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Information Needs and Seeking Behavior of Paramedical Staff in the Hospitals of Khyber Pakhtunkhwa, Pakistan

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Abstract

The main theme of this study was to examine the information needs and seeking behavior of Female Paramedical Staff in Government Hospitals of District Karak, Khyber Pakhtunkhwa. Survey-based method was used to carried out the study. The population of this study was 110 Female paramedical staff in two government hospitals. Data was collected through questionnaires for data collection. The findings of the study revealed that paramedics mostly need information for clinical works, caretaking of patients, problems of patients, new medical trends and health policies, and self-development. The study found that they held conversations with medical experts, colleagues, and patients for seeking information. They also use books, dictionaries, magazines, and research articles to acquire the needed information.

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The study revealed that most of the paramedics use internet search engines, social media, audio-visual materials, e-books, e-articles, and e-newspaper to fulfill their required needs of information. The findings of this study will be helpful for health professionals, administrations, and policymakers to understand the level of information needs and seeking behavior of paramedical staff.

Keyword: Information Need, Seeking Behavior, Paramedics, Khyber Pakhtunkhwa

1. Introduction

Information is the basic need of Human Being like, food, water, and shelter, (Higher Education of Pakistan). Education is the powerful instrument for overcoming poverty and inequality, also for smooth functioning of economic growth, good governance, and effective institutions (Brunes. 2003). Today in Modern society, everyone belongs to different professions and fields need effective information for all its developments. It allows the individuals, organizations, and government to get and take very effective decisions upon their works and professions. Information is the vital ingredient for the development of every nation, (Jan 2011). Information has a fruitful impact on individuals and societies in every element concerned with them and plays a significant role. Information and need for information are recognizing as powerful and significant factors in improving the Human Being, (UNESCO). Information need becomes the fundamental element in every field. Information seeking behavior is the Human behavior towards getting the required needs to fulfill the very aspects of their works, decisions, and tasks a headed. The concept of Information need is a term closely related to the concept of information-seeking behavior. A user Recognizing an information need articulates it into a question, or, a request which is conveyed through formal or/and informal channels of

communication and information systems, to receive a response (verbal written, visual) that will satisfy that need.

Paraprofessional is a job title given to persons in various occupational fields, such as education, healthcare, engineering, and law, who are trained to assist professionals but do not have professional licensure. The Para-professional staff in the clinics or hospitals needs a wide range of clinical information resources to manage their patients because it has been estimated that Doctors and Paraprofessional need two million pieces of information to manage their patients. In Rural areas like District Karak, the Para-professional staff facing limited access to Clinical Resources, non-availability of health science libraries, poor information and communication technology, and information services. This information poverty of rural areas has been recognized as a serious public health problem. Not a single survey or any kind of study has been conducted to reveal the Information Seeking Behavior of Female Medical Para-professional in District Headquarter Karak. So, this problem is quite significant to be considered for research. The study will focus on the Information Seeking Behavior of Female Medical Para-professional Staff in District Headquarter Karak to find the procedure of finding information, channels of information, and impact of Information and Communication Technology.

2. Literature Review

Rubeena and Qureshi (2017) established Information and Communication Centre in a village in Sialkot for finding to Improve Women`s Health Information based on information Technology. The study revealed that the majority of participants gave an interest in Information Technology. Most respondents need information on family planning and antenatal care. Half of the participants need awareness on childcare. The majority of them update their selves about the

prevention of domestic violence. They usually used ICTs for the retrieval of information. The main sources of communication are the ICTs.

Naeem and Bhatti (2016) explored barriers in seeking health information from primary health facilities in Pakistan on 77 basic health units through a questionnaire. The study had found that the respondents faced barriers such as; unavailability of required sources, no onsite library, no health science librarian, scarcity of health information resources, technological infrastructure. They mostly consult seniors, improved internet connectivity, and document delivery services to fulfill their needs of information.

Naeem and Khan (2013) carried out a study on the information-seeking behavior of doctors working in remotes areas in Pakistan. The questionnaire was used as a data collection tool. The results had found that the majority of the doctors have accessed medical librarians and medical libraries. They mostly preferred print resources for seeking clinical information. The study had also revealed that the doctors encountered barriers such as; nonavailability or medical-related materials, medical libraries, and lack of internet connectivity.

