an infrastructure to connect to the Internet through the reading desk, Existence of a library website, Access of library staff to dedicated computers, Online access of staff and users to scientific resources and databases, Existence of clear guidelines authorized use of workstations, obligations and responsibilities of the user in the library policy, Receiving necessary training regarding the use of software and hardware by staff and users.

2. Services Management standard, including 16 components: Having a clear policy of access to library services, Users' access to electronic resources, Providing educational services by the library to patients and their families, Information literacy training to librarians and users, Providing information services through the library website, Providing information services through social networks, Providing information services through newsletters, Providing information services through bulletin boards, Providing information services through electronic notice boards, Providing information services through RSS, Alert, Newsfeed, Providing information services through the SMS sending system, Providing information services through group e-mail, Providing information services through brochures and guides, Providing services inter-library cooperation, Providing specialized services for patients, and Providing document delivery services at the patient's bedside.

Subsequently, the checklist was distributed to all medical sciences universities in Iran via an official communication from the Ministry of Health's Center for Development and Coordination of Scientific Information and Publications. The communication was then directed to the Director of Scientific Resources and Central Library Head by each university's Research and Technology Vice-Chancellor. Once the library head completed the checklist, it was sent back to the Ministry of Health along with relevant documents or via an organizational email. The data collected from the checklist evaluation of parameters and components were shared with the researcher, who then inputted the data into SPSS software for analysis. Furthermore, the checklist's validity was assessed by experts in medical library and information science who were involved in developing hospital library standards.

Results

The evaluation of 213 hospital libraries from 60 universities of medical sciences was conducted in the current study. As a result, the study provides descriptive statistics pertaining to the assessed libraries.

As shown in Table 1, among the hospital libraries, the highest compliance with the Information Resources Management standard related to "Regular evaluation of information resources component," with 193 (90.6%) libraries, "Acceptance of donated

resources based on the policy of library services," with 180 (84.5%) libraries. Conversely, the lowest compliance with the Information Resources Management standard related to the "Weeding based on the opinion of the managers of educational groups," with 161 (75.6%) libraries.

Table 1. The evaluation of the information resources management components in the MOHME-affiliated hospital libraries

Information Resources Management	Compliance with hospital library standards (n=213)	
	Yes	No
	Number (Percent)	Number (Percent)
Existence of a documented collection policy	167 (78.5%)	46 (21.5%)
Acceptance of donated resources based on the policy of library services	180 (84.5%)	33 (15.5%)
Existence of a written weeding policy	177 (83.1%)	36 (16.9%)
Weeding based on the opinion of the managers of educational groups	161 (75.6%)	52 (24.4%)
Having a standard number of books and resources required by the library	168 (78.9%)	45 (21.1%)
Regular evaluation of information resources	193 (90.6%)	20 (9.4%)

Table 2. The evaluation of the information technology resources management components in the MOHME-affiliated hospital libraries

Information Technology Resources Management	Compliance with hospital library standards (n=213)	
	Yes	No
	Number (Percent)	Number (Percent)
Existence of specialized library software	201 (94.4%)	12 (5.6%)
Existence of wireless Internet	168 (78.9%)	45 (21.1%)
Installation of an infrastructure to connect to the Internet through the reading desk	96 (45.1%)	177 (54.9%)
Existence of a library website	212 (99.5%)	1 (0.5%)
Access of library staff to dedicated computers	208 (97.7%)	5 (2.3%)
Online access of staff and users to scientific resources and databases	208 (97.7%)	5 (2.3%)
Existence of clear guidelines authorized use of workstations, obligations and responsibilities of the user in the library policy	146 (68.5%)	67 (31.5%)
Receiving necessary training regarding the use of software and hardware by staff and users	110 (51.6%)	103 (48.4%)

According to Table 2, among the hospital libraries, the highest compliance with the Information Technology Resources Management standard related to "Existence of a library website," with 212 (99.5%) libraries, "Access of library staff to dedicated computers," with 208 (97.7%) libraries, and "Online access of staff and users to scientific resources and databases," with 208 (97.7%) libraries. Conversely, the lowest compliance with Information Resources Management standard related to the "Installation of an infrastructure to connect to the Internet through the reading desk," with 177 (54.9%) libraries.

