

**INFORMATION SEEKING BEHAVIOUR OF PARAMEDICAL
PROFESSIONALS IN MIZORAM**

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by

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DECLARATION

I hereby declare that the dissertation entitled “**Information Seeking Behaviour of Paramedical Professionals in Mizoram**” submitted by me has not been previously formed the basis for the award of any Degree or Diploma or other similar title of this or any other University or examining body.

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List of Abbreviations

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| INC | Indian Nursing Council | 16 |
| MNC | Mizoram Nursing Council | 16 |
| SNCH | School of Nursing Christian Hospital | 29 |
| PHSN | Presbyterian Hospital School of Nursing | 29 |
| HWTS | Health worker's Training School | 29 |
| MCON | Mizoram College Of Nursing | 29 |
| RIPANS | Regional Institute of Paramedical And Nursing Sciences | 29 |
| NS | Nursing School | 29 |

| | | |
|---------------------|--|----|
| MFMNS | MFM Nursing School | 29 |
| ANS | Apollo Nursing School | 29 |
| Int | International | 29 |
| Nat | National | 29 |
| DVD | Digital Video Disc or Digital Versatile Disc | 29 |
| T. &Diss | Theses & Dissertations | 29 |
| PP | Paramedical professionals | 54 |
| L | Librarian | 54 |

1. INTRODUCTION

Information is an essential need for all human endeavors in the present day complex society and it improves the quality of man, which in turn, is a means to improve the mankind's social, economic, cultural, and scientific and technological as well as national development. For this it is inevitable to provide the right information to the right user at the right time in the right form. User is the last recipient of the information in the communication process performed by the libraries and information centers. The user is also known as patron, client and member etc. The types of the user vary from age-to-age, place-to-place and library to library. It can be further classified as user and non-user. The communication process of the libraries and information centers is supposed to act as affective agency for the communication of timely, relevant and comprehensive information. For this, they should have sufficient relevant collection that should have been arranged in proper manner, so that it can be retrieved and disseminated at the right time. For proper collection, proper arrangement, proper retrieval, and proper dissemination of information, a library should have competent and experienced staff. Last but not the least users of information agencies are also interested and trained in gathering information, so that they can utilize the information very effectively and efficiently. The education and training of users is an important factor in the effective use of available information.

In the modern times the information agencies no longer afford to remain on the past information handling process. In the changing dimensions every aspect of information agency not only calls for automated service, but also the change of their traditional role of being storehouse of books into effective service information agencies.

Information is acclaimed as power to support the service strength in any sector and medical sector is no exception to it. It enables the faculties and students to strengthen to provide better and effective services especially in medical field. The paramedical professionals who are closely related with medical profession either as a secondary or supplementary capacity are primarily concerned with drug related information so as to meet the clinical questions for enhancing the care of the patient. The paramedical professionals also known as Paramedics, health care workers include nurses, therapist, technicians and other ancillary staffs who are directly associated with medical care and are intimately associated with the physicians as they share a direct responsibility of the physicians. (Britannica, 1998) <https://www.britannica.com/topic/paramedical-personnel> Thus, update information is crucial for such staffs particularly in the field of drug and other therapeutic procedures, like, administering injections, making routine health assessments and taking

medical histories etc.. Hence, information can be defined as a concept, statement, and idea or an association of concepts, statements, and ideas. It also can be defined as a message conveyed or intended to be transmitted through a systematized body of ideas. According to Shannon and Weaver (Sharma; 2007; pp.341-360), “Information is any stimulus that reduces uncertainty”.

Multiple sources which include library, social networking sites, medical databases, open source are available to fetch information in the area to keep update for such paramedical professionals, Tahamtan, Farahi, Afshar, Baradaran (2017, pp. 173-186) pointed out that, seeking drug information facilitates the professionals to answer various clinical questions during handling a patient and they obtain information through printed and electronic resources to meet their drug information needs. Iyer (2011) revealed that, the paramedical professionals are more tuned to the advanced technologies and they access various medical databases like Medline to seek drug information especially using smart phone. Personal Digital Assistants, Tablets which not only provides substantive information but also reduces the errors in the event of their applications of medicines and enhances their capability to improve their clinical operations.

1.2 Paramedical Services

Paramedical personnel also called Paramedics, health-care workers who provide clinical services to patients under the supervision of a physician. The term generally encompasses nurses, therapists, technicians, and other ancillary personnel involved in medical care but are frequently applied specifically to highly trained persons who share with physicians the direct responsibility for patient care. This category includes nurse practitioners, physician’s assistants, and emergency medical technicians. Paramedical training generally prepares individuals to fill specific health-care roles and is considerably less comprehensive than the education required of physicians (<https://www.britannica.com/topic/paramedical-personnel>).

The paramedical services are associated with the health care in the nursing homes, hospitals, dispensaries, health care centres etc. and the paramedical professionals assist the medical professionals. The services imparted by the paramedical professionals include mainly on nursing which is a compulsory component of the medical care. Nursing is well recognized as a dignified profession in health care irrespective of the health care centres (<http://www.jitinchawla.com/content/paramedical-services>). These paramedical professionals perform routine diagnostic procedures and relieve the physicians in taking care of the

subsequent treatments of the patients as per the directions of the doctors. The paramedical services in a hospital, nursing homes, and dispensaries include (http://www.cdss.ca.gov/agedblinddisabled/res/FactSheets/IHSS_Paramedical_Services_Color.pdf),

- ⇒ Administering medication or giving injections
- ⇒ Blood/urine testing
- ⇒ Wound care
- ⇒ Catheter care and ostomy irrigation
- ⇒ Any treatments requiring sterile procedures
- ⇒ Enemas, digital stimulation, or the insertion of suppositories
- ⇒ Tube feeding
- ⇒ Suctioning
- ⇒ Maintaining routine health assessments and
- ⇒ Recording medical histories

The physicians concentrate on achieving the cause of the injury including the treatment of symptoms or pain with the help of the paramedical professionals using a wide variety of diagnostic tools and treatments, Injury Care. (<http://www.selfgrowth.com/articles/role-importance-of-paramedical-services>). Apart from the above responsibilities, the paramedical staffs also perform to cure the injuries.

- Osteopathic manipulation
- Physical therapy
- Electrical stimulation
- Trigger point, joint and spinal injections
- Exercise prescriptions
- Pain Medications
- On-site pharmacy

1.3 Community Paramedicine

Community Paramedicine, an emerging healthcare profession allows paramedics and emergency medical technicians (EMTs) routine healthcare services to underserved populations, and helps to improve rural emergency medical services (EMS). Community paramedics generally focus on (Joshua O and Ahmad A, 2017)

- Providing primary care.
- Post-discharge follow-up care.
- Integration with local public health agencies.
- Providing education and health promotion programs.

As the paramedical service is indispensable to the effective running of the modern health care system, the paramedics are well trained, equipped with knowledge on handling the equipments. They are also developed with skills to assess, treat, and discharge older

patients with minor acute conditions in the community. As the profession is directly concerned with human life, they require to abreast with the latest information. Further, the current information in the following areas are essential to extend proper treatment to the patients including handling of new technology (<http://www.emergencymedicalparamedic.com/category/new-technologies/>)

- ⇒ Insulin Pump,
- ⇒ Bone Injection Gun,
- ⇒ Stem Cell Treatment
- ⇒ Stem Cell Research scuuess,
- ⇒ Medical CPR

Information need is the fundamental and essential for such profession as the professionals need to orient with the technology applications of various new equipments on the patients. To cite its importance, paediatric emergencies are profoundly difficult for paramedics to attend because of the heightened emotions associated with a seriously injured or ill children, difficulty in communication and are anatomically and physiologically very different from adult patients and although children compensate very well, rarely decompensate as an adult would prior to cardiac arrest(<http://www.emergency medical paramedic. com/category/new-technologies/>).

The paramedical professionals are the skilled professionals in medical field who need to keep abreast with the cause related and application of medicines on the advice of the doctor in the common emergency areas like, Abdo Pain, Anaphylaxis, Asthma, Burns, Carbon Monoxide Poisoning, Chest Pain, Explosions and Blast Injuries, Eye Injuries, Dehydration, Diabetic Emergencies, Fractures, Heat Stroke, etc.

1.4 SIGNIFICANCE AND SCOPE OF THE STUDY

Information is crucial to all classes of the society, all professionals including the paramedical professionals and its importance has been well recognized especially in health sector to survive the information age as it has the practical utility. Advances in ICT have opened a wide range of availability in information for all those who are in need of information. Libraries in general and social networking sites and Internet in particular are considered as the source centre for expansion of knowledge, innovations, research and development. Information needs among the users bridge the gap between the state of knowledge and the anomaly to resolve and also to enrich the dimension of knowledge in the relevant area of study and or application. Significance of the present studies lies with the fact that, information quest among the academic community is crucial for teaching, learning and

research and this is equally more significant among the paramedical professionals who are concerned with health issues and the information need is adheres to the medical treatment. The present study, however, is limited to the paramedical professionals and others indulged in medical professionals are also excluded from the purview of the study.

1.5 REVIEW OF LITERATURE

Review of literature is one of the indispensable components in research work to aware of the research outputs in shape of journal articles, book, e-resources available in the concerned field of the study. This is also the means to find the research gap in the relevant field of study. Therefore, the scholar made an attempt to find out the literature available in the relevant field from various journals, books including dissertations and web. A projection of such research outputs in the descending order reveals the studies carried out in the field.

Chandrika (2017)revealed that health care has received a greater significance today in order to achieve a Healthy Society. Many factors like sex, age, type of illness, access to services and perceived quality of the services, influences the health seeking behaviour. Scholars from different streams of economics, anthropology, epidemiology, public policy and management have explored the reasons behind utilization of healthcare services by an individual.Gandhi, Kedar and Jadhav, pradeep R (2017) conducted a study to find out their preferences for drug information among postgraduate medical residents and found out that postgraduate residents have varied preferences for drug information resources. Interventions in the form of continuous medical education are required to improve their information seeking behaviour.

Bilawar and Samprasad M Pujar (2016) said that e-information literacy has made an impact on information seeking behavior of university teachers and facilitated them to make effective use of e-information independently, university should organize training programmes and awareness in the use of e-information to improve their search skills. Chris Leader andChiraq Shah (2016) investigated that how students conduct collaborative library research and how an online collaborative search system can support their work and found out that improving collaborative search system will assist students in conducting research using library resources. Laki, Damian G. (2016) conducted a surveyed among 202 health care providers in Tanga region, and the results show that health care providers located in urban areas were more likely to search health information and use it than those in rural areas and also made recommendations that health care providers in both rural and urban health facilities should continuously be trained on how to search and use health information. ReijoSavolainen (2016) revealed multiple features of such obstacles and identified their impacts on

information seeking, and the present study focused on socio-cultural barriers by characterizing small world related barriers as well as barriers due to the lack of social and economic capital.

