Asian Journal of Information Science and Technology
ISSN: 2231-6108 Vol. 8 No.1, 2018, pp. 39-43

Assessment of Knowledge Management in Health Science Librarianship: A Study

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Abstract - **An exciting and unstable and unsettling environment is influencing the health sciences information management professions in how they practice, whom they serve, where they practice, what service they provide, and the composition of the health information professions. Tremendous advances in medicine and health care have been taken place and will continue during the next century. However, provision of quality health care to all may be more difficulty as control of health care management networks is visualised. Networks increasingly focus on cost containment issues sometimes at the expense of quality care. The challenge for information professionals is to deliver traditional information services both in person and in electronic version. In today in the changing environment health science information settings, health professionals need instant access to the best possible medical information through knowledge management. Finally, this paper discusses the short coming of knowledge in handling health libraries and implication and suggestions.**
***Keywords*: Knowledge Management, Health Libraries, application of Knowledge management, information management**

I. INTRODUCTION

The rapid changing in information communication technology and advances in technology allow librarians to provide effective research, information, and instructional service to dealt with these to the users health librarianship is required knowledge and skills to update day to day changing scenario in the digital environment.The rapid increase in medical information poses several challenges for keeping up-to-date with the latest developments in the field. Information searches can be difficult without a basic knowledge of the way information is organized and indexed. In preparing scientific studies and in making clinical decisions, the key issue is to effectively scrutinize previous literature. That is why familiarity with medical information sources and the ability to use them effectively is important. In a rapidly developing science, journals are an important channel for disseminating new information, and they are the primary publication medium for professional and scholarly communication in medicine in specific and any scientific field in general. Often it is understood that the searches are very random and at times need some education in searching and in the formulation of logical search strategy. Adequate training in information- searches leads to an increase in the development of more sophisticated electronic information resources. The explosion of information, the emergence of evidence-based care, new Internet-based technologies, rapid growth of online bibliographic databases and shifts to electronic publication practices means that knowing how to conduct effective information searches is that much more sought after needs of the users. Health librarianship should be aware of recent trends that impact the purpose, policies, programs and activities of the organization that shape health care information system.

II. KNOWLEDGE MANAGEMENT IN HEALTH SCIENCE

The medical practice is moving from diagnostics to prognostics and on the micro evidences and to evidence based medicine. The growth of number of medical bibliographic databases and other research sources all underline the importance of being able to search for up-to-date information effectively in the present context. The demand from simple bibliographic references is changing to the full text and with the most relevant and specific content. The recent concept of 'knowledge management Services" visualized by many database vendors is the evidence as how new facilities and services are sought by the end users. Because of an increasing amount of information, the constant updating and revision within the discipline has become imperative and a variety of innovative services are now made available to those seeking information and must precisely define what kind of information they are looking for and from which sources the information needed may be found and where they are located.

III. REVIEW OF LITERATURE

Sheffield, James (2008) describes that Health Knowledge Management by surfacing key issues, perspectives and philosophical assumptions. Knowledge Management research in health science is critically reviewed. He identified issues and examined the knowledge management perspectives, and philosophical perspectives. He also identified the some of the domains like personal values, social norms and objective facts. These concepts are related to three knowledge management core areas. Further he stated that importance of knowledge management facts, norms and values is crucial in handling in knowledge management.

Yamazaki, Tomoyoshi (2011) illustrates the theoretic model of systematic knowledge in the health care management

collaborating using clinical pathways. He developed model for implementing knowledge management in clinical service. The theoretical model shows that interaction between explicitknowledge and tacit knowledge in the health care process using clinical method. He also highlights the importance of knowledge management in clinical pathway in practical in hospitals.

Jih, Wen-Jang Kenny (2006) highlights the importantof knowledge management in hospital services to deliver quality medical services, highlighting the services, which are required to solve the problems within various resources. Creation, organisation, distribution, and application of knowledge management in medical services. He also explored the relationship of knowledge characteristics knowledge acquisition, and knowledge of the profession. Finally he illustrated the importance of knowledge management in service providing in health service sectors like hospital and information centres.

