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Resource Sharing among Medical Teaching Libraries: A Developing Country Perspective

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Abstract:

Resource sharing is a functional as well as financial need of any library. In this modern era of information technology while information explosion is at extreme, it is impossible for a library to cover the entire surface of available knowledge. Developed countries are actual beneficiaries of this practice where idea of resource sharing has been transformed into a formal practice. Developing South Asian countries are also working on this concept in order to adopt it as a practice. This study identified the resource sharing opportunities for medical teaching libraries in Lahore with reference to perception and willingness. The sample of this study encompassed 26 leading medical libraries of all public and private degree awarding institutions in Lahore, Pakistan. The survey research method was adopted for this study. Findings showed that resource sharing is a valuable practice. It enhances the level of user satisfaction. It adds value to library collections which is not limited to library books only. Libraries are willing to initiate resource sharing through creating union catalogues. This study could be applied to all medical libraries in Pakistan to develop a real time formal resource sharing network which would accelerate performance reaming in limited financial resources.

Keywords: Resource Sharing and Medical Libraries; Resource Sharing in Pakistan; Medical Libraries in Pakistan; Collection Sharing in Pakistan

Introduction and Background to the Study:

Since the ancient times, the aims of libraries were to collect ample resources of information for education and research of various branches in a single library for the convenience of their scholars. Resource was identified by the term “library cooperation,” which was replaced with the passage of time as “resource sharing” and gained worldwide acceptance particularly in this age of inflation and budgetary reduction. The term “resource” applies to anything at any person, material or action to which one turns for assistance in time of need. The word “sharing” requires apportioning, allotting or contributing something that is owned to benefit others.

Resource sharing can be traced to 200 BC, when the Alexandrian Library shared its resources with Pergamum Library. Kraus and Schechter (2003) gave examples of library cooperation among monastery libraries in the 13th century. Library co-operation can be traced to the monastic libraries in the first half of the thirteenth century. Specifically, Parts and Cestriensis indicated the location of manuscripts in 138 English and Scottish monasteries. Soon after, in 1410, the monk Jojn Boston DE Bury, in his Catalogue Scriptorium Ecclesiae, attempted a Union Catalogue. Years Later, in 1672, a form of library co-operation was mentioned by Naudé (1950) in his Advice on establishing a library. de Peiresc and Dal Pozzo (1989), a Ranchman, attempted to begin an Inter-Library Loan System in 1638. The Royal Library in Paris, The Vatican and Barbering Libraries in Rome were involved in this venture. Through de Peirese was a very resourceful individual yet his plan was never materialized. There were exchanges of agreements among the Universities of Lund, Abo and Greifsemnittel from 1770 to 1781, formulated a plan for the exchange Lessing, among the Universities of Lund, Abo and Greifswald as early as 1740. In 1770, Germany saw the beginning of a planned library co-cooperation activity G.E Lessing, librarian in Wolfenbuttel from 1770 to 1781, formulated a plan for the exchange of duplicate materials between libraries. He also suggested the development of a plan for a joint acquisition between Wolfenbuttel and Gottingen. One of the oldest traditions in Library cooperation is to share the bibliographic information.

The resource sharing concept is being experienced in the developed world. Developed countries have concrete frameworks for resource sharing. The Canadian Information Resource Sharing Policy may be the best example: Interlibrary loan, union catalogue development,

cooperative cataloguing, cooperative reference, cooperative collection development and joint storage of material are all components of the Canadian Information Resource Sharing Strategy. Developing countries are striving to implement these procedures and policy at national or local level. India's DELNET, the successful resource sharing and information provider in India is very good in this regard. Kaul (2010) mentioned that DELNET was based on a self-sustainable model and was considered to be a role model for other library networks especially those in developing nations.

The resource sharing concept was started in the sixteenth century and gained tangibility and concretization in the 1990s. In this period of information technology, developed countries are actual beneficiaries of this practice where the idea of resource sharing has been transformed into an official practice. Developing and South Asian countries like India, Nepal, Bhutan, Bangladesh etc. are also working on this concept in order to adopt it as a practice. In Pakistan, there is no significant example of formal resource sharing. There was some literature with reference to resource sharing and basic efforts were also made to approve this practice in connection with the developed world but it proved to be unsuccessful. There has been nothing significant in terms of literature or practices during the previous five to seven years except for one or two conceptual papers.