Anila, Rath, and Madalli (2015) studied adaptation of new technologies in relation with indexing and searching in order to cope up with the growing collection. This study analysed application of visualization in digital libraries, especially in search and retrieval information. Stvilia and Choi (2015) explored the mobile application is gaining momentum for information seeking among college students. This study contributes to current research and practice in mobile wellness application design and the provision of mobile wellness services. Strarasts (2015) studied the managing and evaluating increasing amounts of digital information in the effort to improve the productivity and sustainability of their farming system. Pradeepawijetunga (2015) conducted a survey and collected data from 69 agriculture undergraduates, and found out that they often depend on Search engines, Wikipedia, classmates and lecturers for information rather than library resources and e- resources.

Andualem, Mulusew, Kebede, Gashaw, and Kumie, Abera (2013) conducted a surveyed among 350 health care workers by distributing questionnaire, and found out that the majority of the respondents acknowledged the need of health information to their routine activities. Gavgani,VahidehZarea (2013) indicates that health information seekers in Iran are passive information seekers rather than active ones. The results showed that most common resources for seeking health information were “TV” and “discussions with others”. Among the persons used internet for search health information, search engines such as "Google" or "Yahoo" were more used. Kanbarkar, Pushpalata N & Dr. K.B, Afolabi, M. O, et.al (2013) examines health-seeking behavior of university students, their use of healthcare services in the community and barriers to seeking help at the university health centre, and found out that promotional activities may be necessary to inform and educate students on rational use of medicines and access to treatment at the health centre. Maharana, Rabindra k, et.al (2013) investigated information seeking behaviour and satisfaction level of the faculty member and students at the VSS medical college, Burla, Odisha and examined different library services provided and satisfaction level of the respondents by distributing questionnaire. Pattanaik and Parida (2013) in their study found that timely availability of relevant information is important for a well-established and well design information system. The study indicates that the libraries need to adopted different types of software security system for providing quick services to the users.

Dave (2012) in his study reported about the importance of information and its need. He also discussed about various types of information seeking behavior models developed by the information scientists of the world and characteristics of information seeking behavior of the research community. Kostagiolas, P.A, et.al (2012) revealed that Psychologists are an understudied population in terms of information needs and information seeking behavior, and also identified the need to more strongly link hospital library services to health psychologists on the grounds of their information needs and behaviors. Sharma and Gupta (2012) who collected data from 83 faculty members by using questionnaire opined that, BSNL is the major internet services used by most of the faculty members. Singh, Raj Kumar (2012) focuses on the analytical study of information seeking behaviour among medical practitioners of Varanasi district and identified that awareness of resources, surroundings environment, medical practitioners' participations, and ability to use tool, self-evaluation, and intuition are having positive impact on medical practitioners information needs and seeking behaviour. Selvamani, J (2012) investigated information pattern of Faculty of Pharmacy Colleges in Chennai. This study is based on survey method through questionnaire, and found that advanced training for faculties at different level should be started and the institution should provide new innovative document delivery services and better facilities to satisfied the needs of the Pharmacy faculties in the electronic environment.

Mokhtar, IntanAzura, et.al (2011) aimed to find out what were the attitudes of young people (aged 18 to 24) in Singapore towards medical or health information seeking, and the findings of this study seemed to suggest that youths might not actually be novices in the autonomous search of health information and instead, might be increasingly competent in this area. Shibu Ray and Baby (2011) disclosed that ICT has an impact on the information seeking behavior of the academics. It showed that library system of the university is well used during different stages of research, and they used the library for academic purpose.

Gowda and Shivalingaiah (2010) viewed that the research scholars depend upon their respective university libraries as their channel information which is followed by internet facility found out that universities libraries have to equip with world class information services to match the information requirements of the research scholars. Al-Dousari, Elham (2009) focuses on exploring the information needs and seeking behavior of doctors in Kuwait government hospital and investigates the internal and external information sources used by doctors and whether the existing information sources meet their needs, and the result showed some contextual factors either supported or hindered doctors in seeking the information they need.

Mahawar, Verma, and Saha (2009) revealed that most of the Geologists used to find their information through conferences, seminars and mainly internet. They use both informal and formal sources of information. It also analysed satisfaction level of the Geologists. Krishnamoorthy, R Pandian G and Aruladhanakar, M (2009) attempts to identify information seeking behaviour of the members of faculty of science and humanities, Anna university Chennai. It reveals that out of 137 members in six departments studied, all the staff required information on current development scientific and technical news and also uses books as well as abstracting and indexing journals as their major requirements for information. Fatima and Ahmad (2008) collected data from 60 students by administering questionnaire on their information behavior at Ajmal Khan Tibbiya College, Aligarh Muslim University indicated that guidance in the use of library and services is necessary to helps students meet their information requirements.

Hemminger, Bradley M, et.al (2007) conducted a survey of academic science researchers at the University of North Carolina at Chapel Hill to capture their current information seeking behavior, and found that the information seeking behavior of academic scientists is being transformed by the availability of electronic resources for searching, retrieving, and reading scholarly materials. Kari and Savolainen (2007) revealed 11 different relationships between internet searching and the goals of personal development. Because these seem to be quite generalizable to information seeking in other contexts too, they abstracted into four generic relationships: detachment, unity, direction, and interaction.

Bennett, Nancy L, et.al (2006) distributed questionnaire with 18 items adapted from previous studies was sent by facsimile to a randomly selected sample of U.S. physicians in all specialties and active in practice, and found that specific patient problems and latest research in a specific topic most often prompt physicians to search on the Internet. Younger physicians and female physicians were most likely to seek information on a specific patient problem. Silvio (2006) concluded that chief sources of information included colleagues, friends, neighbours and relatives – respondents tend to seek information that is easily accessible, preferably from interpersonal sources, unless there is a particular reason for avoiding interpersonal sources. Mahapatra (2006) said that with the emerging need and increased fascination of scientific and engineering work groups for handling and use electronic information resources, the information centers and libraries are expected to acclimatize with the inherent pressing needs of changed mindset of users. Joshi, Pradip A, et.al (2004) had study the various attitudes and behaviour in seeking information from

engineering college libraries by users , and their analysis shows that students ,teachers and scholars have been shown more affection to formal collection in libraries.

Wellstead (2004) said that men in most western countries demonstrate poorer health outcomes than women and their information seeking in the in the health arena is poor. Acknowledgement of these differences in information seeking behavior and process needs to be supported by appropriate curriculum innovations. Padmamma, Vijayaakumar and Vasudevevan (2002) who conducted a survey on information seeking behavior of 84 VISL scientist expressed that, roughly one third of scientists visit information centre to satisfy the information needs and research activity. Prasad and Tripathi (1998) in their study revealed that there are significant differences in information seeking behavior of physical scientists and the social scientists. Information needs and sources used for satisfying their information requirements also studied in this paper.

Reddy and Karisiddappa (1997) conducted a survey by collecting data from 160 professionals in the field of disabilities in India reveals that channels are more used for information gathering. It also said that Journals are preferred for formal sources of information for preparing course/teaching materials. Thuburn, H (1997) surveyed about the information needs and seeking behaviour of health visitors in Leicestershire by means of the questionnaire distributed by the divisional nurses and the surveyed indicates that the health visitors do not feel that their information needs are being satisfactorily met by the Leicestershire Health Care Libraries and also made recommendations for the improvement of information services to health visitors in Leicestershire.

Musib (1991) found out that the principal information needs the sources utilized for obtaining information by the person engaged in the rural areas, and the survey revealed that most of the cottage industries in the rural areas depended much on self; friends, relatives and fellow professionals for current information. Warner, et.al (1973) found that most studies remain constrained by the system's definition of needs with the menu of responses coming from the systems' view of the world and not of users. Voigt (1960) determined scientists approach to the information and to relate these approaches to purpose for which information was sought. He pointed that a scientist's use of information arises from three fundamental needs; Current approach, everyday approach, and exhaustive approach.

1.5.1 Research gap:

From the above review of literature it could be found that, even if a good quantum of literature are available in the present field of study, no study has yet been found concerning to

the paramedical professionals of Mizoram and hence, the present study will bridge the research gap which will be the means and sources of information seeking found in the nursing and institute libraries are inadequate. Practical suggestions will enhance the libraries to adopt collection of information and disseminate through the viable modes to equip the paramedical professionals to meet any eventuality.

1.6 RESEARCH DESIGN

1.6.1 Statement of the Problem

Advance in ICT enhanced the important of information. Distinctions between the information 'have' and 'have not' is increasing at an overwhelming pace. The needs for information varies according to their use are several types of information in a varied format to quench the information thirst of the seeker. Even if, good length of information exist on internet domain still its authenticity is subject to verification which makes constraints among the paramedical professionals and they find difficulties to determine the worth of the information. Theoretical as well as research based article are frequently published in different journals which adds substantial value to seek the desired information. This is coupled with other forms of literature which is beyond reach sometimes due to its unavailability in the library for financial constraints. Thus, problems are inhabitable due to access of multiple resources from wide range of sources. The paramedical professionals also equally encounter multiple problems for their information need in spite of all technological supports and the library resources. The paramedical professionals invariably come across the problems due to,

- Lacking of adequate experienced library personal including supporting staffs to support the users with relevant information from the library,
- Deficit budget in the library,
- Technological failure due to strategic location of place which causes hindrances in retrieval of need based information and,
- Technology emulation which also added substantial problems in retrieval of information.

1.6.2 OBJECTIVES OF THE STUDY

The objectives of the study are to:

- i) Identify the information needs among the paramedical professionals of the nursing and institutes covered under study;
- ii) Find out the various channels through which information is accessed by Paramedical professionals in Mizoram.
- iii) Ascertain the preferred information sources used by Paramedical professionals in Mizoram.
- iv) Determine the current practices being followed in selection of resources and collection strengths in the nursing schools and institute libraries,

- v) Find out the problems faced by Paramedical professionals in Mizoram in accessing e-resources.

1.7 RESEARCH METHODOLOGY

Out of multiple methods, the questionnaire method was used for collecting the data from the paramedical professionals of the colleges/institutes under study.

- **Questionnaire method**

The scholar designed two structured questionnaires out of which, one was intended for the paramedical professionals with relevant questions relating to the present study and the other one was for the librarian of all 8 colleges under study. The scholar distributed the questionnaire to all 215 paramedical professionals which is the total population of the study covering all 8 colleges/institutes and all 8 librarians/library in-charge. The distribution of questionnaire to the librarian/library-in-charge of the respective college/institute is primarily intended to obtain information on various aspects of the library like, collection development, principle, services, infrastructures etc. in the respective library. Out of 215 questionnaires, a total number of 198 (92%) filled-in questionnaires were received and this constitutes the total samples of the present study. Further, the scholar received all 8 filled-in questionnaires from all 8 colleges which constitute 100% response rate. The filled in questionnaires were tabulated to draw analysis and findings. Microsoft excel was used to draw appropriate statistical inferences for the present study. The data placed in various tables are also supplemented with suitable graphical presentation wherever necessary. Moreover, the filled in questionnaires revealed the deficiencies of the respective library and it facilitated the researcher to submit suggestions to improve upon the library collections and services.