Parvez (1975) conducted a research study on the information needs of dental surgeons serving in the Dental Colleges and Hospitals of Lahore with the help of questionnaires. The result of the study showed that 68% of respondents required information to keep updated their selves, 48% needed Information about medicines and techniques to be used, for solving problems faced in routine practices (28%), and to adjust within the field (24%). The majority of the respondents (92%) use to go to the institutional library for acquiring information. They favor receiving information from their library's current contents lists, bibliographies on desired topics, and photocopies of papers. Most respondents (88%) complain about the presence of less amount

of literature in their field. On average, the respondents gave 12 hours a week for reading current literature. It suggests some recommendations to improve the existing situation.

Bashir (1975) carried out research work on the information needs of veterinary surgeons working in the district veterinary hospitals of Punjab with the help of questionnaires and collect data from 16 respondents. The findings of this work were included: (1) These hospitals possess a very less amount of literature because of outdated books and the respondents have no access to any other library for the literature of their field; (2) These respondents have also no access to current professional journals; (3) No policy from administrative funds to the hospitals for the purchasing of required literature; (4) They mainly rely on the literature acquired from pharmaceutical companies; and (5) The respondent facing many difficulties to up to date themselves and are not unsatisfied with the role played by the Directorate of Livestock and the Pakistan Veterinary Association. Some recommendations are made to improve information supply to the veterinary hospitals.

Nighat (1975) worked on the information needs of scientists working in the Oils, Fats, and Waxes Division of the PCSIR Laboratories at Lahore through the personal interview as a tool. Major findings were: (1) The respondents made access to both formal and informal sources of information; however, and mostly depend on personal interactions; (2) They used to scan scientific literature, especially current journals for research ideas; (3) On the average they spend nine hours per week on reading; (4) They suggest their files of off-prints and other materials for their personal use; (5) They also use other sources of obtaining information in case their library was insufficient to supply; (6) Information was received in 80 percent of the cases; (7) However, they show fewer satisfactions to the services of their library. The researcher makes several recommendations to improve information services being provided to these scientists.

Siddique (1976) find out the information needs of chemists working in the PCSIR Laboratories, Lahore, using a questionnaire. One hundred respondents returned their questionnaires out of a total population of 110, with a response rate of 90.9 percent. The findings of the study were: (1) (94%) respondents make appropriate use of oral communication; (2) The participants are mainly consulted literature for research ideas; (3) (80%) need particular information frequently; (4) Current journals, abstracts, and reviews are the useful sources of information; (5) 5 journals are frequently used by chemists; (6) (96%) sources for finding literature was the PCSIR Library 69% use the services provided by PASTIC; The average participants use to eight hours per week on reading; (8) They need assistances from librarians for literature searches, and (9) Only 51% were satisfied with the resources and services of the PCSIR Library.

A systemic review was conducted by Daei and Soleymani (2020) on the clinical information-seeking behavior of physicians to obtain a comprehensive understanding of the physicians' clinical information-seeking behavior. The articles published between 2002-2017 were reviewed, selected, and analyzed in group discussions. The results had revealed that the majority of the physicians used journal articles, internet websites, textbooks, MEDLINE/PubMed, and held discussions with colleagues. They mostly used keywords, Boolean operators, medical terms, and an advanced search as common search strategies. The review also found problems such as; lack of time, information searching techniques, and unawareness of accessible sources.

The Technical Report on Health Information Seeking Behavior on the Web of Health Professionals (2016) indicated that, as a group, nurses and midwives present significant challenges to health libraries and information professionals seeking to design services to meet their needs. First of all, nurses and midwives evince a strong preference for interactive and

experiential sources of knowledge, in particular human sources such as colleagues and other clinicians, over formal sources, and reported use of the journal literature is relatively low. Moreover, librarians, however helpful, are not generally perceived as accessible; this may be linked with the fact that they are not seen as a resource for clinical problem-solving. Library use is frequently associated by nurses with continuing professional development or with formal education rather than with seeking evidence to inform clinical practice.

