

Perceptions of Medical Librarians Towards the Importance of Information Literacy Skills

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The purpose of this study was to find out medical librarians' perceptions towards the importance of information literacy (IL) skills. A structured questionnaire, consisting of eight IL skills, was administered to the head librarians of all academic medical institutions in Pakistan. The respondents were asked to rate the importance of IL skills for their users on a 5-point Likert scale (1- Least important to 5-Most important). A total of 69 (60.5 %) usable questionnaires were returned out of 114 disseminated to the respondents. The IL skills about "accessing the needed information effectively and efficiently", "identifying relevant, authoritative and reliable information sources", "recognizing the need for information", "verifying the relevance and quality of information sources" and "using information ethically and legally" got mean scores exceeding four from head librarians of both public and private sector medical institutions. However, IL skill "evaluating the information critically" received mean score less than four i.e., 3.94 from public sector medical librarians and IL skills "organizing information collected or generated in a logical way" and "using the selected information effectively to accomplish a specific task" although considered important but got lower mean scores (3.97 each) from private sector medical librarians. Respondents from both public and private sector medical institutions had considered all the eight IL skills important for their library users, meaning that library users must be adequately equipped with information competencies.

Keywords: Information literacy, Information Skills, Perceptions, Medical librarians, Pakistan.

Introduction

Since dawn of the 21st century significant initiatives have been taken in the developed world by library and information professionals (LIPs) and various organizations for the adoption and promotion of information literacy (IL). Lately, this area has got attention of information professionals in the developing countries also. UNESCO offers specific grants to train LIPs in the developing countries (Tilvawala, Myers, & Andrade, 2009). However, Pakistan has made some progress in recognizing the importance of IL skills.

The imparting of IL instruction has been devised in the form of some peculiar standards, which have been developed by various organizations. The Association of College and Research Libraries (ACRL) has published the "Information literacy competency standards for higher education in 2000. This document includes five standards along with performance indicators and learning outcomes. It began to influence the higher education institutions of all countries about the essential need for students to be information literate. ACRL standards state that the information literate student: (a) "determines the nature and extent of the information needed", (b) "accesses needed information effectively and efficiently", (c) "evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system", (d) "individually or as a member of a group, uses information effectively to accomplish a specific purpose" (e) "understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally"

(ACRL, 2000). In 2014, these standards were revised significantly to "ACRL information literacy framework for higher education" (ACRL, 2015).

The literature shows that librarians in Pakistan have been providing library orientation and guided library tours to the new entrants (Anwar, 1981). They have also been engaged in user education through library and bibliographic instruction, to make their users aware of the library resources and services and to train them to search their required material in the library (Bhatti, 2012).

However, the concept of information literacy (which has a much wider connotation than user education) is quite new in Pakistan. Wijetunge and Alahakoon (2005) have defined the information literacy as "the ability to identify, locate, evaluate, organize, and effectively create, use and communicate information to address an issue or a problem" (p.31). It was in 2008 when first time IL instruction was included in the curriculum of library and information science (LIS), University of the Punjab (Ameen & Gorman, 2009). The first significant writing with the term of information literacy (IL) in local perspective was by Ameen and Gorman (2009). Also the Higher Education Commission (HEC) of Pakistan in 2009 had included a six credit course on IL instruction in the curriculum of Library and Information Science for BS 4-year programme (Higher Education Commission Pakistan, 2009). Now the question arises whether librarians in Pakistan view IL as important skills for their library users.

Objectives of the study

The explosion of medical information demands that the relevant, reliable and quality information could be searched in a short span of time. The requirement of IL skills also arises due to the introduction of problem-based learning (PBL) in the medical education and evidence-based practice (EPB) for clinical decision making based on the best available evidence from research or practice (Lwoga, 2013). There is a dire need to adopt and promote IL skills in medical organizations. Pakistan Medical and Dental Council (PM & DC) is the accrediting body of medical institutions in Pakistan. It states that professional staff should "supervise the library & information services and provide instruction in accessing resource to the users" (Pakistan Medical & Dental Council, 2012, p. 54). However, studies revealed that medical librarians in Pakistan were not very much involved in instructional activities (Ullah, Kanwal & Bakhtiar, 2010/2011; Ullah & Anwar, 2012). So this aspect needs to be explored in detail

considering its importance in the modern age and to help users in developing lifelong learning skills.