Kronenfeld, Michael R (2005) in their study identifies trend in academic health sciences libraries adopting new technology from print to digital information. He highlights the importance of the model to develop a knowledge management application in Health Science Libraries in similar to National Library of Medicine and to call for the national network of libraries of medicine to support the knowledge base information services

IV. OBJECTIVES OF THE STUDY

The objectives of the present study are:

1. To identify the attitude skills and knowledge of Health science professionals in meeting the user needs both in electronic and print environment.
2. To study the methodologies adopted by them for providing information
3. To study the various knowledge level in proving health science information to the health science professionals.
4. To evaluate the usefulness of the information services to the faculty members.
5. To measure the ability of knowledge in dealing the e-resources to the users.
6. To study the knowledge gaps in participation of various methods including professional development.

V. RESEARCH METHODOLOGY

The present study, questionnaire method was used for data collection. The Questionnaire methods were adopted to collect the information to understanding of an area which research intended to collect data from the respondent. Total 20 colleges were selected by researcher and was sent as an email attachment and post to all the library professional staff.In addition to responding to general questions the participants were asked about the knowledge and skills in the subject, relating to day to day managing the library services

VI. DATA ANALYSIS

The findings of the study are summarised and presented here with tables and diagrams.

A. Sample size

A sample from the 20 colleges which are comes under the Rajiv Gandhi University of Health Science and divided geographically namely Belgaum, Gulbarga, Mysore and Bengaluru. A sample from all the colleges of regions was taken to find out the opinion about the knowledge and skills by the library profession. The table (1) illustrates the distribution of knowledge and skills designation wise.

TABLE I DISTRIBUTION OF KNOWLEDGE AND SKILL DESIGNATION

	Medical Librarian		**Dental Librarians**		**Pharmacy & Nursing**	
Qualification	**No.**	**Percent**	**No.**	**Percent**	**No.**	**Percent**
MLISc	8	32	2	8	2	8
MLISc& MPhil in LIS	2	8	-	-	1	4
MLISc, MPhil & PhD in IS	4	16	2	8	-	-
MLISc& PhD in LIS	3	12	1	4	-	-
Experience						
Below 5 years	2	8	-	-	-	-
6-10 years	3	12	1	4	-	-
11-15 years	4	16	2	8	-	-
16-20 years	2	8	-	-	2	8
21+ years	6	24	2	8	1	4
Designation						
Chief Librarian	8	32	2	8	1	4
Senior Librarian	2	8	1	4	1	4
Librarian	1	4	3	12	1	4
Assistant Librarian	6	24	-	-	-	-

TABLE II KNOWLEDGE AND SKILLS ABOUT MEDICAL DATABASES

Web Resources	Aspects	Greater extent	Some extent	Little Extent	Neutral	Not at All	Chi-square	P-Value
Bibliographic database	Medline/PubMed	17 (68%)	6 (24%)	1(4%)		1(4%)	14.48	0.001*
Online database	Science Direct	15 (60%)	6 (24%)	2 (8%)		2 (8%)	8.24	*.016*
	MD Consult	13 (52%)	11(44%)			1 (4%)	9.92	0.007*
	OVID Database	12 (48%)	10 (40%)	2 (8%)		1 (4%)	14.84	0.002*
	ProQuest	12 (48%)	11 (44%)			2 (8%)	7.28	0.026*
	Cochrane Library	6 (24%)	10 (40%)	6 (24%)	1(4%)	2 (8%)	14.84	0.002*
Open access resource/databases	BioMed Central	13 (52%)	7 (28%)	1 (4%)	2 (8%)	2 (8%)	12.60	0.006*
	MedIND / IndMED	11 (44%)	7 (28%)	3 (12%)	1(4%)	3 (12%)	8.12	0.044*
	Medline Plus	8 (32%)	10 (40%)	3 (12%)	1 (4%)	3 (12%)	7.16	0.067
Online journals of various publishers	Oxford university Press	17 (68%)	3 (12%)	3 (12%)	1(4%)	1 (4%)	14.48	0.001*
	Wiley Online library	12 (48%)	4 (16%)	5 (20%)	2 (8%)	2 (8%)	7.16	0.067
	Springer Link	11 (44%)	6 (24%)	7 (28%)		1 (4%)	8.12	0.044*
	Jaypeedigital (Explore health science)	11 (44%)	7 (28%)	4 (16%)	1 (4%)	2 (8%)	13.20	0.010*
	Lippincott procedures	11 (44%)	3 (12%)	7 (28%)	1 (4%)	3 (12%)	8.12	0.044*
	DOAJ (Direct Online Access Journals)	11 (44%)	7 (28%)	3 (12%)	2 (8%)	2 (8%)	6.20	0.102

Table 1 shows that among the respondents 68% responded from Medical librarians and have 32 percent possessed MLISc degree, only 12 percent obtained MLISc& PhD degree counterparts of Dental librarians hold 8 percent MLISc.