Studying the Information-Seeking Behavior of Hospital Professionals in Greece was carried out by Petros A. and Katerina Ziavrou (2012). The results demonstrated that most of the respondents (64%) included in the study had access to the Internet both at home and at work, 19.7% had access only at home, 7.5% had access to the Internet only at work, whereas only 8.2% had no access to the Internet. It is also interesting to note that most of the responders (55.6% and 34.6%), use the Internet daily or several times a week, and, 6.8% use the Internet about once a week, whereas the remaining 3.0% claimed not using the Internet at all. Moreover, 40.8% of the respondents note that they use personal computers for word-processing, spreadsheets, databases, and other software applications, 15.6% to access social networks, 10.9% for online product orders and e-shopping services, 65.3% for e-mail communication, and 83.0% for seeking scientific information related to their job position in the hospital. Web search engines rank first among the respondents' preferences followed by scientific journals, personal libraries, and printed material, and colleagues, conferences, hospital library, mass media, and company representatives.

Kostagiolas and Niakas (2011) examined the information-seeking behavior of hospital pharmacists in Greece to determine their information-seeking behavior and the effectiveness of the professional role. Data were from 286 pharmacists through a questionnaire. The result of the

study has shown that the majority of the respondents need information for various tasks such as; drug indications, medicine storage, dosage, and prices. They used the internet and the national organization of medicine as their main sources of information. The respondents also indicated that lack of time and organized information are the main problems while seeking information.

Younger (2010) explored the internet-based information-seeking behavior of doctors and nurses to examine the link between uses of print and online resources by doctors and nurses. The results had revealed that there was no relation between using print and online resources. The study had shown that doctors and nurses have the same need for information based on patient care. They used online resources due to unawareness about library resources. The majority of the respondents suggested that the library should ensure the required materials.

A study on the information-seeking behavior of nurses was done by Karen Davies (2007). The review is wide-ranging. It would seem that the traditional methods of face-to-face communication and use of hard-copy evidence still prevail amongst qualified medical staff in the clinical setting. The use of new technologies embracing the new digital age in information provision may influence this in the future. However, for now, it would seem that there is still research to be undertaken to uncover the most effective methods of encouraging clinicians to use the best evidence in everyday practice

Jonathan W. and Bernadette (2001) designed a questionnaire to study the information-seeking behavior of professional nurses was mailed to 600 occupational health nurses who work and reside in New York State. A 28% response rate (165 usable replies) was obtained. Results indicated respondents most need to know about government regulations relating to health care, new developments in their area of specialization, drug information, and the psychological aspects

of the disease. The respondents most frequently looked to peers and colleagues in their agency, personal files and books, and professional organizations as important sources of information. Whereas respondents were less apt to rely on the Internet, MEDLINE, or the hospital library as sources of information used for professional purposes, 38.8% did report they frequently used the Internet to seek health-related information.

The information needs and information-seeking behavior of family doctors by Sue Lacey Bryant (2004) were conducted using questionnaires. Family doctors are prompted to seek information by needs arising from a combination of professional responsibilities and personal characteristics. The data demonstrate that a need for problem-orientated information, related to the care of individual patients, was the predominant factor that prompted the seek information. It showed that personal collections of written information remained their preferred information resource. These family doctors made little use of the local medical library. Membership of a training practice influenced perceptions of information need as well as information-seeking behavior. The employment of a practicing librarian at three training practices stimulated greater use of information resources at the practice level and impacted upon the use of the stock of the medical library.

3. **Objectives of the Study**

i. To identify the needs of information of paramedical staff in hospitals of District Karak.

ii. To find out the preferred sources used for information seeking by female paramedical staff in hospitals of District Karak.

iii. To examine the problems while seeking information by female paramedical staff in hospitals of District Karak

4. **Delimitations**

The scope of the study was delimited to the female paramedical staff who are working in two government hospitals of District Karak. It excludes the female paramedical staff working in Basic Health Units of District Karak.