This study was conducted for resource sharing, challenges and opportunities of medical teaching libraries in Lahore. This study measured the perception, willingness, availability of pre-requisites and troubles of resource sharing. Findings of the study revealed that libraries have a clear perception regarding resource sharing. Libraries are agreeable to adopt resource sharing activities and programs but the problems faced by them in this regard pertain to missing pre-requisites or inadequate funding.

In this period of information technology when information explosion is at the highest point and the global financial system is weakening, libraries are facing financial cuts on their budgets. It is becoming impossible for a specific library to cover all the ground remaining in its limited resources. Resource sharing among libraries is a widely acceptable practice in new world; rising countries are also striving to chalk out its functions and formalities to establish a better practice of resource sharing. This study might fill the literature gap as well as explore opportunities of medical

teaching libraries for resource sharing in Lahore. This study might be applied to major medical libraries in Lahore and results in a better understanding in building a better resource sharing practice. This might result in strengthening the overall economy of the country. Owing to a downfall in global economy and financial constraints for libraries, resource sharing has become an economic requirement around the globe and is widely being practiced. Financial cuts on library budgets which are already very limited lead library toward resource sharing. Limited funds available with the libraries are being utilized to procure the same duplicate information artifact by every library. There is no significant formal resource sharing network in Pakistani libraries. This study measured the institutional readiness for library resource sharing by studying the awareness, willingness and availability of potential resources for sharing among libraries in Lahore.

This study is the first step toward the development of a formal resource sharing network among Pakistani medical libraries. Findings of this study may be applied to all major libraries of Pakistan in order to establish an ideal model for resource sharing among libraries which will eventually strengthen the national economy by using shared resources in libraries.

Research Questions:

Following research questions were formulated:

1. What is the level of awareness of the library professionals regarding resource sharing?
2. What is the extent of willingness for resource sharing?

Literature Review:

Resource Sharing is a need in today's world of information technology given the deteriorating economic situation and the excess of information sources. It is impossible for a single library to cover all information sources because of the countless sources available due to technological development. The term "Resource Sharing" incorporates many activities of cooperation among libraries and other stake holders. Inter library loan, union catalogues, combined collections, document deliver, joint collections and other related terms comes under the auspices of resource sharing. A. K. Reitz, Zimmermann, Hutteman, Specht, and Neyer (2014) defines resource sharing as the activities that result from an agreement, formal or informal, among a group of libraries (usually a consortium or network) to share collections, data, facilities, personnel, etc., for the benefit of their users and to reduce the cost of collection development. Millions of

traditional and nontraditional resources are being produced in this age of information technology and it's quite impossible to cover all the ground for a specific library but the same requirements can be fulfilled with resource sharing. Overall economic crisis exists in global economy and cuts in library budget are enforcing the justification of resource sharing.

Ullah, Ameen, and Bakhtar (2010) stated that the history of medical libraries in Pakistan dates back to 1880, when the first medical college was established in Lahore. At the time of the partition of India, there were two medical colleges and a dental college; King Edward Medical College (now King Edward Medical University) was established in 1860 at Lahore, Dow Medical College (now Dow University of Health Sciences) was established in 1946 at Karachi and De-Montmorency College of dentistry was established at Lahore in 1929. Shiwani (2006) assessed in his study that there were around fifty medical libraries in Pakistan in 1991 where as Qureshi, reported that there were 72 medical libraries in Pakistan in 2000. Now there are more than 100 medical colleges/ Universities in Pakistan with well stocked libraries. All these medical institutions have medical libraries in their respective campuses (www.pmdc.org.pk).