This analysis shows that a sizeable number of respondents have 21+ years of experience. By and large have 8% below 5 years of experience. Findings further revelled that majority of respondents 44% had chief librarians and majority of them Medical Librarian and 24% are Assistant Librarians

Table II a summary of this analysis indications that 68% of Medical librarians who have knowledge and skills to provide a service of PubMed / Medline database to the respective users of their institution. At the same time the study confirmed that 4% little extent and 4% not at all knowledge and skills on PubMed / Medline.

It is depicted that, among the online database, Science Direct 60% knowledge and skills by health science librarians, although 8% little extent of knowledge and skills. It is again expressed that other database MD Consult 60% who have greater extent knowledge and skills on MD Consult by the health science librarians.

From this study says that 52% of health science librarians having the greater extent knowledge and Skills on BioMed Central of open access resources /databases, 4% neutral on MedlinePlus. This study shows that 68% of health science librarians having the greater extent of knowledge & Skills on Oxford University Press, 4% neutral on Lippincott by the health science librarians.

Table III shows that 72% respondent knowledge in Open access handling, 60% e-journals 13% internet searching. Followed by maximum percentage belongs to writing skills, negation skills, it shows health science library profession are well equipped in handling resources.

Table IV shows that all users response that library staff factors motivate in handling Knowledge skill in the job. 96% of the respondents said that to get recognition in the profession, followed by to help fellow in LIS profession. 88% respondent said that to motivate other LIS profession. 56% respondent said that for individual recognition.

Table V depicts that maximum no of respondents 68% said that greater extent in using computer and related items in competencies skills development. 28% in proficiency in academic search engines and proficiency in bibliographic databases.

1. From the findings of this study , it was discovered that the results showed that 25 belongs to the age group of 41 – 50
2. 25 (32%) are chief librarian in medical college, 8% in dental colleges, 4% in nursing, pharmacy and hospital.
3. Maximum percentage 68% Medline/pub med users, 12% Ovid, only 4% psycho info databases respondents familiar.
4. 72% respondent knowledge in Open access handling, 60% e-journals 13% internet searching.
5. Staff factors motivate in handling knowledge skill in the job. 96% of the respondents said that to get

recognition in the profession, followed by to help fellow in LIS profession. 88% respondent said that to motivate other LIS profession.

6. 68% respondents having knowledge in using computer and related items in competencies skills development. 28% in proficiency in academic search engines.

TABLE III KNOWLEDGE AND SKILLS FOR MANAGEMENT OF LIBRARY RESOURCES AND SERVICES IN HEALTH SCIENCE LIBRARIES

Sl. No.	Aspects	Greater extent	Some extent	Little Extent	Neutral	Not at All	Chi	p
1	e-journals	15 (60%)	9 (36%)	1 (4%)			11.84	0.003*
2	Electronic Theses and Dissertations (ETD)	6 (24%)	11 (44%)	2 (8%)	6 (24%)		7.28	0.026*
3	Open Access Resources	18 (72%)	3 (12%)	3 (12%)		1 (4%)	18.32	0.001*
4	Consortia	8 (32%)	13(52%)	1 (4%)	2 (8%)	1 (4%)	15.66	0.001*
5	Subject Gateways	9 (36%)	11(44%)	2 (8%)	2 (8%)	1 (4%)	3.25	0.197
6	Translation Service	7(28%)	10 (40%)	2 (8%)	5 (20%)	1 (4%)	10.8	0.029*
7	Document Delivery Service	10 (40%)	9 (36%)	3 (12%)	3 (12%)		1.04	0.595
8	Union Catalogue	9 (36%)	8 (32%)	4(16%)	2 (8%)	2 (8%)	3.32	0.345
9	Library Finance / Budget	13 (52%)	9(36%)	2 (8%)		1 (4%)	15.8	0.001*
10	Time Management	14 (56%)	8 (32%)	1 (4%)	2 (8%)		17.4	0.001*
11	Library Marketing	10 (40%)	8 (32%)	2 (8%)	1 (4%)	4 16%)	12.0	0.017*
12	Human Resource arrangement	10 (40%)	3 (12%)	7 (28%)	2 (8%)	3 12%)	5..24	0.155
13	Professional Ethics	12(48%)	7(28%)	4(16%)	2 (8%)		8.85	0.012*
14	Internet Searching skills	13 (52%)	6 (24%)	3 (12%)	2 (8%)	1 (4%)	18.8	0.001*
15	Information Literacy Skills	11 (44%)	10(40%)	2 (8%)	1 (4%)	1(14%)	11.6	0.009*
16	Presentation Skills	10 (40%)	11(44%)	3 (12%)	1 (4%)		11.96	0.008*
17	Writing Skills	9 (36%)	12 (48%)	3 (12%)	1 (4%)		12.6	0.006*
18	Reporting Skills	13 (52%)	7(28%)	4(16%)	1 (4%)		12.6	0.006*
19	Communication Skills	12(48%)	9 (36%)	3 (12%)	1 (4%)		12.6	0.006*
20	Negotiation Skills	12(48%)	7(28%)	3 (12%)	1 (4%)	2 (8%)	16.4	0.003*
21	Leadership Skills	16 (64%)	5 (28%)	3 (12%)	1 (4%)		21.56	0.000*