1.8 CHAPTERISATION

The present study is divided into five chapters.

Chapter-1 of the study constitutes the introduction including the paramedical services, community paramedicine, significance and scope of the study, review of literature and research design comprising of statement of the problem, objectives of the study, research methodology and references.

The study of Chapter-2 concentrates on the over view of the Paramedical colleges/institutes in Mizoram. The other discussions in the chapter include the national scenario of the paramedical colleges/institutes. It also includes discussions on the medical colleges/institutes in northeast India including the present status of paramedical colleges/institutes in Mizoram, institution wise brief description of paramedical nursing and

institutes in Mizoram, role of library for paramedical professionals comprising of different of consortia models, Conclusion and references.

Chapter-3 of the study constitutes information need and seeking behaviour which includes information need, type of information need, factors affecting information needs, information seeking behaviour, information seeking process-models, factors affecting the information seeking behaviour, user education, need for user training, types of user education programmes, conclusion and references.

Chapter-4 of the study deals with the data analysis and findings with graphs and tables for clear understanding. The data analysis includes analysis by the respondents, analysis by category of respondents, analysis by frequency of visiting the library, analysis by purpose of visiting the library, analysis by preferences of access of library resources, analysis by preference of information sources, analysis by type of resources mostly used, analysis by consulting source, analysis by purpose of information need, analysis by type of problems in accessing e- resources, analysis by satisfaction/dissatisfaction with the library services and findings.

Chapter-5 contains the conclusion and suggestions along with a comprehensive bibliography.

Reference

- Cliff, L. Role & Importance of Paramedical Services <http://www.selfgrowth.com/articles/role-importance-of-paramedical-services> Charter of duties http://ofbindia.gov.in/download/rti_man/rti_am/Charter%20of%20Duties%20of%20Medical%20&%20Paramedical%20Personnel.pdf
- Emergency Medical Paramedic 2010-2013. <http://www.emergencymedicalparamedic.com/paramedic-study-notes/>
- Emergency Medicalparamedic.http://www.emergency_medical_paramedic.com/category/new-technologies/
- <http://www.dipsindia.co.in/history>.
- <http://www.dipsindia.co.in/history.asp>)
- Joshua O. A and Ahmad A, A (2017). Paramedical Sciences and Services: The Need to Develop Effective Systems in Africa. *World journal of pharmaceutical and Medical Research*, 3(9), 30-33
- Silvio, D.H. (2006). The information needs and information seeking behaviour of immigrant southern Sudanese youth in the city of London, Ontario: an exploratory study. *Library Review*, 55 (4), 259-266

2 Introduction

The paramedical personnel synonymously represented as paramedics and health-care workers extend clinical services to the patients under the supervision of a physician. The paramedical professionals include nurses, therapists, technicians, and other ancillary personnel who are involved in medical care and share their responsibilities in different capacities with close association with the physicians. They are trained through education in the colleges and practical training in the recognized hospitals. Eventually, they shoulder the responsibilities in routine diagnostic procedures, such as the taking of blood samples, and therapeutic procedures, such as administering injections or suturing wounds. They also relieve the physicians of making routine health assessments and taking medical histories. Paramedical training generally prepares individuals to fill specific health-care roles and is considerably less comprehensive than the education required of physicians. (<https://www.britannica.com/topic/paramedical-personnel>).

Education in health sector is predominant in the society. Realizing the importance of health education paramedical colleges were established to impart the need based education as health care delivery systems are undergoing rapid changes and the demand for skilled paramedical personnel (<https://www.nimt.ac.in/courses/medical-and-paramedical/>). The paramedics can be defined as a practice in the field of medical science that deals with pre-hospital emergency services that give primary medical and trauma care and take right decision during an emergency. The major areas of work in the field of paramedical sciences are spinal injury management, fracture management, obstetrics, management of burns and assessment, and evaluation of general incident scene. A person working in the field of Para-medicine should be well acquainted with the medical equipment maintenance procedures, radio operating procedures as well as emergency vehicle operation. The increasing demand of skilled paramedical professionals has opened up several career opportunities for young aspirants. Many paramedical institutes offer courses in the field of para medicine, at degree and diploma levels. (<http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>).

2.1 Paramedical Colleges/Institutes- A National Scenario

While tracing a national scenario of such paramedical colleges in India, many leading colleges/institutes impart courses in paramedical science. The leading institutes who offer such course in India include, (i) All India Institute of Medical Science, New Delhi; (ii) Manipal College of Allied Health Sciences, (iii) Manipal; Teerthanker Mahaveer College of Paramedical Sciences, Moradabad; (iv) Delhi Institute of Paramedical Sciences, New Delhi;

(v) Himalayan Institute of Medical Sciences, Dehradun; (vi) Aalim Muhammed Salegh College of Paramedical Science, Chennai; (vii) Pulipati Prasad Paramedical and College of Nursing, Khammam, Andhra Pradesh; (viii) Moulana Institute of Nursing and Paramedical Sciences, Malappuram, Kerala; (ix) HKL School of Nursing and Paramedical Sciences, Ferozepur, Punjab; (x) Priyadarshni Institute of Paramedical Sciences, Trivandrum Medical College, Thiruvananthapuram; (xi) Jaya College of Paramedical Sciences, Thiruvallur; Pushpanjali Institute of Paramedical Sciences, Ghaziabad; (xii) Vydehi Institute of Medical Science and Research Center, Bangalore; and (xiii) Dr. BR Sur Homoeopathic Medical College Hospital and Research Centre, New Delhi (<http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>).

2.2 Medical Colleges/Institutes in North-East, India

The medical colleges/institutes prevailing in North East, India is enumerated below in the Table- 2.1

Table-2.1: Medical Colleges/Institutes in North East, India

| Sl. No | Name | Address | State | Website | Status |
|--------|--|---------------------------------|-----------|---|---------|
| 1 | North East Indira Gandhi Regional Institute of Health and Medical Sciences | Mawdiang diang, Shillong-793018 | Meghalaya | http://neigrihms.nic.in/ | Central |
| 2 | Regional Institute of Medical Sciences | Lamphepata, Imphal – 795004 | Manipur | http://www.rims.edu.in/ | Central |
| 3 | Regional Institute of Paramedical & Nursing Sciences, | Zemabaw, Aizawl-796001 | Mizoram | http://ripans.org/ | Central |
| 4 | Regional Dental College, | Guwahati | Assam | www.indiastudychannel.com | State |
| 5 | Regional College of Nursing, | Guwahati | Assam | http://www.educationindia.org.in | State |
| 6 | Government Ayurvedic College, | Guwahati | Assam | http://colleges.ancientayurved.com/ | State |
| 7 | Dr. B. Borooah Cancer Institute, | Guwahati | Assam | http://www.bbcionline.org/advertisement.htm | State |
| 8 | Gauhati Medical College & Hospital, | Guwahati | Assam | http://gmchassam.gov.in/ | State |
| 9 | Silchar Medical College PO: Ghungoor, | Ghungoor, Silchar | Assam | http://smcassam.gov.in/ | State |
| 10 | Jorhat Medical College and Hospital, | Jorhat | Assam | http://www.jmch.org.in/ | State |
| 11 | JawaharLal Nehru | Porompat | Manipur | http://www.jnims.edu.in/ | State |

| | | | | | |
|----|--|---|---------|---|---------------------------------|
| | Institute of Medical Sciences, | Imphal | ur | | |
| 12 | Sikkim Manipal Institute of Medical Sciences, | 5th Mile, Tadong, Gangtok, East Sikkim- | Sikkim | http://smims.smu.edu.in/home.php?t=p | Sikkim Manipal University (SMU) |
| 13 | Agartala Government Medical College, G B Pant Hospital, | Agartala | Tripura | http://agmc.nic.in/ | State |
| 14 | Tripura Medical College & Dr. B R Ambedkar Memorial Teaching Hospital, | Hapania, Agartala | Tripura | http://tmc.nic.in/ | State |
| 15 | LokopriyaGopinathBordoloiRegional Institute of Mental Health, | Tezpur, Dist: Sonitpur, | Assam | http://www.lgbrimh.org/ | Central |
| 16 | Assam Medical College Barbari, | Barbari, Dibrugarh | Assam | http://assammedicalcollege.in/ | State |

Source: <http://www.mdoner.gov.in/node/2025>

In Mizoram, there are 8 (Eight) Paramedical colleges/ institutes and all the institutes provide learning of nursing course and they also provide all the amenities and facilities for the paramedical professionals. All the nursing institutes maintain the library and provide various collections of nursing books, magazines, and journals to support their information needs.

2.3 Paramedical Nursing and Institutes in Mizoram- The Status

The Nursing and Institutes in Mizoram provides skill, training and capacity building among the paramedical professionals. All the 8 (Eight) nursing and institutes in Mizoram are reflected in Table-2.2 with their credentials along with their brief description in Table-2.3.

Table-2.2: Paramedical Nursing and Institutes in Mizoram

| Sl. No. | Name of Institute | Year of Estt. | Location | No. of Paramedical Professionals | Status | Approved | Affiliation |
|---------|---|---------------|----------|----------------------------------|----------------------|------------|--------------------|
| 1 | School of Nursing, Christian Hospital Serkawn | 1919 | Lunglei | 25 | State Govt. | INC & MNC* | Mizoram University |
| 2 | Presbyterian Hospital | 1928 | Aizawl | 17 | Mizoram Presbyterian | INC | Private |

| | | | | | | | |
|---|--|------|---------|----|------------------|------------------|--------------------|
| | School of Nursing | | | | Church Synod | | |
| 3 | Health Workers Training School, Kulikawn | 1957 | Aizawl | 42 | State Govt. | MNC | MNC |
| 4 | Mizoram College of Nursing (Previously Health Workers Training School) | 1980 | Aizawl | 33 | State Govt. | INC &MNC* | Mizoram University |
| 5 | Regional Institute of Paramedical and Nursing Sciences (RIPANS) | 1995 | Aizawl | 28 | Central Govt. | AICTE, New Delhi | Autonomous |
| 6 | Nursing School | 1995 | Lunglei | 23 | State Govt. | INC & MNC* | Mizoram University |
| 7 | MFMS School of Nursing | 1995 | Aizawl | 12 | INC | INC | Mizoram University |
| 8 | Apollo Nursing School | 2005 | Aizawl | 28 | Private Un-Aided | MNC | Mizoram University |

*- INC- Indian Nursing Council, New Delhi, MNC- Mizoram Nursing Council, Aizawl
Source: Annual Report, Mizoram University, 2016-17,

Table- 2.3: Historical perspectives of Paramedical Institutes

| Sl.No | Year | Description |
|-------|------|---|
| 1 | 1950 | Dai training, 1 year course was started, and was then withdrawn in June, 1959, about 101 Dai were trained |
| 2 | 1957 | Auxiliary Nurse & Midwifery (ANM) course was started, more than 200 ANM were trained, later abolished in 1981 |
| 3 | 1965 | First Urban Health Centre / Family Planning Centre was established |
| 4 | 1980 | General Nursing & Midwifery school, three years course was established, and was later closed in 2005, Replaced by Nursing College |
| 4 | 1981 | ANM school was upgraded to Multipurpose Health Worker School, and was shifted from Civil Hospital Aizawl |
| 5 | 2005 | Mizoram College of Nursing (MCON), a degree college of B Sc nursing was established. |

Source: <http://civilhospitalaizawl.org/edu.htm>

2.4 Institution wise brief description of Paramedical Nursing and Institutes in Mizoram

The brief general description of all the eight paramedical nursing and institutes of Mizoram in general and the library in particular attached to each institute is explained below.

