



## USAGE OF INFORMATION, USER'S SATISFACTION AND PROFESSIONAL PERFORMANCE IN THE LIBRARY OF INSTITUTE OF CHEST DISEASES KOTRI IN SINDH AREA OF PAKISTAN



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### ABSTRACT

**Background:** In a developing country like Pakistan, healthcare professionals are quite aware of the new technologies, which are used in the libraries by their counterparts in the developed world. The Report of Sindh Bureau of Statistics, Pakistan (SBSP) shows that there are 330 hospitals in the health ministry of Sindh, Pakistan.

**Materials and Methods:** The Institute of Chest Diseases, Kotri (ICDK) is one of the largest Institute in it. The ICDK library provides services to its end users specifically consultants, specialists, resident medical officers, nurses, para-medics and administrative staff with fewer resources. The main objectives of the present study were to know the status of computer literacy among the healthcare staff, functionality of library, behavior of library staff, and library access to patients. After an ethical approval, a pre-designed and pre-tested questionnaire was distributed to ICDK staffs in 2015.

**Results:** Totally 74 were participated in this study. Among 74 staffs, 53 (71.6%) were males and 21 (28.4%) female. The structured questionnaire was distributed to four major categories of health care

and administrative staffs like medical, nursing, paramedics and the hospital's administrative staffs. The results were showed that a vast majority of these subjects had a good knowledge of various parameters of the computer usage, they were satisfied with the library services and we got satisfactory responses from the library staff and other users.

**Conclusion:** We conclude that although the basic needs and usage of computers were satisfactory, the electronic methods of library resources like e-books, e-journals etc. were need to be strengthened. We have concluded that there should be a set-up of continuous training to the ICDK staffs, so that the health care and awareness of the global standard can be achieved.

**KEYWORDS :**Medical library, library resources, electronic libraries, training, Pakistan.

## INTRODUCTION

The Report of Sindh Bureau of Statistics of Pakistan (SBSP) shows that, there are 330 hospitals, 2, 121 dispensaries and 150 maternity & child welfare centers working with the help of nearly 28, 654 healthcare staff in various categories in the Ministry of Health Government of Sindh. These are to provide curative and preventive health facilities to people of the province of Sindh, Pakistan. Categorically these 330 hospitals comprise of the capacity of about 50 to 2, 000 bedded set up for the indoor patients (SBSP 2011). The statistical report of Pakistan Medical & Dental Council (PMDC) revealed that the Sindh Province has 11 Universities (06 public & 05 private), 23 medical colleges (09 public & 14 private), 16 dental colleges (04 public & 12 private) and 18 postgraduate institutes with the yearly enrolment of 4, 410 new students (PMDC 2012).

There is 269 healthcare staff working on three shifts i.e. morning, evening and night in the ICDK categorized as 46 positions of the medical staff, 32 positions for nursing staff, 71 positions for the paramedics and 120 positions for the administrative and helping staff. The Library of the Institute of Chest Diseases Kori provides services to its end users specifically consultants, specialists, resident medical officers, nursing staff, para-medics and the administrative staff and a postgraduate assistant librarian in the heart of the institute. The Library has 1,450 medical books, 150 medical journals (new & old), 200 books on English literature, approximately 300 Urdu Digests and books on Urdu Literature, 20 books on Islamic Studies, 30 steel chairs, 12 steel almiras, one steel catalogue card cabinet, 03 big steel tables and 05 computers with internet connection. The objectives of the study were to assess the knowledge of healthcare staff regarding Computers, Websites, Databases and etc., To determine the levels of user satisfaction regarding working conditions of computers, adequacy of library opening hours, usage of library facility for patients and provision of latest information for decision making. To determine the level of perceptions regarding the professional behavior of librarian as an easily approachable individual, librarian's interest in responding to the queries and library personnel to provide fair service to hospital staff. To identify areas of improvement regarding helping resources for the library's progress, non – Governmental Organizations (NGO) to play role to improve the resources of library, the staff of the hospital to contribute in the improvement of library. Finally, to find adequately provide the information and knowledge to their healthcare staff through the available resources and services.