The literature reviews reflect a pleasant picture of perception for resource sharing among libraries in Pakistan. Libraries and librarians in Pakistan are fully aware of the benefits and blessings of resource sharing and perceive the idea in a better way. Several efforts to organize formal networks for resource sharing have been made. Mirza and Ahmad (2005) presented the status and modalities of resource sharing among the libraries in Lahore. Sharif (2006) penned an article on library co-operation through resource sharing and highlighted the importance and procedures for a better perception of resource sharing. Mahmood (1999) purposed a model for resource sharing among libraries. Jaswal (2006) pointed out a resource sharing network of business administration economics and allied subjects in 1990. Tanvir (2005) presented a USAID funded project for resource sharing of libraries in the field of agriculture. This was an effort for a national network of 35 libraries on agriculture and allied subjects. Despite a considerable level of awareness and perception of libraries with respect to resource sharing among libraries, there is no significant active formal resource sharing network in Pakistan.

The term and practice of resource sharing has its historical background in the seventeenth century, reportedly the first organized effort of resource sharing was made by a French humanist, Nicolas Claude. Stuart-Stubbs (1975) tried to arrange for the interlibrary lending of manuscripts

between the Royal Library in Paris, the Vatican and Barberini libraries in Rome in 1634. Basil (1994) noted that this effort was not successful but it was the beginning of resource sharing. Interlibrary loan remained a concept and libraries were not willing to adopt this idea as practice till 1876. The leading role for willingness of libraries to transform the concept of inter library loan into practice was performed by Samuel Swett Green. He wrote an article and suggested the need of an agreement to borrow books from each other for a short period of time in order to provide better reference services. He was the librarian of the Free Public Library of Worcester from 1871 to 1909. He was a Harvard graduate, Minister by training and founder of the American Library Association and internationally known for his writings. He had been personally requested by the President to become the librarian so it was assumed that his suggestion would become an actual practice.

Basil (1994) commented that Green's suggestions were ignored but a positive change occurred in the guise of attracting the attention of several working librarians; consequently several librarians were willing to share their resources in 1890. Informal and voluntary resource sharing was started in several libraries like Boston Public Library which was providing books on loan to other libraries in New England during the 1890s. Green (1876) mentioned a letter printed in the Columbia library journal for advocacy of resource sharing. The writer of the letter was Basil Stuart-Stubb who was the University Librarian, University of Britain. He proposed some guidelines for framing agreements of inter library loan and insisted on adopting adopt this concept as a practice. Unfortunately, the editor of the library journal responded coldly in the Editor's response that interlibrary loan was already present in American libraries; therefore, it was not a novel idea. The editor quoted an example of the Harvard College Library and Boston Athenaeum, commented that they often draw books from each other but there is no example of a formal written agreement in any case in America. Green (1876) tried to elaborate his point of view but he did not pursue his advocacy of the code for interlibrary loan. But his thoughts paved the way for resource sharing and several libraries showed their willingness for informal resource sharing.

Libraries and librarians were willing about resource sharing but there was no formal agreement for resource sharing. This willingness transformed in to a practice in 1890s when Stuart-Stubbs (1975) describes an exemplary service of direct mail service of National Medical Library. A sum of 50\$ was required as security money to in order for anyone to avail this service. Boston

Post published it in an editorial that the direct mail service of National Library of Medical is an example to be followed. The significance of this service was its written agreement containing details on loan duration, shipment means and payment of charges by the borrowing library which was deemed necessary in order to avail this service. According to the American Library Association, America started a cooperative cataloguing program which reflected the acceptance and willingness of resource sharing among libraries. The next step in boosting up the emerging willingness for resource sharing and consortia was delivery of catalogue cards by the Library of Congress Association (1989). Another prime example of resource sharing of that era was the Boston Public library where a printed form having special terms and condition for other libraries to borrow books from the Boston Public Library was made available for inter library loan facility. The University of California showed its willingness to enter into an agreement with other libraries to share resources. Till the end of 19th century and even in the first half of the 20th century, there was no significant change with regards to resource sharing among libraries at large scale. But the perception and awareness of resource sharing was strong enough to lead the libraries to practical implementation of resource sharing among libraries.