Table 3. The evaluation of the services management components in the MOHME-affiliated hospital libraries

Services Management	Compliance with hospital library standards (n=213)	
	Yes	No
	Number (Percent)	Number (Percent)
Having a clear policy of access to library services	172 (80.8%)	41 (19.2%)
Users' access to electronic resources	192 (90.1%)	21 (9.9%)
Providing educational services by the library to patients and their families	31 (14.6%)	182 (85.4%)
Information literacy training to librarians and users	80 (37.6%)	133 (62.4%)
Providing information services through the library website	163 (76.5%)	50 (23.5%)
Providing information services through social networks	72 (33.8%)	141 (66.2%)
Providing information services through newsletters	37 (17.4%)	176 (82.6%)
Providing information services through bulletin boards	127 (59.6%)	86 (40.4%)
Providing information services through electronic notice boards	14 (6.6%)	199 (93.4%)
Providing information services through RSS, Alert, Newsfeed	8 (3.8%)	205 (96.2%)
Providing information services through the SMS sending system	35 (16.4%)	178 (83.6%)
Providing information services through group e-mail	39 (18.3%)	174 (81.7%)
Providing information services through brochures and guides	112 (52.6%)	101 (47.4%)
Providing services inter-library cooperation	89 (41.8%)	124 (58.2%)
Providing specialized services for patients	21 (9.9%)	192 (90.1%)
Providing document delivery services at the patient's bedside	27 (12.7%)	186 (87.3%)

As Table 3 presents, among the hospital libraries, the highest compliance with the Services Management standard related to "Users' access to electronic resources," with 192 (90.1%) libraries," "Having a clear policy of access to library services," with 172 (80.8%) libraries, and "Providing information services through the library website," with 163 (76.5%) libraries. On the other hand, the lowest compliance with Information Resources Management standard related to the "Providing information services through the SMS sending system," with 8 (3.8%) libraries, "Providing information services through electronic notice boards," with 14 (6.6%) libraries, "Providing specialized services for patients," with 21 (9.9%) libraries, "Providing document delivery services at the patient's bedside," with 27 (12.7%) libraries.

Discussion

The present study evaluated MOHME-affiliated hospital libraries of Iran based on the two standards of Resources Management standard, including two sections: Information Resources Management and Information Technology Resources Management, as well as Service Management standards extracted from the book of Standard for Hospital Libraries in Iran.

According to our previous evaluation research, the importance of evaluating hospital libraries of Iranian medical sciences based on national standards was felt more than before (14). Thus, it was necessary to evaluate other dimensions of hospital libraries.

Based on the results obtained from the evaluation of hospital libraries, in the components related to Information Resource Management standard, more than 90% of the libraries in the component of

"Regular evaluation of information resources" meet the standard. More than 84% of the libraries in the component of "Acceptance of donated resources based on the policy of library services," and more than 83% of the libraries in the component of "Existence of a written weeding policy" acted based on the standard.

Okeke et al. (16), Ekene et al. (17), and Qaraei and Jafarzadeh Kermani (18) showed that the status of the collection of information resources in most hospitals is below the standard level, which is not in line with the component of "Having a standard number of books and resources required by libraries" in the present study. Furthermore, the study of Qaraei and Jafarzadeh Kermani indicated that in terms of policy, weeding, and updating of resources, 76.9% of libraries had policies, and they were regularly weeded and updated (18), consisting with the present study regarding the "Existence of a written weeding policy" and "Weeding based on the opinion of the managers of educational groups" components. Regarding evaluating the components of "Accepting donated resources based on the policy of library services" and "Regular evaluation of information resources," no research was found, and this study is unique in evaluating the above two components based on the national standard.

The current study's results demonstrated that in the evaluation of hospital libraries based on Information Technology Resources Management standard, more than 99% of the libraries in the component of "Existence of a library website" meet the standard. In addition, more than 97% of the libraries in the component of "Access of library staff to dedicated computers" and "Online access of staff and users to scientific resources and databases," and more than 94% of the libraries in the component of "Existence of specialized library software" comply with the national standards. The findings of Qaraei and Jafarzadeh Kermani (18), Rakhsh et al. (19), and Bigdeli et al. (20) align with the results of this study in terms of utilizing contemporary technologies and Internet and wireless network infrastructures for accessing information and scientific resources, as well as facilitating seamless connectivity to online systems and resources in hospital libraries.