## MATERIALS AND METHODS:

### Study Setting:

The present study was conducted in Institute of Chest Diseases Kotri, Sindh Pakistan in 2015. A questionnaire which comprised of 36 questions was used for this survey and distributed to four major

categories of subjects working in the institute i.e. medical staff, nursing staff, paramedics and staff of the hospital administration. As we indicated that there are 269 healthcare staff members working in the institute in three working shifts in various categories and capacities; but among them 86 of the staff members belonged to lower grade and were almost illiterate. Hence these were excluded.

**SAMPLE SELECTION AND DATA COLLECTION:**

The morning shift subjects of healthcare staff of the Institute were interviewed through questionnaire for this survey in 2015. These subjects were involved to handle the administrative matters, out-patients department; carry out the laboratory examinations during the working hours for services. We distributed questionnaires to 112 day duty staff of the institute. We have received 74 questionnaires dully filled in a week’s time from these subjects. We included the subjects who co-operated and showed full compliance. Any individual responding partially to the questions addressed in the questionnaire was excluded. We also excluded the subjects who were not willing to continue to participate in this study.

**RESULTS:**

The results based on designations and the pattern of job we recruited various participants categorized as: Additional director 1 (1.4%), Assistant director 1 (1.4%), Clerks 2 (2.7%), Hospital administration 8 (10.8%), House physicians 4 (5.4%), Laboratory technicians 11 (14.9%), Lady health visitors 9 (12.2%), Medical officers 17 (23%), Women medical officers 5 (6.8%), Specialists 5 (6.8%), Nursing staff male & females 10 (13.5%), and the Pharmacy related subjects 1 (1.4%) as shown in [Table 1].

**Table 1. The breakdown of the recruited subjects based on the type of Profession from the Institute of Chest Diseases Kotri, Sindh Pakistan (N = 74)**

Designation	Subjects	Percentage
Additional Directors	01	01.4
Assistant Directors	01	01.4
Clerks.	02	02.7
Hospital Administrators.	08	10.8
House Physicians	04	05.4
Lab: Technicians	11	14.9
Lady Health Visitors.	09	12.2
Medical Officers	01	01.4
Medical Officers (Males)	16	21.6
Women Medical Officers	05	06.8
Specialists	05	06.8
Nursing Staff	10	13.5
Pharmacy	01	01.4

The results based on the academic qualifications we had institute staff as medically qualified (MBBS) 28 (37.8%), MBBS & DTCT subjects were 5 (6.8%), Masters of Arts 6 (8.1%), Bachelor of Arts 13 (17.6%), Nursing Diploma holders 10 (13.5%), Intermediate grade subjects 10 (13.5%), and Matriculates i.e. grade 10 were 2 (2.7%) as shown in [Table 2].

**Table 2. Distribution of educational qualifications of the staff (N = 74)**

Educational Qualification	No. of participants	Percentage
MBBS	28	37.8
MBBS + DTCD	05	6.8
M.A	06	8.1
B.A	13	17.6
Intermediate	10	13.5
Matriculation	02	2.7

The results based on participation or job experienced these participants reported their joining in the Institute in the decade of 2000 to 2010 i.e. 28 (37.8%). Others joined in 1990 to 2000 with 23 (31.1%), in 1980 to 1990 period 19 (25.7%) and in 2010 – till to date they were 4 (5.4%) as shown in [Table 3].

**Table 3. Distribution of job experience of the staffs (N = 74)**

Experience of the staffs	Study Participants	Percentage
During 2000 – 2010	28	37.8
During 1990 – 2000	23	31.1
During 1980 – 1990	19	25.7
2010 till to the survey	04	5.4

The results based upon the knowledge regarding the usage of Computers and Information Technology showed that the great number of the participants in our study had the knowledge about the computer 73 (98.6%) and about 1 (1.4%) denied regarding the handling of computer. About 72 (97.3%) subjects had the knowledge of websites, 1 (1.4%) had little bit knowledge and 1 (1.4%) was totally denying about it.