Literature review and finding of this study are equally agreed on the point that the extent of willingness for resource sharing among libraries in Pakistan is at a satisfactory level. The majority of libraries are willing to start or be a part of a resource sharing activity. The national digital library program was started in 2003 and gained strength in 2005. The purpose of this initiative was to provide access to research databases through consortia with government backing. All major libraries showed their willingness and eagerly applied for access to the digital library that reflects willingness for resource sharing.

Research Methodology:

Keeping in view the suitability and usability of the survey research method and previous studies conducted in this field the survey research method was adopted for this study. Creswell (2013) mentioned that “the quantitative research is best fit in determination of beliefs, attitudes and behaviors of the individuals regarding any specific event”. The population for this study was the medical teaching libraries in Lahore. According to the reports of Pakistan Medical Dental Council (PMDC), there are 26 public and private Health / degree awarding institutes including 5 universities in Lahore till 2016. There are several leading government and private medical teaching

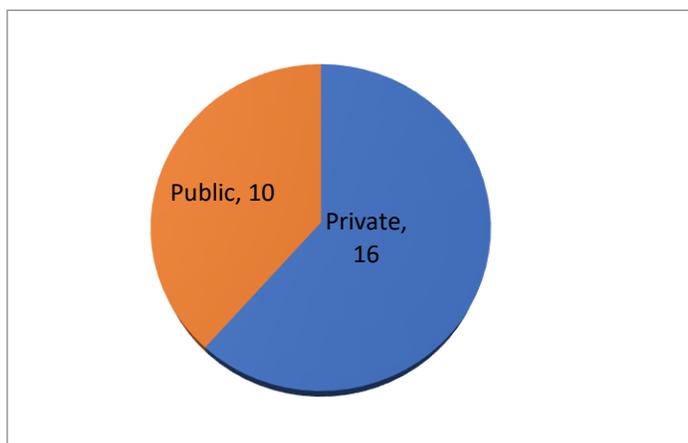
libraries in Lahore. Keeping in view the relevant literature, extent nature and timeline given to accomplish this study and available resources, a comprehensive sample of 26 leading libraries of Lahore was selected for this study. Due to small size of the population selected for this present study, census sampling technique was used to collect data. This study adopted a questionnaire developed and used by (Ashfaq (2016) in order to gather data from the respondents. This study was quantitative in nature and a questionnaire was employed as a tool for data collection from the respondents through distribution among participating institutions followed by personal visits. A telephonic appointment prior to personal visit was made with the participant as per his/her convenience. Participant sent back the filled questionnaire after due course of time through email or by post. After collection of data a numerical analysis using SPSS was performed to present the data into tangible results. Frequency analysis and different tests were performed to get maximum findings from the collected data. Chi square test was also performed to obtain the correlation result for readiness of major libraries of Lahore for resource sharing.

Data Analysis and Findings:

Medical Institutional Libraries

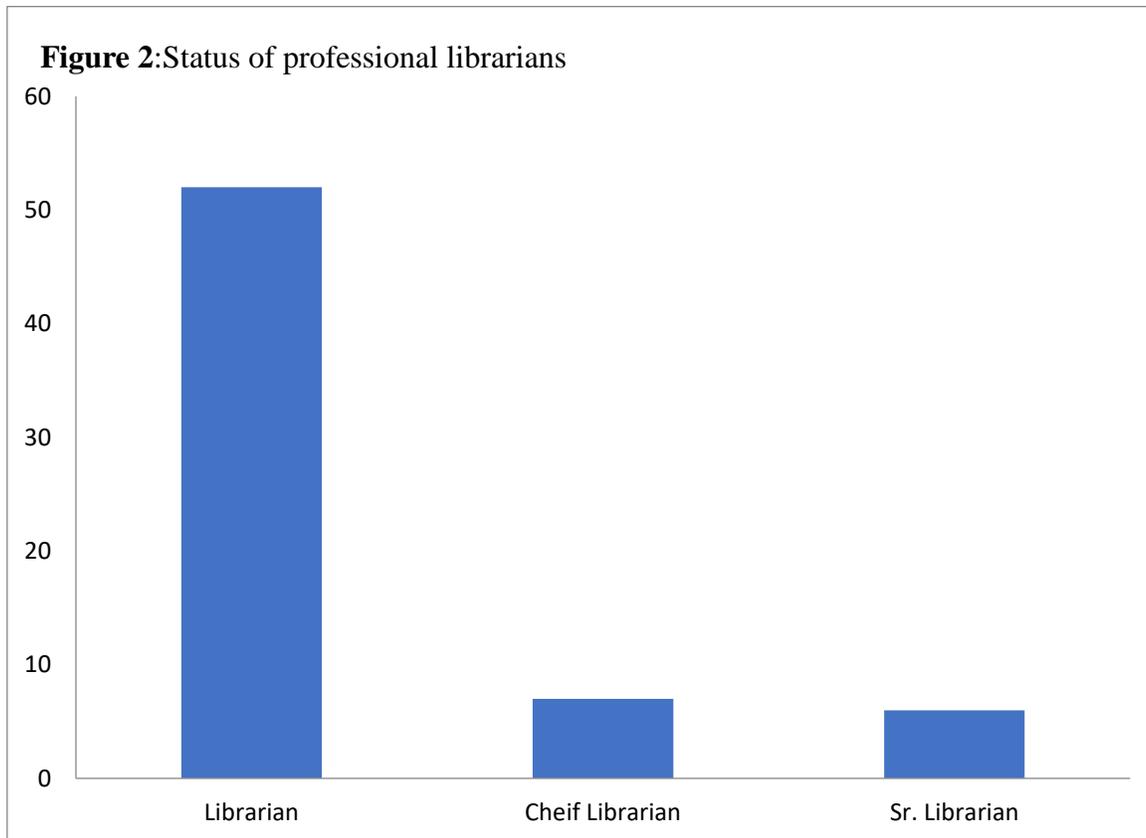
Census-taking approach was used to get response from the staff of 26 medical teaching libraries including Private (16, 62%) and Public (10, 38%) as illustrated in Figure 1.

Figure 1: Types of Libraries



Position of Professional Librarians.

A great number of professionals were found working as librarians (80%) followed by assistant librarians as shown in figure 2. The finding revealed that medical libraries both (public and private) were managed by qualified library professionals.