2.4.1 School of Nursing, Christian Hospital

School of Nursing Christian Hospital Serkawn was established in 1919 and was approved by the Indian Nursing Council (INC), Delhi. It is recognized by the Mizoram Nursing Council (MNC). The institute is affiliated to the Indian Nursing Council and it is situated at Lunglei in the State of Mizoram. The School has currently 25 (twenty five) Paramedical staffs.

The institute is one of the famous and admired nursing institutes available in the State of Mizoram. It provides the best possible diploma education in the field of nursing using highly experienced and skilled lecturers and by adopting latest teaching techniques and basic facilities & amenities.

The primary aim of the institute is to create talented and professionals in the field of nursing. The institute makes immense efforts to increase the boldness and confidence of the students coming out the institute in order to make them successful nursing professionals

2.4.2 Courses offered:

The School of Nursing Christian Hospital Serkawn, offers the diploma course in nursing – GNM (General Nursing and Midwifery) and the duration of the diploma course is three and a half years.

2.4.3 Eligibility criteria for admission:

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.4.4 Infrastructure:

The institute has an excellent atmosphere which is well suited for learning nursing course and it provides all the amenities and facilities for effectively managing a nursing institute. The institute has the facilities such as library, laboratories, cafeteria, modern equipments, and computing facility. Each department of the institute has well equipped laboratories furnished with modern equipments. The cafeteria in the institute offers hygienic food items and drinks for the students and staffs.

2.4.5 Library

The School of Nursing, Christian Hospital Serkawn library which was established in the year 2008 is equipped with a library to meet the information need of the paramedical professionals of the institutes. The library of the institute is not only spacious but also provides a wide range of reading resources to the staffs and students of the institute. It is strengthened with wide range of collections of nursing books, magazines and journals. The library of the institute is equipped with well-furnished computer laboratory with internet facility which supports the staffs and students to find the resources from the web in the concerned field.

Personal visit is the current practice of the users which is being followed in the library for selecting resources by the users by themselves. Even if the library is quite spacious, the library does not provide enough seats for faculties and students. The library maintains the physical form of catalogue and displayed to the users to select the resource. But, the library does not follow any classification due to non-availability of schedule. But, the library is committed to maintain journal subscription and Rs.4000/- yearly has been earmarked for subscribing the national journals. Due to fund constraint, the library at presents is having 1 computer and 1 telephone. The library is adopting traditional means of charging and discharging of books to the users.

The library is opened throughout the year including the holidays to facilitate library resources to the users. The normal functional timing of the library in the week days are from 9AM to 4PM. However, on Saturday and Sunday, the library functions till 12 noon.

⇒ Library Staffs:

The library is equipped with technical manpower and the librarian takes all measures to strengthen the library not only with the resources but also with multiple services. The librarian being the sole hand in the library finds constraints to maintain the library properly leading thereby, affecting to the library services.

⇒ Library Collections

The library, due to paucity of funds is unable to equip with rich resources. But, still as of now, the library is having 3500 collections of books and subscribing to 5 (Five) national journals in the field. However, the library is promoting the users to access open access journals from the library.

2.5 Presbyterian Hospital School of Nursing

Presbyterian Hospital School of Nursing, located in Durtlang, Aizawl (Mizoram). It was established in the year 1928 and the school has currently 17(Seventeen) Paramedical

staffs. The first trainer was Dr. J. Williams (PuDaka). He took Ms.Khuangi 16 years of age from Suarhliap as his first student. A formal nursing training was started in December 13, 1937 with the arrival of Missionary Dr. Miss Gwyneth Parul Roberts (Pi Puii).

The nursing course was approved by the Indian Nursing Council in the year 1944, becoming the first recognised nursing school in northeast India. Since its establishment the institution is developing steadily and gradually under the tender care of Mizoram Synod. It intends to produce competent nurses. In order to accomplish its aim and to provide comprehensive education to the students, Presbyterian Hospital School of Nursing boasts of being equipped with all the basic facilities.

2.5.1 Courses offered:

Presbyterian Hospital School of Nursing offers three and half years of diploma in General Nursing & Midwifery (G.N.M) course at undergraduate level.

2.5.2 Eligibility criteria for getting admission:

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.5.3 Infrastructure:

The institute has the facilities such as library, laboratories, cafeteria, modern equipments, and computing facility. Each department of the institute has well equipped laboratories furnished with modern equipments. The cafeteria in the institute offers hygienic food items and drinks for the students and staffs.

2.5.4 Library

The Presbyterian Hospital Nursing School library was initiated in the year 1928 at Durtlang, Aizawl. The library is located in the ground floor of the Academic block in the nursing school and it is learning resource centre and service section of the school. In the year 1977 it was recognized as the establishment of the library to start lending facilities services handled by tutors on assignment basis. Since 1944 it was remarkable that the library functions separately by it having separated rooms and further operate by professional staff. The library is recognized by the state government in the year 1999 under the matching scheme of RRLF & state government.

The PHNS library provides various collections of nursing books, magazines, and Journals. Since the PHNS library is a special library for Medical Science, most of the users are having a medical background. The current practices being followed in selecting the

resources in the library is Personal visit. The library does not have a separate building and hence, cannot provide adequate space for the clientele and enough number of seats for faculties and students. The library maintains catalogue of all the collections which makes easy means to know the availability of resources. In the absence of the computers, the library follows a practice of traditional means of charging and discharging of books to the users.

To provide better use of the library resources, the library maintains its functional timing in the week days from 9AM to 4:30PM in summer and in winter 9AM to 4PM. But, it does not open on Saturday and Sunday.

⇒ **Library Staffs**

There are two non-professional hands in the library excluding a librarian. While, the librarian takes care of all the technical works of the resources, the non-professionals assist him in other functions and services of the library.

⇒ **Library Collections**

The collection development essential in the library and it provides adequate information to its users. The total collection of the library is 7541 which include the print, non-print, and electronic materials.

2.6 Health Worker's Training School

Health worker's training school was established in the year 1957 and it is located in Kulikawn.. The institution was approved by Mizoram Nursing Council (MNC) and is affiliated to Mizoram Nursing Council. Currently, there are a total number of 42 staffs including teaching and non- teaching staffs.

The institutes provides diploma education in the field of nursing using highly experienced and skilled lecturers and by adopting latest teaching techniques and basic facilities & amenities.

2.6.1 Courses offered

Health workers training school offers three and half years of diploma in General Nursing & Midwifery (G.N.M) course at undergraduate level.

2.6.2 Eligibility criteria for getting admission

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.6.3 Infrastructure

The institute has the facilities such as library, laboratories, cafeteria, modern equipments, and computing facility. Each department of the institute has well equipped laboratories furnished with modern equipments.

2.6.4 Library

Health worker's training school library was established in 1957. The library was located in the first floor of the academic block. The library does not have a experience librarian to maintain the library materials. However, to look after the day to day activities and function, one non-professional staff is engaged as library-in-charge. Since the library has no separate building and experience librarian, the library does not provide adequate services to its users. Further, the absence of the experience librarian also caused strain in proper management of library resources. However, the in-charge librarian takes care of issue and return of the books through the register. He also provides the reference services to the users. The library abstains of providing any other technical services to the users. The users have a free entrance to the library to select their own resources. However, the library maintains card catalogue of all the resources which help the users to ascertain the availability of the resources.

⇒ Library Timing

The library remain open only 1 (one) Hour in weekdays during lunch time i.e 12:00 noon to 1:00 pm and remain closed on government holidays.

⇒ Library Collections

Due to inadequate budget, the library is unable to maintain need based collections. However, the total collection of the library amounts to 1000 which include the medical books and reference books. It also subscribes two Indian journals. Thus, there is a poor status of the library.

2.7 Mizoram College of Nursing

Mizoram College of Nursing is a nursing school run by Civil Hospital, Aizawl under the Health & Family Welfare Department, Mizoram. The campus is located in Falkawn. It features a library, computer laboratory, nursing laboratory classrooms, and a hostel. The school began in 1980 with an intake of 20 students for the general nursing and midwifery course. About 500 students have graduated since. The institution was upgraded to provide degree level education in 2005. The institution has gained approval from the Indian Nursing Council (INC), Delhi and Mizoram Nursing Council (MNC), Aizawl. It is affiliated with Mizoram University.

2.7.1 Course offered

The college offers a B.Sc.Nursing which is 4^years course. Students gain mental health experience at Lokopriya Gopinath Bordoloi Regional Institute of Mental Health in Tezpur.

2.7.2 Eligibility criteria for admission

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.7.3 Infrastructure

The institute has adequate infrastructural facilities such as library, laboratories, cafeteria, modern equipments, and computers which create a healthy environment for the students.

2.7.4 Library

Mizoram College of Nursing Library (MCON) was established in 2005, and located in the ground floor of the Academic building. The library is well equipped with latest Nursing and Medical books and relevant journal magazines and newspapers. The institute has qualified librarian and library staff since 2015. Before this, the library was being looking after by many staffs such as IV Grade staffs, MR staffs, and Tutors etc. MCON library provides various collections of Nursing books, Magazines, and Journals for the students and faculties.

The current practice being followed in selecting library resources is through personal visit to the library by the users. The library provides adequate space and seats for the clientele. The time required for processing the library material is one week. The circulation section of the library is computerised, and the library also provides documentation service and reference services to the users including online information access like Open access journals through NCISTS freely. The library also provides other services to the users like Automated Circulation, Online Databases, CD-ROM/DVD, Multimedia databases, Internet facilities. This is comparatively a well-developed library in the field where, the users get a wide range of options to access library resources and electronic resources along with internet resources.

The library maintains its functional timing throughout the year from 9AM to 4 PM on week days except on Sunday and hospital holidays.

⇒ **Library Staffs**

The library is well organized and maintained by an experienced librarian. There are altogether three staffs in the library including the librarian. All the library staffs work together and provide the user centric information to the users.