Regarding the information about databases and how to use it, 41 (55.4%) subjects responded positively to have knowledge to use it, 27 (36.5%) subjects had little bit knowledge and 6 (8.1%) were unaware about it. Subjects were asked to respond for knowledge about the e-journals, we found that 66 (89.2%) of them responded yes, while 7 (9.5%) had little bit knowledge and 6 (8.1%) denied about

the knowledge of this kind. In our study the vast majority of participants 66 (89.2%) had knowledge about the e-books, 7 (9.5%) were had little bit knowledge and only 1 (1.4%) subject totally denied about this format of knowledge resource. Our results showed that 70 (94.6%) of participants had the knowledge about the usage of emails, only 4 (5.4%) individuals straightly refused about having any knowledge for this facility. As the applications of MS Office are being used by the majority of people globally, so the participants of this study who were using it were 70 (94.6%) versus 4 (5.4%) individuals who had poor knowledge about it. Sometimes information downloading from the internet takes very prolonged time, 45 (60.8%) subjects in our study felt no worry to download, 26 (35.1%) had very little knowledge to download and 3 (4.1%) subjects were mainly unaware. In this study 50 (67.6%) participants said that computers were always in good condition, but 20 (27.0%) totally disagreed and 4 (5.4%) were unaware about the condition of computers.

The results based upon the user perception regarding the library and librarian's performance, behavior and library resources (Table 5) shows in our study that 66 (89.2%) subjects agreed and 8 (10.8%) disagreed that a librarian is as easily approachable person. Our study revealed that 62 (83.8%) subjects agreed about the response for the librarian's skills i.e. satisfactory leadership, communication and technical aspects while 12 (16.2%) of them were uncertain in this regard. Among the participants of our study, 70 (94.6%) agreed that librarian shows interests in their enquiries and treat them fairly, versus 4 (5.4%) who disagreed. In our study 70(94.6%) participants agreed about the professionalism of the librarian while 4 (5.4%) were uncertain about it. In this study, we found that 66 (89.2%) participants were satisfied by librarian's friendly gesture, 4 (5.4%) disagreed about it and 4 (5.4%) were uncertain. In our study we observed that 54 (73.0%) subjects agreed the provision of printing facility by library, though 16 (21.6%) subjects were uncertain and 4 (5.4%) disagreed. We asked about satisfactions by usage of Book-material (i.e. paper based) versus Non-book material (i.e. paper less) in library resources in our questionnaire. We have got mix results, where in 28 (37.8%) subjects felt comfortable with the minutia of available resources, 24 (32.4%) subjects disagreed, and 22 (29.7%) of them showed uncertainty.

Provision of sufficient space in the library for group discussions was agreed positively by 62 (83.8%) of the subjects while 8 (10.8%) individuals disagreed and 4 (5.4%) were uncertain. As good libraries have a classification scheme for the proper placement of books and non-book material for helping the user to find out proper information to save the time, we assessed that aspect and found that 62 (83.8%) showed satisfaction, 10 (13.5%) did not agree, while 2 (2.7%) were uncertain. Among 39 (52.7%) subjects agreed that library suggested different resources of information with different searching tools, 23 (31.1%) were uncertain and 12 (16.2%) subjects disagreed.

Adequacy of library timings were agreed positively by 66 (89.2%) participants who responded as good, and 8 (10.8%) disagreed. On query for participants to use library, we found that 50 (54.1%) subjects agree while 34 (45.9%) disagreed due to fear of spread of infection among the combined users. Generally, we found 74 (100%) subjects agreed that library is the need of hospital and it helps in various ways to its users. In this study 66 (89.2%) subjects said that government should support the library resources while 48 (64.9%) opined that philanthropists or Non-Governmental Organization (NGOs) to carry up that function, while 26 (35.1%) disagreed this idea, 47 (63.5%) were in favor of the hospital staff to support the library, 15 (20.3%) had no idea and 12 (16.2%) disagreed that staff of hospital can be of any help due to their low salary status.

## DISCUSSION:

The results of our study showed that the staff belonging to this library is much skilled and



competent as required by any commissions. We studied diverse professional range and wide spectrum of subjects. A vast majority of these subjects had good knowledge of various parameters of the computer usage. Our findings also matched with the studies elsewhere in the world regarding usage of the physical and electronic based library resources. This study also showed satisfactory operation mode of the library itself and the library staff's behavior as well. The combined usage of library by patients was not supported. The majority of the healthcare staff had knowledge about computers, web-sites, data-bases, e-mails, electronic formats of books and journals and e-downloading and respondents showed overall satisfaction with the library resources and its services, in this study we found that the majority respondents has found the role of librarian as solving problems with diverse ability of handling of enquires; human, conceptual, planning, leading, and technical, presentations, and communication, etc . We also found library is working with professional staff, which performs as leading role, regarding in the field of Information Technology, Record Keeping, Book-Shelving, and the Cleaning of Libraries.