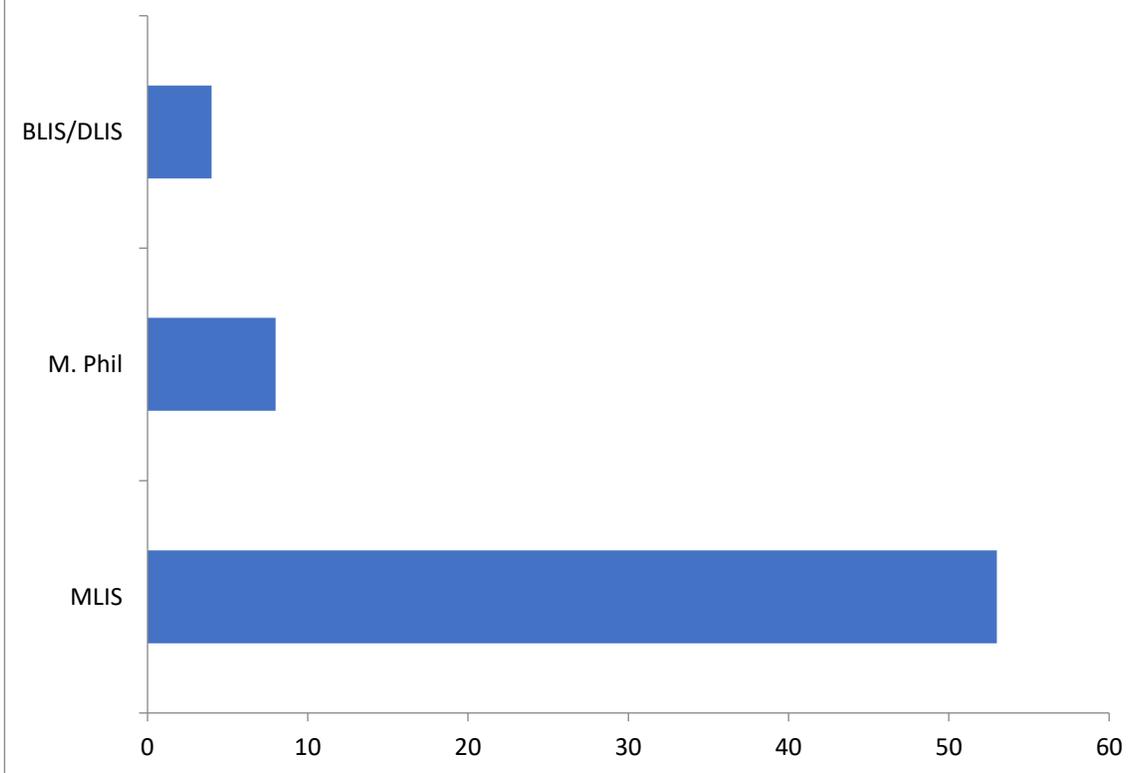


4.3

Professional Qualification

Majority of the professionals were holding MLIS degree. A less number of professionals were also found holding M Phil degree as illustrated in Figure 3. There is trend of higher education among the individuals going to join librarianship as profession. A number of LIS schools are offering formal education from master degree to PH. D .in Pakistan. The working professionals are making efforts to enhance their professional education.

Figure 3: Professional Qualification



Libraries and Holdings

A list of libraries existing in medical teaching institutes presented in Table 1. Detail regarding the libraries holdings (collection) including name of libraries, type, and collection size is mentioned too.

Table 1
Libraries and Holdings

Sr.	Library Name	Type	Collection Size			
			Books	Journals	Thesis	CD Rom
1	Allama Iqbal Medical College	Public	32000	1600	0	50
2	Services Institute of Medical Sciences	Public	8000	1400	0	0
3	Ameerud Din Medical College	Public	15000	2000	450	250

4	FMH College of Medicine & Dentistry	Private	5000	3000	0	250
5	Lahore Medical & Dental College	Private	3000	1200	150	70
6	CMH Lahore Medical College	Private	6500	1560	0	550
7	Sharif Medical & Dental College	Private	3000	1500	0	250
8	Continental Medical College	Private	3200	1200	0	150
9	Akhtar Saeed Medical & Dental College	Private	5000	1200	0	400
10	Central Parks Medical College	Private	2800	200	100	50
11	Avicenna Medical College	Private	2500	400	0	20
12	Shalamar Medical & Dental College	Private	6200	700	0	500
13	Rashid Latif Medical College	Private	2400	500	50	50
14	Hashmat Medical & Dental College	Private	2300	500	0	65
15	Pakistan Red Crescent Medical & Dental College	Private	2200	550	0	45
16	De'Montmorency College of Dentistry	Private	2100	300	0	35
17	Punjab Institute of cardiology	Public	3000	400	50	25
18	Institute of Public Health	Public	12317	800	1412	50
19	The Children's Hospital & Institute of child Health	Public	3250	1400	150	70
20	Gulab Devi Postgraduate Medical Institute	Private	4000	500	130	30
21	King Edward Medical University	Public	50000	5000	1000	300
22	Fatima Jinnah Medical University	Public	40000	3800	500	1500
23	University of Health Sciences	Public	7000	5000	2300	250
24	Shaikh Zayed Hospital	Public	6000	1600	150	150
25	Rahbar Medical College	Private	2800	450	0	55
26	University of Veterinary & Animal Science	Public	36000	2200	400	350

Perception about Resource Sharing

Professional librarians were asked twelve different items in order to measure perception about resource sharing of medical teaching libraries on a scale 1-5. As shown in Table 2, two out of twelve items 'RS is limited to library books only' and Libraries can share their human resources got highest mean scores of 2.58 and 2.11 respectively however 'Reference service is good attribute of this library' obtained lowest mean score of 2.76. The results of Table 2 showed that the majority of the respondents agreed on resource sharing are limited to library books only. Furthermore, the respondents were found with the perception that medical libraries might also share their human resources. The findings exposed that OPAC, union catalogue and other technological resources might be shared among medical libraries.