⇒ **Library Collections**

The collection development of the library includes the print, non-print, and electronic materials. The library is subscribing to 4 (four) international nursing journals and 6 (six) national nursing journals currently. The library has a wide range of collection development with total holdings of 2922resources.It is also housed with 45 Theses/Dissertations and 40 DVDs / CD-ROM.

2.8 Regional Institute of Paramedical and Nursing Sciences (RIPANS)

The Regional Institute of Paramedical and Nursing Sciences (RIPANS) was established during 1994-95 under North Eastern Council (NEC) as an Autonomous body with due approval of the concerned Ministries of Government of India to cater the much needed Paramedical, Nursing and Pharmacy personnel of the North Eastern States viz, Assam, Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland, Tripura and Sikkim. The Institute is situated at the outskirts of Aizawl, Mizoram in a secluded hilly slope of about 39.60 bighas. The Institute was transferred to the Ministry of Health & Family Welfare, Govt. of India from NEC w.e.f 1st April, 2007.

RIPANS Institute is located at Zemabawk on the slope of a hill generously donated by the Govt.of Mizoram. The site is surrounded by National Highway 54 on the South-East and Mizoram State Cancer Institute (MSCI) on the North-West. It is located in the outskirts, about 10 kms away from the capital city of Aizawl. The scenic beauty of the Campus on completion itself will be more attractive beyond comparison with any other similar Institute. The site offers wide scope of development in terms of infrastructure and the dedicated services of the employees (teaching and non-teaching) have created an environment of real education. The scenic beauty of the city can be well seen and appreciated from the Campus.

The Regional Institute of Paramedical and Nursing Sciences and the institute is a Government of India institution under the Ministry of Health and Family Welfare. The institute is offering courses pertaining to the health care industry with affiliation from the Mizoram.

2.8.1 Course offered

The Regional Institute of Paramedical and Nursing Sciences is offering the following courses pertaining to the field of health care:

- Bachelor of Science in Nursing
- Bachelor of Pharmacy
- Bachelor of Science in Medical Lab Technology
- Diploma in Radio Imaging & Cardio Instrumentation Technology
- Diploma in Ophthalmic Technology

2.8.2 Eligibility criteria for admission

For seeking admission to the aforesaid courses, candidates must have completed their 10+2 with not less than 50% of marks, which is 5% relaxed for candidates falling under SC/ST and OBC Category.

2.8.3 Infrastructure

The institute also has a computer centre with internet facility and the students can access this center during the working hours. The institute also offers transportation facilities for students and staffs. The institute also offers canteen facility with quality food items and this can be availed by the staff members and students of RIPANS.

2.8.4 Library

RIPANS library was established in 1997. Initially Library users were restricted to teaching faculty members only due to shortage of books, staff, space etc. During the last few years it has been growing and there have been improvements in terms of infrastructural development and increase in reading materials. Recently the library has been computerized. Catalogue of collection of the library holdings have been available for users searching throughout the campus network using Web OPAC facility provided by TLSS.

The current practices being followed in selecting resources in the library is personal visit and Web OPAC. Catalogue Card is the physical form of catalogue adopted in the library, and the library use electronic method for charging and dis-charging books as it saves the time of the library users. The library also provides reference service to the readers through both traditionally and electronically. E-journals can also be access from the library. The library spent the amount of Rs.40 lakhs for subscribing electronic journals. It provides other services to the users like Automated cataloguing, Automated circulation, and Internet.

The library remains open throughout the year except on Sunday and government holidays. The functioning of the library in weekdays is from 9AM to 4:30PM.

⇒ **Library Staffs**

Currently, the library is maintained and organized by experienced librarian with the help of three professional staffs and two IV-Grade. They serve the students and teachers with useful information in the field of their needs.

⇒ **Collections**

The library has a wide range of collections in their field and provides adequate resources to the users. Currently, the library have 5246 books, 2500 reference tools, 700 DVD, and 33 E-journals. The library is subscribing to 8 (Eight) national and 8 (Eight) international journals in the field.

2.9 Nursing School

The Nursing School is a located in Salem veng of Lunglei district in the State of Mizoram which is an urban area. The Nursing School Lunglei is managed by State Government and was established in the year 1995 and got recognition in the year the academic session of our College starts in the month of July. The Nursing School Lunglei was approved by Indian Nursing Council (INC), and Mizoram Nursing Council (MNC) and it is affiliated to Mizoram University.

The Nursing School Lunglei has many students studying in various classes with very well qualified faculty/teachers teaching them giving a healthy student pupil ratio. These teachers are able to provide innovative and practical teaching to the students.

2.9.1 Course offered:

Nursing school, Lunglei offers three and half years of diploma in General Nursing & Midwifery (G.N.M) course at undergraduate level.

2.9.2 Eligibility criteria for getting admission:

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.9.3 Infrastructure:

The institute has good facilities and infrastructure such as library, laboratories, cafeteria, modern equipments, and computing facility.

2.9.4 The Library

To support the students and teachers the Nursing School Lunglei also is equipped with a Library which is open at the convenient time for students. The library is well equipped with a good collection of books and other relevant study material. It was established in 2009,

located in the first floor of the main building. Since the library has no separate building there are no adequate space and seats for the students and faculties.

Traditional method in the library is being followed for issuing the books. The library maintains catalogue of all the holding of resources which is accessible to its users. The users get ascertained about the availability of books. However, the library is lacking of an experienced librarian. In the absence of the regular librarian, the library is being managed by a nursing staff as library in charge. The library remains open on weekdays from 9AM to 4PM but it remains close on Saturday and Sunday.

In the absence of a technically qualified staff, the library is being managed by a nursing staff of the school as the library-in-charge. She is the sole hand to look after the day to day works of the library.

⇒ **Library collections:**

The library does not have specific budget allocation to develop its resources. However, it has developed a total number of 635 books and presently subscribing to 4 national journals in the field of nursing.

2.10 MFM School of Nursing

MFM School of Nursing was established in 1995 and it is located in Bawngkawn, Aizawl. The school was approved by Indian Nursing Council (INC) Delhi and Mizoram Nursing Council (MNC) and affiliated to Mizoram University. MFM Nursing School has trained faculty. A total number of 12 paramedical staffs are presently working in the school.

The MFM Nursing School provides various facilities and infrastructures to the students and staffs which help them to meet various needs. The infrastructure of the school includes library, laboratories, cafeteria, modern equipments and computers.

2.10.1 Course offered:

MFM Nursing School offers Diploma course in Auxiliary Nursing and Midwifery (ANM).

2.10.2 Eligibility criteria for Admission:

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 40% aggregate marks, are eligible to apply for the Diploma course in Auxiliary Nursing and Midwifery (ANM).

2.10.3 The Library

MFM School of Nursing library was established in 2009 to cater the needs of the students. But there is no separate building of the library. Presently it is located in the 2nd floor of the academic building. The MFM library do not have qualified librarian and is look after

by one the staff as a library in charge. Since the library has no separate building there are no adequate space and seats for the faculties and students.

The MFM library provides various collections of nursing books, magazines, and nursing journals. The current practices being followed in selecting library resources is through personal visit. The library maintains catalogue of all the resources through card and is open to the users to select the library resources. Traditional method is being used for issue and return of books. The library spends approximately Rs. 700/800 for subscription of different nursing journals. The library remains open throughout the year except on government holidays. The opening hour of the library in the week days is from 9AM to 4PM.

The library does not have any technical hand to look after the technical issues of the library. However, a nursing staff is in charge of the library to run the library. She is being assisted by one temporary staff.

The collection development of the library is limited to 612 books. However, it is subscribing 4 national journals in the field for the users.

2.11 Apollo School of Nursing

The Apollo School of Nursing was established in 2005 and located in Luangmual, Aizawl (Mizoram), is one among the prominent institutions to acquire nursing education and training in the state. The college was incepted with the intention to produce well-qualified and skilled nurses. In order to accomplish its aim, Apollo School of Nursing has equipped itself with all the basic amenities. The college offers three and half years of General Nursing & Midwifery (G.N.M) course at undergraduate level. It has gained the recognition from Indian Nursing Council (INC), Delhi. The college is also approved by Mizoram Nursing Council (MNC), Aizawl, and affiliated to Mizoram University.

2.11.1 Course offered:

Apollo Nursing School, offers three and half years of diploma in General Nursing & Midwifery (G.N.M) course at undergraduate level.

2.11.2 Eligibility criteria for admission:

Candidates, who have passed 10+2 or equivalent examination in science stream with a minimum of 50% aggregate marks, are eligible to apply for the GNM diploma course. The admission for the GNM diploma course is made on the basis of marks obtained in the qualifying examination.

2.11.3 Infrastructure:

The college provides good infrastructure facilities such as library, laboratories, cafeteria, modern equipments and computing facility. The institute also offers transportation

facilities for students and staff members commuting from the nearby areas and this facility has been arranged according to the working hours of the college.

2.11.4 The Library

Apollo Nursing School library was established in 2005. Located in Luangmual, Aizawl, the institute library provides various collections of nursing books and magazines. The library materials are maintained by one technically qualified professional staff. In addition, there are three temporary staffs that assist in handling the resources of the library. The library provides enough space for various types of services to clientele but does not provide enough seats for faculties and students. The library is having 1264 books and 50 reference tools to support the learning activities of the students.

Traditional method is used for issuing library resources and catalogue card is used for accessing the library resources. The library remains open on weekdays and holidays except on Sunday. The timing of the library is from 9:00 am to 4:00 pm on week days.

2.12 Comprehensive Data of Library Resources

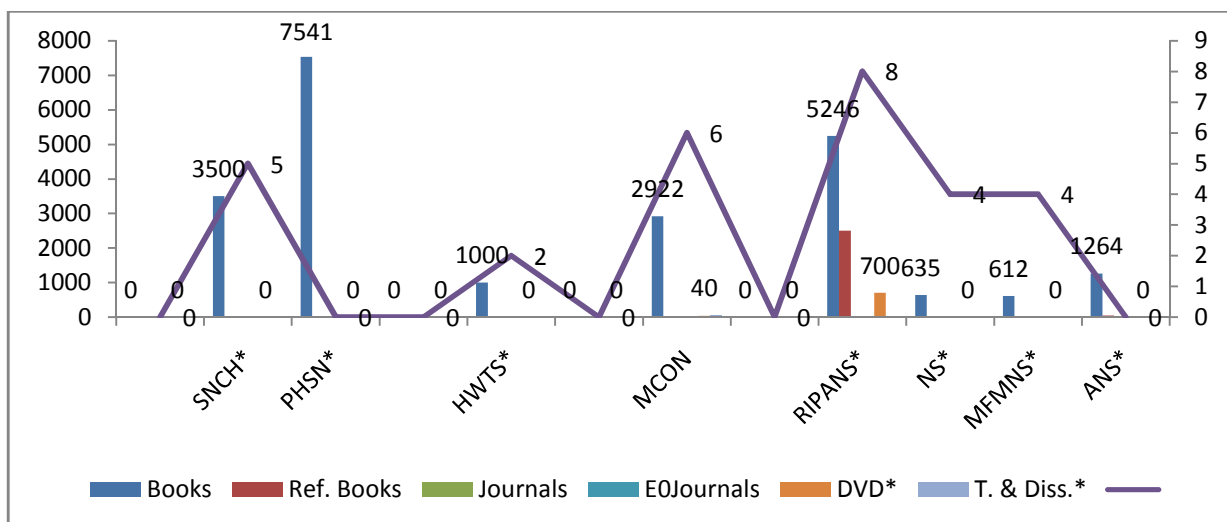
A comprehensive data of library resources of all the 8 Para-medical institutes in Mizoram is placed below in Table-2.4 and it is supported with Graph-2.1 for clear understanding.