Demand for the medical information increased day by day in whole world due to the raped changes of the scientific innovations and the availability of Information Technological Developments. Medical Information divided in thousands of specific subjects for helping of human kind for curing and preventing from diseases. The big storage of this information obviously is libraries and the medical libraries working under the structured bodies with the vision and mission of those bodies as help. In our study as physical resources we found that library having the all resources which can be used as tool to up-lift the culture of reading, researching and learning with help of cool and smooth environment, here if we defined what reader or user required from a library. We can say that; a reader want a space for sitting, books & journals for reading, print a page or photocopy of a reference, scanning the picture or document, copying of Audio & Video material and the availability of professional library staff.

Since the place of this study was a hospital with tuberculosis patients and as this is a communicable disease so we observed some interesting responses when the subjects were asked whether the library is good for the patients or not, we found that almost equal number of subjects agreed as compared to those who disagreed by saying that tuberculosis is a communicable diseases, and the daily usage might disseminate the infection. The medical profession has been a concern for mankind since ancient past. The Physician – the medicine man, the healer, has always been looked upon with great respect throughout centuries till today. The medical library has played an important part in the great advances in medical knowledge. It is the link between the past, present and future. The history of the medical library is closely related to the actual history of medicine. In fact, a particular attitude towards medicine at any given time affected the state of the medical library (Birchette et al. 1973). The role of the health science library is to provide a learning center where practitioners and administrators can develop the skills and knowledge needed to enhance the quality of healthcare in diverse communities and to disseminate the biomedical information (Trivedi et al. 2006). At present, the technologies are increasingly used to collect, store and retrieve a great amount of information for preventive and curative health measures through the medical websites and databases developed by institutions, associations, societies and pharmaceutical agencies. In a developing country like Pakistan, healthcare professionals are quite aware of the new technologies, which are used in the libraries by their counterparts in the developed world.

The intention of a health science library is to support medical professionals in enhancing and updating their knowledge and skills, and to provide them information regarding new innovations, views, theories and latest treatment options for a better patient-care, medical education, and research (Srinivasulu et al. 2010). There is increasing pressure on health care professionals to ensure that their

practice is based on evidence from good quality research (Adio et al. 2007). This pressure comes from various sources. Evidence-based health care encourages a questioning and reflective approach to clinical practice and emphasizes the importance of lifelong learning. Evidence is the basis for almost every human decision and action. A field such as the medical profession that deals with the health and lives of individuals should ensure the utmost care in diagnosing and treating the patient (Gavvani et al. 2008).

Expounds the hospital libraries as an embodied for the mission and vision of their institutions (Weise et al. 2004). She interprets the library service as a physical symbol of the search for knowledge, a focal point for the campus and intellectual commons, a place for group engaged in collaborative work or learning and an access point and distribution center based on print and electronic information. Andargie quotes Hofmann in his article that in the health sector advances in information and computer technology in the last quarter of the twentieth century has led to the ability to more accurately profile the individual health risks, to understand better basic physiologic and pathologic processes and diagnoses through new imaging and scanning technologies. Such technological development, however, demands an increased responsibility of practitioners, managers, and policy-makers to assess appropriateness of new technologies (Andargie et al. 2013).

Standard 11 of Medical Library Association of America i.e. Standards for hospital libraries 2007 revealed support for availability of Information Technology and it says that adequate IT resources are essential in the provision of up-to-date knowledge based information resources and services. The Library must have hardware and library-specific software applications to perform basic functions related to acquiring, organizing, retrieving, and delivering knowledge based information resources to support the institution's mission (MLAS 2007). In a 1990 American Hospital Association (AHA) issued a management advisory recommending the library usage by the patients: "Library staff can be active partners in the hospital's patient education program by drawing members of the community into wellness programs through the provision of information and the materials that are directed to a nontechnical audience" (Hafner et al. 1994). The Standards for hospital libraries 2007 further say that there should be evidence to demonstrate effective connections between knowledge based information and the patient care. It also says about the education of hospital and medical staff on information management and use of information technology. The identification of print and/or electronic resources for further individualized learning on topics presented in educational sessions is also addressed.