Table 2
Perception about Resource Sharing (N=65)

Sr.	Statements	Mode	Mean	SD*
1	RS is limited to library books only	1	2.58	1.310
2	Libraries can share their human resources	1	2.11	1.264
3	Library website can add value to RS practice	1	1.72	.740
4	Union OPAC is essential to share resources	1	1.71	.678
5	Union catalogue is very important for RS	1	1.71	.551
6	RS enhances the level of user satisfaction	3	1.69	.983
7	Sharing technological resources and experiences are also included in the practice of RS	1	1.65	.738
8	Libraries can build shared resources with collaborative budgets	1	1.57	.728
9	RS is equally beneficial for the all participating libraries	1	1.57	.749
10	RS adds value to library collection	2	1.51	.640
11	Resource sharing saves budgets	2	1.49	.664
12	Resource sharing is a valuable practice	2	1.46	.561

Willingness for Resource Sharing

It is quite impossible for any medical library to render any service to any user or organization without willingness of the administration of the said library. The extent of the willingness of the institutions has been calculated after statistical analysis of the collected data though the instrument developed for the purpose of data collection of this study.

This segment of the study highlights the willingness of different institutions for resource sharing among medical teaching libraries in Lahore. It is worth mentioning that there is no significant difference between all the libraries. All institutions are willing in one or the other to participate in a resource sharing set of connections. Frequently, intuitions are keenly interested in obtaining access to the electronic resources of other institutions. Majority of libraries are agreed on willingness to get access of printed resources i.e., books, journals, reports etc. and training from trained professionals of other libraries through resource sharing practice. Getting or granting access to manuscript and rare material is the next level of willingness.

The majority of libraries agree to provide metadata/bibliographic records to be included into a union catalogue. The most interesting finding of this study is that most of the libraries are ready to bring together union OPAC by getting the metadata of the other institutions. A point of agreement where difference can be measured is institutional willingness to share hardware and software for provision of a common software or OPAC. A smaller number of libraries are willing to share their hardware and software but a major number of libraries are willing to use the hardware and software of other libraries for a common software and OPAC.

Table 3

Willingness of Institution for Resource Sharing (N=65)

Sr.#	Statements	Mean	SD*
1	Our institute is willing to share its hardware and software for provision of a common software and OPAC	2.12	1.097
2	We would like to share our printed resources e-books, journals, reports, etc. of the library with other institutions	2.06	1.210

3	Our institute is ready to share trained human resource with other libraries	2.02	1.218
4	Our institute is willing to use hardware and software of any other library for uniformity and union OPAC	1.91	.914
5	Our institute is ready to get training from trained professionals of other libraries through RS program	1.89	1.106
6	Our institute is ready to grant access to our electronic resources to other libraries	1.88	.910
7	Our institute is willing to get access to manuscripts and rare material from other libraries.	1.85	1.121
8	We like to get printed resources i.e. books, journals, reports etc, on loan from other institution for our library	1.82	.846
9	Our institute is ready to grant access to the users of other libraries to our manuscripts and rare material	1.82	.967
10	Our institute is willing to get access to other libraries through RS practice	1.82	.846
11	Our institute is ready to have metadata//bibliographic records for other libraries incorporate in a union catalog	1.80	1.019
12	Our institute is willing to provide our metadata//bibliographic records for completion of union OPAC	1.75	.848
13	Our institute is ready to grant access to our electronic resources to other libraries	1.57	.558

1 = Agree, 2 = strongly agree, 3= Disagree, 4= strongly disagree, 5= Neutral, SD*=Standard deviation

The results of (Table 3) revealed that the majority of the respondents agreed that medical libraries are willing to share hardware and software for provision of a common software and OPAC. Furthermore, the respondents were also found with the opinion that they would like to share their printed resources i.e. e-books, journals, reports, etc. with other institutions. The findings exposed that mostly medical professionals showed their willingness for resource sharing among medical libraries. These tools could be helpful for resource sharing in medical libraries. However,

the respondents strongly agreed that resource sharing could add value, save budget and value able practice

Conclusion:

The conclusive findings of the study and the literature review reveal that medical libraries have a clear perception regarding resource sharing. Libraries are willing to adopt resource sharing activities and programs. The conclusions drawn from this study are listed below.