2.4: Comprehensive Data of Library Resources

| Institute/ College | Books | Ref. Books | Journals | | E- Journals | DVD* | T. & Diss.* | Total |
|-----------------------|-------|---------------|----------|------|----------------|------|----------------|-------------|
| | | | Int* | Nat* | | | | |
| SNCH* | 3500 | 0 | 0 | 5 | 0 | 0 | 0 | 3505 |
| PHSN* | 7541 | 0 | 0 | 0 | 0 | 0 | 0 | 7541 |
| HWTS* | 1000 | 0 | 0 | 2 | 0 | 0 | 0 | 1002 |
| MCON* | 2922 | 0 | 4 | 6 | 0 | 40 | 45 | 3017 |
| RIPANS* | 5246 | 2500 | 8 | 8 | 33 | 700 | 0 | 8675 |
| NS* | 635 | 0 | 0 | 4 | 0 | 0 | 0 | 639 |
| MFMNS* | 612 | 0 | 0 | 4 | 0 | 0 | 0 | 616 |
| ANS* | 1264 | 50 | 0 | 0 | 0 | 0 | 0 | 1314 |

- SNCH-School of Nursing Christian Hospital, PHSN*-Presbyterian Hospital School of Nursing, HWTS*-Health Worker Training School, MCON*-Mizoram College Of Nursing, RIPANS*- Regional Institute of Paramedical And Nursing Sciences, NS*-Nursing School, MFMNS*-MFM Nursing School, ANS*Apollo Nursing School, Int*-International, Nat*-National, DVD*-Digital Video Disc or Digital Versatile Disc, T. & Diss.*-Theses & Dissertations.

Source: Questionnaire



Graph-2.1: Comprehensive Data of Library Resources

It could be ascertained from the Table- that, RIPANS library is having the highest collections which amounts to 8675 followed by PHSN with 7541 resources and SNCH with 3505 resources.

2.13 Role of Library for Paramedical Professionals

Library is a recognised and accepted podium not only for collection of published, electronic and audio-visual materials resources but also a dissemination centre of information/knowledge and also to provide uninterrupted information for teaching, learning and research to the users. Libraries are established for the systematic collection, organization, preservation and dissemination of knowledge and information. Libraries are regarded as agencies through which sources of information of accumulated knowledge and experiences are selected, acquired, organized, preserved and disseminated to those who need them (Abdulsalami, OkezieandAgbo, 2013). . Onwubiko and Uzoigwe defined library as an information center located in an organization, institute, agency, industry, government agencies etc. to satisfy the information needs of the individual client and the realization of the broad goals and objectives of the parent organization (Abdulsalami, OkezieandAgbo, 2013). This can be attended through the collection of user-centric acquisition and dissemination of information to the target users. In the present scenario, the role of library has become multidimensional and this is due to prevailing of Information and Communication Technology. It opened the avenues for different collection of electronic resources though open source and consortia. This has also subcutaneously added value on the user behaviour to access information. The need of library consortia in the medical profession is essential which not only extend benefits to the library in mobilising the resources but also to the medical

professionals including paramedical professionals who need to access information to enrich their knowledge.

It may be mentioned that, the library, irrespective of the colleges or institutes is not sufficient to provide adequate resources whether traditional or electronic to its clientless and needs to join the consortium for access to resources to provide services. Library consortia connotes to the term of grouping of libraries where one agency or centre will be identified to accumulate resources through electronic form and disseminate the same to the group of member library through networking. It is a conglomeration made up of two or more individuals, companies or governments that work together toward achieving a chosen objective. Each entity within the consortium is only responsible to the group in respect to the obligations that are set out in the consortium's contract. Therefore, every entity in the consortium remains independent in its normal operations and non-members of the consortium cannot express their views over operation of the consortium. Consortia have started prevailing in all sectors whether business or service. It is more predominant in libraries because of the availability profuse electronic or digital form of information in journals. Consortia among the libraries have become obligatory the western countries even if many model are prevailing for print journal subscription, co-operative resource sharing.

Library consortia are the primary vehicle of multiple and multidimensional electronic resources and have three basic functions according to Potter (1997) such as,

- ⇒ Sharing of physical resources through preparing of union catalogue, linking of local systems, promulgation of interlibrary loan protocols, and courier services.
- ⇒ Furnishing internet connectivity among the member libraries of the library consortia for portioning out of resources, technical experiences, softwares etc.
- ⇒ Allowing access to a wide array of electronic resources to the users of the member libraries of the library consortia either by mounting them on a local server or on some other platforms.

Resource sharing of the libraries in electronic form has become a common and viable feature through consortia among the member libraries which not only economized the libraries with regard to finance but also accelerated the use of resources more transparently coupled with information access irrespective of the subject to the users in a large scale. The National Knowledge Commission set up in 2006 also equally emphasized the libraries to come under the consortia umbrella for collection and sharing of resources which could be proved to be a positive solution for enabling a level of cooperation in broader and deeper than ever before. Like developed countries, India is also equally housed with a good number of

academic and special library consortia consequent upon the realization of its national importance. It may be mentioned that, the library consortia are based on various models depending upon participation of the libraries and funding sources. However consortia models can be grouped under the five broad headings such as,

2.13.1 Open Consortia Model

The Open Consortia is flexible by nature where, the member libraries have the option for joining or quitting. The member libraries can take an alternative decision to relinquish their membership especially when they do not feel the need of consortia. INDEST Consortium is an example of such an open consortia model.

2.13.2 Closed Group Consortia Model

Closed Group Consortia Model operates within a defined group. Such consortia emerge either by affiliation and collaboration among them like CSIR, DAE, and IIM Consortium. A specific group of libraries identical by nature form such a close group of consortia share a common interest of resources.

2.13.3 Centrally Funded Consortia Model

The Central Government in India established centrally funded consortia to acquire the e-resources and administer them among the university libraries in India. UGC-INFONET, ICMR, CSIR under DSIR are some examples of centrally funded consortia model.

2.13.4 Shared Budget Model

Consortia among the libraries also are formed through budget sharing basis where, the participating libraries take the lead and form the consortia by sharing equal portion of their allocated budget to acquire common interest of e-resources and apportion the same among the member libraries only.

2.13.5 National Consortia Model

National Consortia Model is established and identified as a resource centre that would be responsible in accumulating resources in electronic form taking the requirements of different libraries and make licensing with the respective publishers to supply the resources that in-turn provides link to the member libraries in India to access the same. INDEST-AICTE, E-Shodh-Sindhu are some examples of such national consortia model.

Mention may be made that, many types of medical consortia are available which include HELINET is Health Science Library and Information Network, National Digital Medical Library Consortium known as ERMED, medIND, developed by Indian Council of Medical Research(ICMR) & National Informatics Centre(NIC), NTRMEDNET consortium, Maharashtra University of Health Sciences, Nashik launched MUHS digital library

consortium, HINARI was launched by World Health Organization (WHO), ICMR e-Consortia.

2.14 Conclusion

ICT has a positive impact in all sectors. The tremendous impact of technologies in the library services has dynamically changed information accumulation, organization, accessibility and storage. As the use of e-resources is gaining momentum among the users, communities and its use among the paramedical professionals has become visible which adds value in the health sector. The libraries attached to various colleges/institutes are not providing e-resource services excepting the Regional Institute of Paramedical & Nursing Sciences. However, all the libraries are taking care of the users to guide them to access the e-resources. As the users are having the competencies to access e-resources, they keep abreast with the latest information through the Internet more through their mobiles. But, the libraries are equally providing the Internet connectivity in their respective colleges/institutes and the users also access the e-resources required by them. The staff positions in most of the libraries are in a deplorable condition and that is the reason why the libraries are unable to provide the need-based service in the library. But, it can be mentioned that, the present situation demands the new services to the users using the ICT. Hence, it can be viewed that, the role of the librarian especially in a special library has to be redefined in view of technological developments keeping in mind the best interest of users.

References

- Abdulsalami, L.T., Okezie, Q.I. and Agbo, A.D. (2013).The role of the library in the promotion of knowledge societies in Nigeria.Pelagia Research Library *Advances in Applied Science Research*. 4(1):58-70. Available at www.pelagiaresearchlibrary.com.
- Annual Report, Mizoram University, 2016-17
- Career as Paramedics Available at.<http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>
- <http://agmc.nic.in/>
- <http://assammedicalcollege.in/>
- <http://civilhospitalaizawl.org/edu.htm>
- <http://colleges.ancientayurved.com/>
- <http://gmchassam.gov.in/>
- <http://neigrihms.nic.in/>
- <http://ripans.org/>
- <http://smcassam.gov.in/>
- <http://smims.smu.edu.in/home.php?t=p>
- <http://tmc.nic.in/>
- <http://www.educationindia.org.in>
- <http://www.bbcionline.org/advertisement.htm>
- <http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>
- <http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>.
- <http://www.jmch.org.in/>
- <http://www.jnims.edu.in/>
- <http://www.lgbrimh.org/>
- <http://www.mdoner.gov.in/node/2025>
- <http://www.rims.edu.in/>
- <https://www.britannica.com/topic/paramedical-personnel>
- Potter, (William Gray). (1997). Recent Trends in statewide Academic library consortia.*Library Trends*.45 (3); pp.416-434).
- www.indiastudychannel.com

3 Introduction

It is quite evident that information is vital to every individual. It is the life cycle of the human being without which sustainability of human life is next to impossible. Where information is concerned, there are the haves and the have not and information rich and the information poor. People go bankrupt and even lose their lives in the pursuit of information.

Information plays a vital role in education as well as social and economic development of our country. It is an important resource in the creation, maintenance and development of knowledge. Many type of user like educationist, technician, manager, executives, economists, social worker, etc. require information today. The world has now moved from the industrial revolution into the information revolution. The rapid development of technology, and the fast pace of modern world has created an increasing awareness of the importance of information and the need for professionals, dedicated to studying and understanding it.