The objective of this study was to answer the following research questions:

1. What are the perceptions of medical librarians towards the importance of IL skills for their library users?
2. Are there differences in the perceptions of the head librarians employed in public sector medical institutions and those employed in private sector medical institutions?
3. Are there differences in the perceptions of the head librarians employed in medical colleges, postgraduate medical institutes and medical universities?

Literature Review

Librarians, faculty and students are the major stakeholders of IL (Lwehabura, 2007). They need to appreciate its importance in order to initiate and develop IL instruction programs in academic institutions (ALA, 1989; ACRL, 2001). IL instruction is one of the core mandates of librarians which are also supported by international LIS associations (AASL, 2007; ACRL, 2001; ALA, 1989; Bundy, 2004; CILIP, 2004; Lau, 2006; MLA, 2005). Therefore, it is essential for librarians to recognize the importance of IL skills to prepare themselves for imparting IL instruction programs. McGuinness (2009) revealed that 77 percent librarians of higher education institutions in Irish Republic considered IL instruction "very important" or "absolutely essential" as part of their professional services. Aharony and Bronstein (2014) conducted a mixed method study to explore the Israeli academic librarians' perceptions on IL. One of their findings was that respondents believe teaching IL is more a library role than a faculty role.

Many studies have been conducted around the world on the faculty perceptions of information literacy skills (Baro 2011; Blau, 2012; Bury, 2011; Chan, 2003; Gullikson, 2006; Julien & Boon, 2004; Leckie & Fullerton, 1999; Lwehabura, 2007; Lwoga, 2013; McGuinness, 2006; Nilsen, 2012; Saunders, 2012; Weetman, 2005). In general, studies found that faculty deemed IL skills important for their students and supported development of IL skills and knowledge among students. In Pakistan, Ameen and Gorman (2009) considered IL illiteracy as an obstacle to development in all spheres of life. Ameen and Gorman also highlight that the developed world explanations of IL may not be applicable to the developing countries. Kousar (2010) conducted

questionnaire survey to know engineering faculty perceptions about M. Phil and PhD student's IL skills, using ACRL standards for assessment. Kousar found that faculty perceived PhD students better than M. Phil students in information skills. She also revealed that faculty was willing to work with librarians for the improvement of students' IL skills. Batool and Mahmood (2012) surveyed the teachers of three private schools located in Lahore city, to measure their perceptions about IL skills of their 3rd grade students. Batool and Mahmood found that the teacher's perceived IL skills of their students were good or adequate. They recommended that the IL skills of students might be improved by providing proper learning facilities and infrastructure.

Morrison (1997) conducted a focus group study to explore undergraduate students' perceptions of IL skills at College of Alberta, Concordia University. The students perceived locating, evaluating and effectively using information as valuable skills, however, they did not consider "recognizing a need for information" as an actual skill. Gross and Latham (2009) interviewed the undergraduates to know their perceptions of information literacy. They found that all the participants of the study were quite ignorant of the term "information literacy", while students had proficient information literacy skills. The students may be able to find information, but may not possess adequate skills to assess the quality and accuracy of information, and legal and ethical use of information (Williams & Wavell, 2007).

Although IL is considered an important skill for the digital age, very limited studies has been conducted in Pakistan on the subject. Therefore, this study sought to assess the medical librarians' perceptions towards the importance of IL skills, to obtain empirical findings that may support delivery of IL instruction in higher learning institutions with a particular focus on medical institutions.

Research Method

The survey method was used to achieve the objectives of this study. A structured questionnaire, listing eight information literacy (IL) skills, was prepared keeping in view the local conditions. ACRL (2000) standards, Bundy (2004), Lau (2006), MLA (2005), and Wijetunge and Alahakoon (2005) provided guidelines for the development of questionnaire. The questionnaire was reviewed by a panel of experts for content validation. It was also pilot-tested on a group of medical librarians who were not part of the sample.