Hospital librarian's roles have evolved to meet the challenges of this changing environment. Traditionally, they have acted as information service providers, collection resource managers, and consultants to other departments in the hospital that address the training and education needs of employees and staff (Holst et al. 2009). She further elaborates the role of the Medical Library Associations (MLAs) as starlight, she states that "this aspect discusses five mission-level goals identified by administrators and directors and describes how hospital librarians currently contribute to them. These five goals are: (i). Clinical care: provide excellent clinical care and promote clinical learning. (ii). Management of operations: promote sound management decisions, increase profitability, meet accreditation standards, reduce corporate risk, and provide an organizational learning environment, staff satisfaction, and institutional attractiveness. (iii). Education: provide excellent educational programs, resources, and services necessary for teaching and learning. (iv). Innovation and research: adopt innovative technologies and practices and foster research. (v). Customer service: improve lives of patients, families, and community members. We observed in our study the role of librarians as per internationally recognized standards.

According to the American Library Association's (ALA 1996) guidelines for the behavioral performance of reference and information service providers, an important component of a successful reference interaction is that a librarian be approachable (Bonnet et al. 2013). Midrarullah suggested in his study that; medical librarians need to have appropriate personal qualities along with professional competencies to enhance credibility, to become acceptable members of teams and to improve visibility in the organizations they served (Ullah et al. 2013). The first guideline to the librarian from the American Library Association (ALA 1996) is that the librarian should be ready to engage approaching patrons and is not engrossed in reading, filing, chatting with colleagues, or other activities that detract from availability to the patron this shows how the librarian is and will behave like a professional. The third guideline of American Library Association is that the serving person "acknowledges the patron through the use of friendly greetings to initiate conversation and by moving forward, or moving closer to the patron". Furthermore, the basic library management skills required for a library professional can be summarized as follows: (i). Effective communication skills; (ii). Resource building skills, (iii). Technical skills, (iv). Leadership skills, (v). Decision making skills, (vi). Time management skills, (vii). Public relations skills, (viii). Preservation skills, and (ix). Information and communication Skills (Ajeemsha 2012). The National Knowledge Commission of India recommends the minimum skills required for library information service professionals as: (i). Library and information-handling skills; (ii). Service orientation; (iii). Information communication technology knowledge skills; (iv). Communication and training skills; (v). Marketing and presentation skills; (vi). Understanding of cultural diversity; and (vii). Knowledge mapping skills (Ajeemsha et al. 2012).

#### **CONCLUSION:**

We conclude that although the basic needs and usage of computers were satisfactory, the electronic methods of library resources like e-books, e-journals etc. were need to be strengthened. We have concluded that there should be a set-up of continuous training to the ICDK staffs, so that the healthcare and awareness of the global standard can be achieved.

#### **RECOMMENDATIONS:**

Keeping of this reality and on the bases of findings of the study some recommendations are made for the Administrator, Directors of the Medical Institutes, Librarians, Medical Librarians and the Faculty Members of the Department of the Library & Information Sciences, which are made below:

- ❖ Focusing on the virtual medical information through the web sites related to medical and allied medical sciences, because the use of online information is growing and latest information received by the emails, announcements, and by breaking news on the web-pages.
- ❖ Started group discussions among the healthcare team members, Librarians and the Policy Makers for understanding the Mission & Vision of the parent organization and their aims and objectives for provision of better service.
- ❖ Organized library orientation programs in parent organization and for the visitors for understanding the work flow and environment of libraries.
- ❖ Stepping-up the program of Library Consortia as the collaborating works among the medical libraries as similar to inter library loan scheme.
- ❖ Started programs in libraries under the slogan of "Helping Hands" in the Parent Organization and the users of libraries are members of this program, for user education, current awareness about the library collections, circulation of library materials, and sending reminders to library borrowers



and make liaison with the faculty members.

- ❖ Conducting user satisfaction surveys on quarterly bases for understanding the needs and objections of the users regarding the resources and services of the libraries.

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