‘Information’ is power which is more complex a term but easy to comprehend. Information as the term has been defined by different bodies, scientists in various angles. The Oxford English Dictionary (1961, p.274) has defined information as the action of informing, formation or component of the mind or character, training, instruction, teaching; communication of edifying knowledge. Information, according to Random House Dictionary for the English Language (Stein, 1970, p.130) means knowledge communicated or received concerning a particular fact or circumstances. By information, Webster’s Third New International Dictionary for the English Language (G & C Merriam Co., 1976, p.1160) has outlined it as a communication or reception of knowledge or intelligence. It is a knowledge communicated by others or obtained through investigation, study or instruction. Rajagopalan (1975, p.1.1.1) has mentioned information as a concept, statement, and idea or an association of concepts, statement, and the ideas. According to Aohasan and Mehla (1987, p.120-40), the term refers to the communication of knowledge derived from observation, study, experience, or instruction. Bhattacharya (1978, p.18), visualized that, information appears as the message conveyed or intended to be conveyed by a systematized body of ideas, or it’s accepted or acceptable substitutes. Sengupta (1988, p.12) has opined information as any form of recorded or unrecorded knowledge disseminated or received concerning a particular fact, event, or circumstances.

Thus, the concept of information has been coined conceived from various angles as has been understood in different contexts by diverse bodies, scientists and the term cannot be generalized as, no agreeable description comprehending all its aspects have arrived so far.

It is observed that, the need and employ of information is much older than the human civilization itself. Since the commencement of civilization, human beings have made advance in various dimensions and fields with significant enhancement in time. Now, information is treated as the first stage of cognition, conceptualization, communication, concretization, control (both physical and hegemonic) and reproduction of social relations and structures. Information in its various facets and functions constitutes the living spirit of a highly integrated and interactive modern world system. The meaning and purpose of any scientific discovery and technological break-through for mastering both time and space is justified by efficient, free flow and accessibility to information. Information, a self-regenerative resource, is a key economic element.

The present era is the era of information and knowledge revolution. Many electronic resources are available in the library. The increase in information available on the web has affected information seeking behaviour. Innumerable types of information, in a large variety of containers and many different locations are all available in one place. In the modern society, the types of information and the media that present them have become manifold and multifarious, offering men and women a vast selection. Regardless of which group in a human society is discussed, each one bases its actions upon current information and discards and earlier data. Philosophies emphasized the direct, experiential acquisition of knowledge in the material, physical plane of existence as the most proper form of information. So, no one can deny that knowledge and information are vital.

Chen and Hernon (1982) defined information as “all knowledge, ideas, facts, data, and imaginative works of mind which are communicated formally and/or informally in any format.”

3.1 Information Needs

Users are concerned with information in the library and their needs are versatile. The users who are categorised into students, researchers, faculties, scientists, engineers, politicians and others need the information which to suit to their interest. In the present days, information has been increasingly felt that to serve readers' better, information needs and the users must become the central focus of attention. It is necessary to keep it on the rails of relevance of its users group, the careful initial planning and constant monitoring of needs and demands. User studies and user education were in fact, thought to have above average

importance because of the inherent restless nature of the parent field, and many different disciplines and interests it embraces at any one time.

The information needs refers to individual needs of users regarding information, which are expected to be satisfied by the specific information system used by him. The user group belongs to different categories like government officials, legislators, parliamentarians, researchers, teachers, students, etc. It is of great significance to know the information needs of the users and to produce better what the user of different category needs, how to get the product to the user, and how to give them better services.

The information needs of the users are of central concern to providers of information service. The ultimate aim of any information-retrieval system is to supply and deliver the information, which can precisely match the information requests or requirements. Information need and users are studied with a view to improve the overall system of information transfer. User study is a multidisciplinary area of knowledge; it is primarily concerned with the behavior and experience of users of information systems and services with regard to their interaction.

The information need of a user, however, can be sequenced into the following categories.

- Factors that generate differential information needs and
- Types of information needs

However, the important influencing factor of the information need is that, it varies from user to user viz, the information needs of scientists or technologist or technocrats vary from the faculties of general education. But the library in any way requires strategies to provide the need based information to its users in spite of the problem of the conceptualisation of the term information need and difficulty of separating the concept from want, expressed demand, requirements, satisfied demand etc.

Therefore, it is the onus of the library to satisfy with the information needs to the users irrespective of the types. However generally, the information needs are related to (i) the subject or the content which presupposes that any and or all information about the requested subject will somehow satisfy the information needs and, (ii) the Information suit to the given situation which is otherwise known as situational approach. The situational approach signifies the user's want of information on a certain subject. Here, the satisfaction level is concerned according to his/her want of information provided by the library. This further, specifies the intrinsic characteristic of information, whatever the subject may be.

It is defined in many ways by the scientist. While analysing the term from various dictionaries it could be found that, information relates to,

- Need: It requires for an individual for research, learning, recreation etc. In the case of research, required information accelerates the study. There may be an implied value judgement in the way, the term is used. A need may or may not be identified as a want but, it is a potential demand.
- Want: Invariably, the want of a user is changed to demand when the situation warrants especially in the libraries. It also relates to probable demand.
- Requirement: It means the need or want and or demand that can be employed to cover all three categories.
- Demand: Demand is partly dependent on expectation, which in turn depends partly on existing provision of library or information services. A demand is a potential use.
- Use : A use usually represents a need of some kind. Use can be partial indicators of demand, demand of wants, and want of needs (Line, 1974; 87pp).

The comment of Roberts (1975; 308-313p) on the above draft definitions is worth recording as the 'requirement' according to him means a 'need' or a 'want' or a 'demand'. He viewed that, a need may or may not be want; a want may or may not be a need. Both want and need may be appropriate or in-appropriate to an individual information situation and may or may not be expressed in some consequent form of demand action. He suggested that as the term requirement is not a comprehensive term, another term can be replaced with total potential demand. He viewed that, total potential demand is the sum of all individual and group demands that could be made upon the materials, services and personnel of a library.

Leupolt (1983;pp7-8) differentiated between information need and information requirement in the following context.

- ➔ Individual information requirements more or less exceed the respective information need.
- ➔ The ideal case would be if the individual information requirement coincided with the information need. However it is not likely to occur very frequently in reality since the information requirement deviate to some extent from the respective information need.
- ➔ The information requirements given at a specific time point may be lower than that of the information provided during solving the task or problem.

Users are the hubs of the organization around which, all the functions of the library revolve. Since the user is the key component in any information system having different attitudes, behaviour, and tastes, it is an essential obligation on the part of the library professionals to discover the actual needs of the user so as to find ways and means to meet their requirements. Simultaneously, the rationale for which information is to be used has to be examined. The identification of users also aid in defining user group characteristic that leads to both the specific mode and the methods of information to be presented to the target population. The users should always be armed with the qualitative and pinpointed information they need. To afford qualitative information, five most important aspects should be borne in mind (Rajkumar and Gopal Krishnan, 1991, p.55), which include:

- ⇒ To whom the information is to be disclosed;
- ⇒ Purpose of information requirement;
- ⇒ Quantum of information to be provided with;
- ⇒ Type of information; and
- ⇒ Time duration for supplying the information.

Furnishing the right information to the right reader in a percolated form is essential which can only be achieved through its systematic collection, processing, storage, and retrieval. Rojas (1984, p.58-75) has suggested the following qualities for retrieval of need based information to its target population. These qualities include:

- Accessibility, i.e., ease and speed of information;
- Comprehensiveness;
- Precision;
- Compatibility;
- Timeliness;
- Clarity;
- Flexibility;
- Verifiability; and
- Free from bias.

Information is a part of all human experience. Acquiring and processing information are fundamental aspects of life itself. Current interest in science of information has developed as a result of complexity of life problems. There are several types of information as discussed below:

| | |
|------------------|--|
| Facts | Things known to have happened or to be true or to exist. |
| Data | Data is the smallest element of information. Data are language, mathematical or other symbolic surrogates which are generally agreed upon to represent people, objects, events and concepts. |
| Knowledge | Knowledge is an organized set of statements of facts or ideas presenting a reasoned judgment or an experimental result which is transmitted to others through communication medium in some systematic form. |
| Wisdom | An individual trait comes to one through acquisition of sound knowledge, and the related virtues gained through age and experience. The trait may comprise among others, ability to see far ahead into the future, have a vision of things to come and judgment in selecting the right alternatives several among several others available, for making a decision. While it is the highest form of knowledge, wisdom cannot be transferred, it can only be acquired. |

Although the terms information and data are often used interchangeably, there is a crucial difference between the two. Information consists of classified and interpreted data that are being used for decision making. It is definitely different from data. Accesses to data do not automatically convert itself into information. Inference and interpretation are required.

An information scientist or a librarian has some interest in both the theories of information. He is more concerned with behavioural problems i.e with the effect, which the meanings of the transmitted symbols produce on the recipient. If the behaviour or conduct of the recipient is not affected, no information is said to have been conveyed to him.

The generated information cannot just float about in air – just as water is contained in a vessel, so true is information contained in different sources. Information finds its way into the following types of sources:-

- ☞ **Primary sources** such as periodicals, research reports, conference proceedings, patents, standards, trade literature, theses etc.
- ☞ **Secondary sources** such as, indexing and abstracting periodicals, reviews of progress, reference books (encyclopedia, dictionaries, handbooks, tables, formularies etc.), treatises, monographs, textbooks etc.
- ☞ **Tertiary sources** such as, yearbooks and directories, bibliographies, guides to the literature, lists of research in progress, guides to libraries and sources of information, guides to organisations etc.

There are also *audio-visual* sources such as filmstrips, slides, video and audio-tapes etc.

Most of the printed sources are also available online now. Further, these sources are found in bookstores, libraries, information centres etc.

3.2 Types of Information Need

Tague (1976) has presented the following types of information needs (most of which are self explanatory)

- ◆ Social or pragmatic information needs-required for coping with day-to-day life.
- ◆ Recreation information needs
- ◆ Professional information needs
- ◆ Educational information needs.

The other types of information needs also can be categorized as,

- **Success needs** which relates to employment opportunities, self-improvement (dress, speech, personal carriage etc.) and,
- **Specialised information needs** that concern with for the physically handicapped, emotionally disturbed, geographically isolated the non-English speaking groups etc.

3.3 Factors Affecting Information Needs

By far, the most important factor that affects the information need of an individual is the type of work in which he is involved – as found by Lin and Garvey. Another factor is – whether the work is basic or applied.

The discipline, within which an individual is working also affects his information needs – for example, the information needs of researchers in the pure sciences is probably more urgent than that of researchers in the social sciences, because science is ever growing. The scientist will need to constantly update his knowledge – i.e. he has to catch-up with the latest developments.

Other factors include – social, political, economic and legal.