TABLE IV FACTORS MOTIVATE YOU FOR ACQUIRING KNOWLEDGE AND SKILLS ON THE JOB?

Sl. No.	Particulars	Yes	No	Chi-square	P-Value
1	To get recognition in the profession	24(96%)	1 (4%)	21.16	0.000*
2	To get recognition in the organization	19 (76%)	6 (24%)	6.76	0.009*
3	To be a leader in the profession	22 (88%)	3 (12%)	14.44	0.000*
4	To help fellow LIS professionals	24 (96 %)	1 (4%)	21.16	0.000*
5	To motivate other LIS professionals	22 (88%)	3 (12%)	14.44	0.000*
6	Out of passion	10 (40%)	15 (60%)	1.00	0.317
7	For career advancement	19 (76%)	6 (24%)	6.76	0.009*
8	For better financial prospects	16 (64%)	9 (36%)	1.98	0.162
9	For individual recognition	14 (56%)	11 (44%)	.360	0.549

TABLE V COMPETENCIES IN SKILLS DEVELOPMENT

Sl. No.	Aspects	Greater extent	Some extent	Little Extent	Neutral	Not at All	Chi-square	P-Value
1	Computer operating skills are very much needed for Health Science Librarians	17 (68%)	7 (28%)	1 (4%)			15.68	0.000 *
2	Proficiency in Commercial Integrated Library Management Software (LIBSYS, Easylib, Libsoft, Slim++ and others) is very important for Health Science Librarians	8 (32%)	12 (48%)	5 (20%)			2.96	0.228
3	Proficiency in archives/ Institutional Repositories (DSpace and ePrints) is very important for Health Science Librarians	9 (36%)	11 (44%)	4 (16%)	1 (4%)		10.04	0.018 *
4	Proficiency in Digital Library Software (Greenstone and Microsoft SharePoint) is very important for Health Science Librarians	7 (28%)	10 (40%)	8 (32%)			.560	0.756
5	Proficiency in Blogging Software Packages (WordPress, Blogger, Tumbler and so on) is very important for Health Science Librarians	7 (28%)	9 (36%)	9 (36%)			4.84	0.028 *
6	Proficiency in Scanning (OCR) the	10 (40%)	7 (28%)	7 (28%)	1 (4%)		10.64	0.005 *
7	Proficiency in Wikis	8 (32%)	6 (24%)	10 (40%)	1 (4%)		7.16	0.067
8	Proficiency in Internet Search Engines	9 (36%)	12 (48%)	4 (16%)			3.92	0.141
9	Proficiency in Academic Search Engines	12 (28%)	10 (40%)	3 (12%)			5.36	0.069
10	Proficiency in Bibliographic databases	12 (48%)	9 (36%)	4 (16%)			3.92	0.141
11	Ability to develop and evaluate web content	8 (32%)	13 (52%)	4 (16%)			4.88	0.087
12	Knowledge of medicine as a field of study and its mapping	10 (40%)	8 (32%)	6 (24%)	1 (4%)		7.16	0.067

VII. CONCLUSION

The health science professions concern with enhancing growth, development, communication and preservation of knowledge to achieve success in their field as well as enhancing knowledge and skills, proficiency in the subject. The study suggests that a good health condition environment in the organisation should provide to update and restructuring intuitional environment in health sector. Rapid changes, driven by information and communication technologies, are influencing in the context of knowledge management.

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