The feedback of reviewers and pilot study participants helped in refining the instrument. The researchers performed reliability tests from the responses to all the eight IL skills of the study. The reliability of the survey instrument was tested using Cronbach's alpha level. The overall testing result of the reliability for the instrument was at the alpha level = .893, which represents a high level of internal consistency of the instrument (Cronk, 2012). The questionnaire was distributed among the head librarians of all (114) academic medical libraries in Pakistan. The respondents were asked to rate the importance of IL skills for their library users on a 5-point Likert scale (1- Least important to 5-Most important). The perception of head librarians from public sector and private sector medical institutions about each IL skills in the form of mean, standard deviation (SD) and rank were presented separately. The IL skills were ranked from highest to lowest according to the mean score of head librarians. In case of a tie, the IL skill with the low standard deviation was ranked higher.

Independent-samples t-test was applied to examine whether there were significant differences in the opinions of head librarians employed in public and private sector medical institutions. One-way ANOVA was also applied to know whether there were significant differences in the perceptions of head librarians belonging to the three groups based on type of institutions (medical college, medical university and postgraduate medical institute).

Results

Out of 114 questionnaires distributed among the head librarians of medical institutions, 69 (60.5 %) useable questionnaires were returned after continuous follow-up efforts. Out of 69 respondents who filled the questionnaire, 52 (75.4 %) were males and 17 (24.6 %) were females. A total of 31 (44.9 %) were from public sector and 38 (55.1 %) were from private sector medical institutions. Majority (44, 63.8 %) of the respondents were employed in medical colleges, 11 (15.9 %) in medical universities and 14 (20.3 %) in postgraduate medical institutes.

The perceptions of head librarians from public sector and private sector institutions about each IL skills in the form of mean, standard deviation (SD) and rank are presented separately in Table 1 along with the t-test significance value (p value).

Table 1

Perceived Importance of Information Literacy Skills Along With t-test Results

S. No	Information Literacy Skills	Sector	N	Rank	Mean	SD	Sig. (2-tailed)
1	Accessing the needed information effectively and efficiently	Public	30	1	4.40	.724	.795
		Private	38	2	4.45	.760	
2	Identifying relevant, authoritative and reliable information sources	Public	31	2	4.39	.803	.373
		Private	37	1	4.54	.605	
3	Recognizing the need for information	Public	30	3	4.33	.802	.929
		Private	38	4	4.32	.809	
4	Verifying the relevance and quality of information sources	Public	31	4	4.29	.864	.890
		Private	38	3	4.32	.662	
5	Using information ethically and legally	Public	31	5	4.19	.792	.965
		Private	38	5	4.18	.955	
6	Organizing information collected or generated in a logical way	Public	31	6	4.13	.806	.438
		Private	37	8	3.97	.833	
7	Using the selected information effectively to accomplish a specific task	Public	29	7	4.07	.923	.657
		Private	38	7	3.97	.822	
8	Evaluating the information critically	Public	31	8	3.94	.998	.443
		Private	38	6	4.11	.831	

Table 1 shows that all the eight IL skills got mean scores more than three from both public and private sector respondents and were therefore considered important for library users.

The respondents from public sector institutions had given most of them high rating with seven IL skills receiving mean scores exceeding 4. "Accessing the needed information effectively and efficiently" received the highest mean score of 4.40 and was ranked first, closely followed by "identifying relevant, authoritative and reliable information sources" ranked second with a mean score of 4.39 and "recognizing the need for information" ranked third with a mean score of 4.33. The other four IL skills (S. No. 4 to 7) got mean score of 4.29, 4.19, 4.13 and 4.07. One IL skill "evaluating the information critically" got a mean score less than four i.e., 3.94 and was ranked last.

Six IL skills got mean scores exceeding 4 from respondents employed in private sector institutions. "identifying relevant, authoritative and reliable information sources" was considered most important, with a mean score of 4.54. Five IL skills "accessing the needed information effectively and efficiently", "verifying the relevance and quality of information sources", "recognizing the need for information", "using information ethically and legally" and "evaluating the information critically" received mean scores of 4.45, 4.32, 4.32, 4.18 and 4.11 respectively. The remaining two IL skills "using the selected information effectively to accomplish a specific task" and "organizing information collected or generated in a logical way" got mean scores less than four i.e., 3.97 each (Table 1).