5. Methodology

Research methodology is a pre-planned and systematic procedure to obtain a solution to the problem. It also refers to the scientific process of conducting research steps. The survey research method is used to investigate the ideas, attitudes, and other responses from a large number of populations. In this method, a series of questions were asked from the sample of the population with the help of questionnaires. To obtain the goals of the study, a survey method is used to collect data. The reason for using the survey method was that it allows one to generalize from a smaller group to a large group. Surveys also provide a speedy and economical means of collecting data while giving a high response rate. Although there are some drawbacks of the survey method, such as the validity of answers, poor representation of questions, and rigidity of questions. The population of this study is the Female Para-medical Staff of Two Government Hospitals of District Karak i.e. District Headquarter Hospital and City Hospital Karak. In this study, simple random sampling is used to collect the data and every participant is an equal chance to be selected. Structured questionnaires were used to collect data from the target population. The closed-ended questionnaire is the type of questionnaire in which the participants have to choose the answers from the given options. It can be answered with either Yes or No. Researchers personally visited each hospital and distributed the questionnaires personally to collect data from the paramedics of each hospital. 110 questionnaires were distributed out of which 79 filled in and received. The response rate was 72%.

6. Data Analysis

6.1. Demographic Information of the Respondents

i. Name of the Hospital

The acquired result shows that majority of the respondents 66% were from District

Headquarters Hospital because of a large number of paramedics in the hospital followed by 34%

from City Hospital due to a smaller number of paramedics working there (Table 1).

Table 1: Respondents from each Hospital

Sr.	Hospital	Frequency	Percentage %
1	District Headquarter Hospital, KDA	52	66%
2	City Hospital, Karak	27	34%
	Total	**79**	**100**

ii. Age of the Respondents

The statistical data shows that most of the respondents 25% were young paramedics

between 20-25 years followed by 22% who were between 36-40 years. It also indicates that

paramedics between 31-35 years were 18% followed by 16% senior age paramedics between

above 40 years. The least number of the respondents 5% did not mention their age followed by

13% who were between 26-30 years (Table 2).

Table 2: Age of the respondents

Sr.	Age	Frequency	Percentage %
1	21-25	20	25%
2	26-30	10	13%
3	31-35	15	19%
4	36-40	17	22%
5	Above 40	13	16%
6	Missing	4	5%
	Total	**79**	**100%**

iii. Qualification of the Respondents

The descriptive statistics show that majority of the respondents 39% were 2 Years Medical Diploma holders followed by 33% who have completed One Year Diploma in Medical Field. The least number of the respondents 12% were 16-Years Graduate followed by 16% were 14-Years` degrees in the Medical Field (Table 3).

Table 3: Qualifications of the respondents

Sr.	Diploma/Certificate/Degree	Frequency	Percentage %
1	1-year Medical Diploma	26	33%
2	2-years Medical Diploma	31	39%
3	14-years Professional degree	13	16%
4	16-years Professional degree	9	12%
	Total	**79**	**100%**

iv.   Professional Experience

Table 4 shows that a large number of the respondents 23% were fresh paramedics having experience of up to five years followed by 22% having experience up to 20 years. The data shows 18% of the paramedics were experienced having 5-10 years and 16% were senior paramedics having experience above twenty years. The least number of the respondents 6% did not mention their experience followed by 15% having experience up to 15 years.

Table 4: Professional Experience of the respondents

Sr.	Experience	Frequency	Percentage %
1	1-5 Years	18	23%
2	6-10 Years	14	18%
3	11-15 Years	12	15%
4	16-20 Years	17	22%
5	Above 20 Years	13	16%
6	Missing	5	6%
	Total	**79**	**100%**

6.2. Need of Information

Descriptive statistics revealed that the majority of the respondents 86% need information for clinical works and 82% for identifying the nature of patients` problems followed by 81% to seek information to get new medical trends and 81% for the caretaking of the patients who were admitted in the hospital. The study found that 72% need information for determining social problems faced by the patients and 68% want to know about new medicines in the medical field. The least number of the respondents 38% pointed out that they needed information for self-

development followed by 49% for personal health and 62% needs information to know about the latest health policies (Table 5).