Conversely, in the component of "Installation of an infrastructure to connect to the Internet through the reading desk" only 45.1% of hospital libraries comply with standard. Similarly, less than 50% and 52% of libraries act according to the standard in the two components of "Installation of internet connection infrastructure through study desk" and "Existence of clear instructions on the permitted use of workstations, obligations and responsibilities of the user in the library policy," respectively. In general, these two components emphasize easy and convenient connection to the Internet, compliance with the rules and regulations of Internet use, and access to authorized sites and classified access for users. Unfortunately, most libraries generally perform poorly in the above two components and do not comply with the standard. Regrettably, no research was found on evaluating the above two components based on the available standards.

In the Service Management standard, in the component "Providing educational services by the library to patients and their families," only 14.6% of libraries comply with the standard. Unfortunately, even the studies conducted in Iran did not address the noted component, showing that this type of service was neglected among libraries.

Nevius et al. (21) in their study emphasize the training of librarians to target groups, including medical students, whose findings are not in line with the recent component of this research. In addition, the 2022 document Standards of Practice for Hospital Libraries and Librarians (10), Australian Health Libraries Standard (22), Canadian Hospital Library Standards (23) and Standards for Irish healthcare library and information services, second edition (24), emphasized the importance of training librarians to patients and their families.

In the component "Information literacy training for librarians and users," less than 50% of all libraries comply with the standard, which was far from expected regarding information literacy training for librarians. Lewis et al. utilized the results of their research project to create a structured, modular training framework. This framework includes a postgraduate degree program in medical librarianship and a continuing professional development structure

that facilitates a three-year cycle of certification and training (25). However, notably, this framework does not align with the current study's findings. The outcomes of the components mentioned above indicate that hospital libraries need to meet national and international standards in delivering services to patients, their families, and librarians who prioritize educational services.

In the component of "Providing specialized services for patients," less than 10% of libraries comply with the standard. In the component of "Providing document delivery services at the patient's bedside," less than 13% of libraries operate in accordance with the standard. Okeke et al. conducted a study to improve quality healthcare services. The non-delivery of documents and the lack of information resources needed to provide services for medical library users to provide quality health services were among their findings, which align with the results of the present study. Similarly, Farrell and Mason evaluated the impact of services such as document search on patient care without the need to spend much time on the part of library users (26), which is not in line with the findings of this study. Considering the importance of providing specialized services and delivering patient documents to improve the quality of treatment and patient care, these two components are of particular importance. Besides, all existing standards and guidelines emphasize compliance with these standards, which ultimately leads to patient and family satisfaction.

In the assessment of other aspects of the Services Management standard, the components of "Providing information services through social networks" accounted for 33.8%, "Providing information services through newsletters" accounted for 17.4%, "Providing information services through electronic notice boards" accounted for 6.6%, "Providing information services through RSS, Alert, Newsfeed" accounted for 3.8%, "Providing information services through SMS sending system" accounted for 16.4%, "Providing information services through group e-mail" accounted for 18.3%, and "Providing inter-library cooperation services" accounted for 41.8 % revealed that libraries have a fundamental weakness in complying with national standards. Unfortunately, no study was found on meeting the above components related to the Service Management standard.

Conclusion

The evaluation of hospital libraries based on the national standards indicates that the performance of hospital libraries in all components related to the Information Resources Management was favorable and they function according to the standard. On the other hand, hospital libraries in crucial components such as convenient and easy access to the Internet and the development of infrastructure for easy and fast access to scientific and information databases (Information Technology Resources Management Standard), providing educational services by the library to patients and their families, information literacy training to librarians and users, providing inter-library cooperation services, providing specialized services to patients and treatment staff, and delivery of documents at the patient's bedside (Service Management Standard) have fundamental weaknesses and do not operate according to the standard. Hence, it is crucial for library and hospital managers, along with their parent organizations, to address issues related to non-compliance with standards. These standards have proven effective in delivering services to library users. Undeniably, achieving these standards will enhance the quality of patient care, ultimately resulting in the satisfaction of both patients and their families.

Declaration

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Conflicts of Interests

The authors declared no conflict of interest.

Ethical Statement

The current research is extracted from the Master's thesis; therefore, all ethical principles have been observed.

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Authors' contributions
All authors participated in all stages of this study.

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