Independent sample t-test results reveal that mean score of public and private sector institutions' head librarians on all eight IL skills were not significant at

the alpha level of 0.05 (Table 1). The sector of institution has no effect on the perceptions of respondents which implies that no significant differences exist in their perceptions on the importance of IL skills for library users.

One-way ANOVA was applied (as the groups were more than two) on composite mean scores of respondents, to know whether there were significant differences in the opinion of head librarians belonging to the three groups based on types of institutions (medical college, medical university and postgraduate medical institutes). The result reveals that differences among the perceptions of three group of head librarians were not significant ($F(2) = 1.042$, $Sig = .358$). The type of institutions has no effect on the perceptions of respondents which implies that no significant differences exist in their perceptions on the importance of IL skills for library users.

Discussion

Table 1 shows that head librarians had considered all the eight IL skills important for their library users. This was reflected in receiving mean scores higher than three by all IL skills from the respondents. Our results confirmed the findings of previous studies that suggest IL as an essential part of librarian's professional services and IL skills are necessary for medical library users (McGuiness, 2009; Aharony & Bronstein, 2014). However, respondents from the public sector institutions had underestimated the evaluation skill. They ranked it last despite that this skill is integral part of IL definitions. The library users need to be able to determine the credibility and relevancy of information as well as its currency and appropriateness for their needs. While the IL skills "organizing information collected or generated in a logical way" and "using the selected information effectively to accomplish a specific task" although considered important by the head librarians of private sector medical institutions but got mean scores less than four. The abilities to organize and use information are also very important for library users to manage information for anticipated use, to accomplish their tasks, and to achieve their communication goals (Stewart & Basic 2014). IL is a new concept in Pakistan and it could not find proper place in the LIS curriculum so far (Ameen & Gorman, 2009). Moreover, training opportunities for medical librarians in Pakistan are also very rare in the field of IL (Ullah & Anwar, 2012). Thus lack of awareness among most of the medical librarians about these low rated IL skills could be the possible reason.

Our results also revealed that there were no significant differences in the perceptions of head librarians

employed in public and private sector medical institutions as well as in three types of medical institutions (medical colleges, postgraduate medical institutes and medical universities). It demonstrates a consensus regarding importance of IL skills among head librarians employed in different sector and types of institutions. However, the ranking of IL skills show that a private sector had a different priority from a public sector. Indeed, IL skill "Organizing information collected or generated in a logical way" was ranked sixth by public sector head librarians while the same was ranked eighth by private sector head librarians. On the other side The IL skill "Evaluating the information critically" was ranked eighth by public sector head librarians and the same was ranked sixth by private sector head librarians (Table 1).

These findings have significant implications for development of library users' IL skills in medical institutions. Although IL skills for this study were derived from the IL standards developed in the advanced countries. However, our findings reveal that these skills are equally important for medical library users of the developing countries like Pakistan. These results are consistent with the IL abilities mentioned in the Empowering eight (E8) model developed in Sri Lanka for developing countries (Wijetunge & Alahakoon, 2005).

Limitations of the Study and Future Studies

The concept of information literacy is quite new in Pakistan. Therefore, knowledge of the medical librarians regarding information literacy may be limited. This limitation was avoided to some extent, by selecting only the head librarians. The other limitation was low response from respondents. An attempt, through continuous follow up contacts, was made to get a reasonable response rate. In the data analysis, while applying one-way ANOVA, the risk of inflating the type one error rate also existed due to the variances within the number of participants from each sub-population (44 from medical colleges, 14 from postgraduate medical institutes, and 11 from medical universities). However, the researchers took the risk because the population included all head librarians of academic medical libraries.

Conclusion

A consensus has emerged among heads of medical libraries in Pakistan about the importance of IL skills for medical library users. Moreover, this study has affirmed the importance of literacy in information, meaning that all medical library users must be adequately equipped with information competencies.

Further studies can be carried out using qualitative methods to get an in-depth insight of the subject.

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