1. Resource sharing is a valuable practice.
2. Resource sharing saves budgets.
3. Resource sharing enhances the level of user satisfaction.
4. Resource sharing adds value to library collections.
5. Resource sharing is not limited to library books only.
6. Libraries can share their human resources in a resource sharing model.
7. Sharing technological resources and experience are also included in the practice of resource sharing practice.
8. Libraries can build shared resource with collaborative budgets.
9. Union catalog is very important for resource sharing.
10. Union OPAC (Online Public Access Catalogue) is essential to share resources.
11. Library websites can add value to the resource sharing practice.
12. Libraries are willing to share their library resources.
13. Libraries are willing to share printed resources i.e. books, journals, reports etc.
14. Libraries are interested in getting access to electronic resources of other libraries.
15. Libraries are willing to participate in or initiate union catalogs.
16. Libraries are willing to use/share similar software/ hardware for ease of sharing.

Discussion:

The overall rating of perception of libraries for resource sharing was found to be ideal. Statistical analysis using the Chi-square test was performed to know the library type perception of libraries regarding resource sharing. It was observed that quite a few libraries, irrespective of type, had ideal perception of resource sharing, this is reflective of the fact that the major libraries in

Lahore perceive resource sharing favorably. The other findings established through the statistical data reveals that mostly participant disagree about limiting the resource sharing just to the extent of books. Majority of the librarians thought that that the exchange of human resources is not included in resource sharing. A moderate number of librarians perceive that resource sharing is equally beneficial for all participating libraries and sharing of technological resources and experiences is also included in resource sharing practices. The ideas of building shared resources and union catalog are also included in this practice by the same group of respondents. A comprehensive number of librarians considers resource sharing to be a valuable practice that saves budgets and adds value to the library collection. Furthermore, a large number of participants acceded that collaborative budgets, union catalogues and union OPACs are essential for resource sharing. Significant importance has been given to the library website to add value to the practice of resource sharing. It is worth mentioning that there is no significant difference of willingness for resource sharing among all the medical libraries in Lahore. All medical libraries whether public or private, are willing in one or the other way to participate in a resource sharing network. Mostly intuitions are keenly interested to get access to the electronic resources of other institutions. Most of the librarians are ready to compile a union OPAC by getting the metadata of other institutions. A point of agreement where variation can be measured is institutional willingness to share hardware and software for provision of a common software or OPAC. Only a few numbers of librarians are willing to share their hardware and software but a significant number of librarians are willing to use the hardware and software of other libraries for a common software and OPAC. Getting training from the trained manpower of the other institutions is another desirable statement in the instrument but sharing of trained human resource with other libraries is significantly not a popular idea among libraries. A large number of institutions are willing to participate in a resource sharing activity and a moderate number of institutions showed conditional willingness or partial willingness for resource sharing among libraries. A few institutions were not willing to be a part of any resource sharing among libraries. With the findings of chi-square test for willingness of resource sharing, it is established fact that there is no significant difference amongst all type of libraries for resource sharing. A considerable number of all public and private libraries are willing for resource sharing.

Recommendations:

The following recommendations are made to establish resource sharing networks among libraries:

1. Proper training and education for resource sharing should be arranged.
2. A common standard software should be provided to all libraries.
3. Functionality and compatibility of standards like MARC and Z39.50 should be ensured in library software.
4. Union catalogue of all the libraries, at least according to type of library, must be developed.
5. Libraries should have their own website existing on the World Wide Web with a provision of online searching from catalogue through the website.
6. The link to the library website should be displayed on the main site of the university in such a manner that it will need only one click to access it.
7. Digital libraries internet-based services like electronic document delivery should be started to cut down the postal charges.

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