Table 5:   Need of Information

Sr.	Need of Information	Frequency	Percentage %
1	For clinical works	68	86%
2	For caretaking of patients	63	80%
3	For medicine awareness	54	68%
4	For personal health	39	49%
5	For self-development	30	38%
6	For social problems	57	72%
7	For new medical trends	64	81%
8	For health policies	49	62%
9	For patients` problem	65	82%

6.3. Sources of Information

Table 6 shows the traditional sources used by the respondents. It indicates that most of the respondents 80% consulted books to get new information and 78% held a conversation with medical experts to get guidance on new issues. The finding reveals that 76% of paramedics held discussions with other colleagues to get information. 66% of the respondents use newspapers as a source of information and 61% directly meet with patients to know their problems. Furthermore, 56% use a dictionary for searching difficult words and terms. The smaller number of the respondents 28% use their collection followed by 21% who consulted research articles to get the latest inventions and discoveries in the medical line.

Table 6: Traditional Sources used by the Respondents

Sr.	Source	Frequency	Percentage %
1	Books	63	80%
2	Newspapers	52	66%
3	Magazines	47	59%
4	Research articles	31	39%
5	Dictionaries	44	56%
6	Personal collection	22	28%
7	Conversation with medical experts	62	78%
8	Discussion with colleagues	60	76%
9	Meeting with patients	48	61%

The data showed in Table 7 indicates that the majority 75% of the respondents use e-books as a source of information and 71% of the respondents use internet search engines to get the needed information. Most of the respondents also use social media 63% to get new information. The result of the study showed that 72% read e-articles to fulfill their information needs, the least number of the respondents 56% consult online-newspapers followed by 58% use audio-visual sources for needed information.

Table 7: Non-traditional Sources used by the Respondents

Sr.	Sources	Frequency	Percentage %
1	e-books	59	75%
2	e-articles	45	57%
3	Online newspapers	44	56%
4	Internet search engines	56	71%
5	Social media	50	63%
6	Audio-visual materials	46	58%

7. Findings

1. The study found that there is a large number of Female paramedics working in the District Headquarter Hospital of District Karak.

2. It also found that more of the Female paramedics were Professional Diplomas` Holder in Medical Field in both of the Hospitals.

3. The study revealed that the majority of the paramedics needed information for clinical works, accessing patients` problems, on new medicals trends, and to enable themselves for the caretaking of patients.

4. Furthermore, the study also revealed that the least number of Female paramedics needed information on self-development, personal health, social problems, and new health policies.

5. Most paramedics held a conversation with medical experts, colleagues, and patients for seeking needed information.

6. Also, the paramedics used books, dictionaries, newspapers, and magazines to fulfill their required information.

7. It also found that paramedics used online sources such as e-books, e-articles, internet search engines, social media, and audio-visual materials for seeking information.

8. Conclusion

Paramedics require information to answer the questions that arise during clinical decisions and to update themselves in Medical Field. They also need to access health information for nursing works in many contexts. The study established that they needed information for clinical works, caretaking of patients, new medical trends, patients` problems, medicines awareness, social problems, and self-development. It was also established that they use books, dictionaries, research articles, newspapers, and magazines to get the required information. They also held conversations with medical experts, colleagues, and patients to make understandings on medical issues. It also established that they used online sources as information sources such as e-books, e-articles, internet search engines, and social media.

The Ministry of Health should make policy to provide the libraries in all Government Hospitals to ensure effective services for their users. They should provide a maximum number of reading materials and information-based technologies for the libraries. The Administration of Hospitals should ensure free of cost services of the internet to Medical`s Staff to utilize the internet use for their clinical purposes. The Ministry of Health should organize workshops and seminars on information seeking of medical staff. The concerned institution should solve all the problems faced by the users of the libraries.

9. Recommendations

1. The Ministry of Health should increase the number of Female paramedics in all Hospitals of District Karak.

2. The Government should hire paramedics who have done Professional Degrees in the medical field to utilize their services in clinical works.

3. The Administration of Hospitals should ensure the availability of books and other reading materials in the libraries which will help in the information-seeking by the medical staff.

4. The study recommended that the Administration in the Hospital should ensure all the facilities in the libraries for better utilization by their users.

5. Also, they should eliminate all the problems faced by the paramedics while using the library.

6. The paramedics should seek more knowledge on self-development to their qualities to achieve their clinical goals.

7. The study also recommended that the paramedics should make awareness of the social problems of patients and new medical policies from higher authorities.

8. Furthermore, the staff of the library should ensure a sense of co-operation with the users of the library.

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