3.4 Information Seeking Behaviour

When a need is felt for everything, more often than not, people take action in order to satisfy that need. Different strategies or mode of action are resorted to. The same applies for the satisfaction of information needs. An individual realizes that he needs information, he knows that in all probability the information will not come to him on its own, therefore he has go to about seeking it. What strategies or processes he resorts to, in order to satisfy the need for information, are the focus of study here. The nature of information seeking behaviour in

information exchange process has been discussed by Wilson (1981; 3-15pp) as under which has been placed in the Figure 1

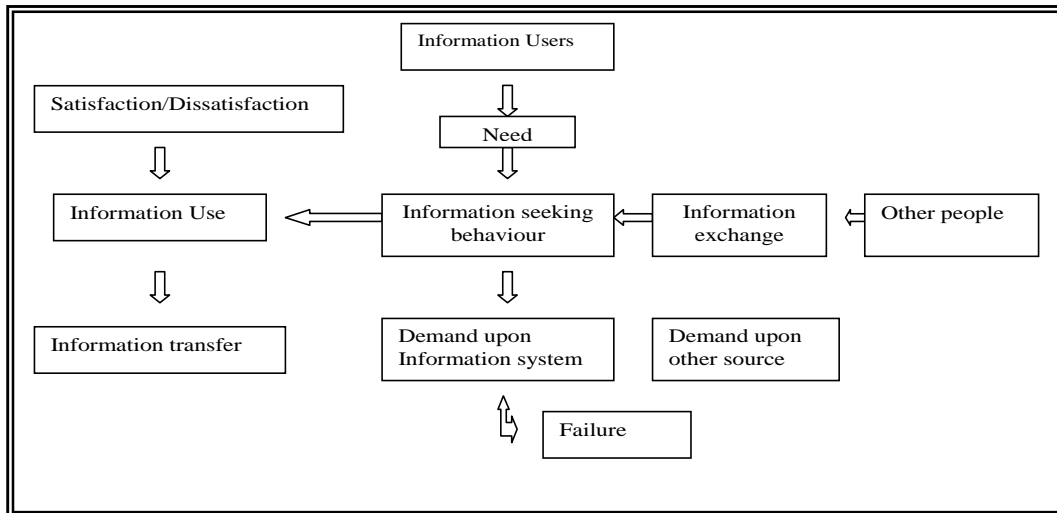


Fig.1: Information Exchange Process

Chen and Hernon (1982) have defined information seeking as follows, “Information patterns are the paths pursued by the individual in the attempt to resolve a need.”

According to Girja Kumar (1970), “Information seeking behaviour is mainly concerned with who needs what kind of information for what reasons; how information is found, evaluated and used.”

Wilson (1994) defines information behaviour as, the activities a person which may engage in when identifying his or her own needs for information, searching for such information in any way, and using or transferring that information.

Ellis (1987, 1989) carried out a study in which he used semi-structured interviews for data collection and Glaser and Strauss’s grounded theory for data analysis. His research resulted in a pattern of information-seeking behaviour among social scientists that included six generic features:

- ⇒ **Starting:** It comprise those activities characteristic of the initial search for information such as identifying references that could serve as starting points of the research cycle. These references often include sources that have been used before as well as sources that are expected to provide relevant information. Asking colleagues or consulting literature reviews, online catalogues, and indexes and abstracts often initiate starting activities.
- ⇒ **Chaining:** Associates with chains of citations or other forms of referential connection between materials or sources identified during “starting” activities. Chaining can be backward or forward.

Backward chaining takes place when references from an initial source are followed. In the reverse direction, forward chaining identifies, and follows up on, other sources that refer to an original source.

- ⇒ **Browsing:** Casually looking for information in areas of potential interest. It not only includes scanning of published journals and tables of contents but also of references and abstracts of printouts from retrospective literature searches.
- ⇒ **Differentiating:** Using known differences (e.g., author and journal hierarchies or nature and quality of information) between sources as a way of filtering the amount of information obtained.
- ⇒ **Monitoring:** Keeping abreast of developments in an area by regularly following particular sources (e.g., core journals, newspapers, conferences, magazines, books, and catalogues).
- ⇒ **Extracting:** Activities associated with going through a particular source or sources and selectively identifying relevant material from those sources (e.g., sets of journals, series of monographs, collections of indexes, abstracts or bibliographies, and computer databases). Significant on its own, the importance of Ellis's model is enhanced by the fact that it has strong similarities with other influential models, such as that of Kuhlthau (1988, 1991, 1993), particularly in terms of the various types of activities or tasks carried out within the overall information- seeking process (Wilson, 1999).

Ellis's model is also important because it was based on empirical research and has been used in many subsequent studies and with various groups of users (Bates, 1989; Choo, Detlor, & Turnbull, 1998, 2000; Ellis & Haugan, 1997; Sutton, 1994). Ellis's categorization of actual information-seeking behavior activities among social scientists suggested that information retrieval systems could increase their usefulness by including features that directly support these activities. Certainly, most of the information-seeking behavior features in Ellis' model are now being supported by capabilities available in Web browsers. For example, an individual could begin surfing the Web from one of a few favourite pages or sites (starting); follow links to related information resources—in both backward and forward linking directions (chaining); scan the web sites of the sources selected (browsing); bookmark useful sources for future reference (differentiating); subscribe to e-mail based services that alert the user of new information or developments (monitoring); and search a particular

source or site for all information on that site on a particular topic (extracting) (Choo, Detlor, & Turnbull, 2000).

3.5 Information Seeking Process- Models

Many models have been framed in order to explain the information seeking process. A model is a framework for thinking about a problem and may evolve into a statement of the relationships among theoretical propositions – or put more simply, models are statements, often in the form of diagrams, that attempt to describe an information-seeking activity, the causes and consequences of that activity, or the relationships among stages in information seeking behaviour. Some of the models that have been developed so far are given below:-

Ellis, (1989) and Ellis, Cox and Hall (1993) – Ellis and Co. use the term ‘features’ rather than ‘stages’ in information seeking. The features according to them are:

- **Starting** :It is a means employed by the user to begin information seeking, for example, asking a knowledgeable colleague.
- **Chaining** : It follows with footnotes and citations in known material or ‘forward’ chaining from known items through citation indexes
- **Browsing** : Relates to semi-directed or semi-structured searching
- **Differentiating** :Enables the users to use known differences in information sources as a way of filtering the amount of information obtained
- **Monitoring** : Keeps the users keeping up-to-date or current awareness searching
- **Extracting** : Users selectively identify relevant material in an information source
- **Verifying** : Users check the accuracy of the information
- **Ending** : Users end with a final search.

Kuhlthau(1993), studying the information seeking behaviour of students doing a research assignment, formulated a model depicting a common patterns of tasks, feelings, thoughts and actions in six stages:-

- **Initiation** : to recognise information need
- **Selection** : to identify general topic
- **Exploration** : to investigate information on general topic
- **Formulation** : to formulate focussed perspective
- **Collection** : to gather information pertaining to focus
- **Presentation** : to complete information search

The model suggests that information-seeking behaviour arises as a consequence of a need perceived by an information user, who in order to satisfy that need, makes demands

upon formal or informal information sources or services, which results in success or failure to find relevant information. If successful, the individual than make use of the information found and may either fully or partially satisfy the perceived need – if he fails to satisfy the need, he will have to start searching again. The model also shows that part of the information-seeking behaviour may involve other people through information exchange and the information perceived as useful may be passed to her people as well as being used by the person himself or herself.

3.6 Factors Affecting the Information Seeking Behaviour

The means that an individual resorts to in order to satisfy an information need will depend on certain factors. Certain points will have to be considered when an individual decides on a certain course of action, they include:

1. Whether the sources is within reach
2. Whether money will be involved – if so, how much money
3. Whether time will be involved, if so, how much time
4. Whether the sources will have the answer to their problem
5. Whether they will understand what the sources provides as answer

Other factors include social, political, geographical, educational, etc.

⇒ **Social factors** - for example, desire for information on such topics as sex education, fashion, music, may not be looked upon kindly in certain societies as a result of which an individual may have to resort to stealthy means for acquiring information.

⇒ **Political factors** - The political system may define certain types of information as forbidden to particular groups or to the public as a whole, consequently the non-availability of such information may motivate a person to resort to ‘underground’ means.

⇒ **Geographical factors** - The geographical location of an individual also decides how he goes about seeking information. Geographical isolation may lead a person to resort to uncommon means of seeking information.

⇒ **Educational factors** - The educated and uneducated may have differing methods of seeking information, the educated person resorting to more formal means while the uneducated one depending more on informal methods.

3.7 User Education

User education is a powerful unifying force linking together the vast resources of information. User education brings immediate qualitative improvement and yields best returns to investment in education. It helps to individual’s self-development. It is the education that helps in the growth and development of nation and economic growth. User

education helps scholars to select right kind of information in a short span of time. Guiding the users, in exploiting library resources is an essential function of librarianship or information work. User Education should be imparted to help the users. Hence, user education is nothing but educating the library user regarding the usage of the library. Enormous amount of money is being spent to collect library resources.

3.8 Need for user training

User training in the library is essential to maximize the use of library resources by the users. It helps to publicize a library's resources and services and communicate with the end users. It also helps the library and information professionals in getting users feedback. Indirectly, it provides an opportunity to build and further improve the image of a library. Above all user education and training is the best way to implement the philosophy propounded by five laws of library science by Dr. S.R.Ranganathan. Otherwise, there is no place for fixed and static structures and mechanisms. Library and information resources and services must be flexible and dynamic, because the professionals are required to work as facilitators to the end users in catering to their information needs. As such, they must be equipped with professional competencies, which include a solid professional knowledge base, pertinent skills and positive attitude. Only this way they can meet the challenges of the networked environment satisfy the growing, diversifying and demanding universe of the users. User has their own set of values in relation to access, concerned with identifiable values such as need, Immediacy, level, quality, use, currency and perceived end use or value. Value can range from expected or wanted change, or to commodity/market values. As such, the library and information professionals must follow the golden principle of customer creating value satisfaction. They should add value to their resources and services on regular basis. Only this way they can build and develop their image. Information professional's basic responsibility is to satisfy the end users.

3.9 Types of User Education programmes:

The user education programmes generally are of two types which was suitable for the college library users for to orient and aware the benefits of library. These programs eliminate the college library users for their academic purpose.

- **Orientation Program:**

This is concerned with introducing the user to the general techniques of library usage and services available in libraries and, in particular, to the organization, services, and layout of one particular library. The usual methods employed include talks by the librarian, library tours, audio visual presentation, printed library guides, displays and exhibitions, retrieval of

information through websites, access to institutional repositories, use of consortia based e-resources etc.

- **Bibliographic instruction:**

This includes discussion of the scope of a search, location of an introduction to the subject, bibliographic review articles, training journals article, current awareness services, other information services (reports, patents, thesis etc) and location of relevant organizations or people. Citation practices and personal index keeping, report writing etc, scientific communication services are included if appropriate. This program is imparted prior to the student starting a project or long essay.

3.10 Conclusion

Information needs and information seeking behaviour have become pragmatic in ascertaining the changing attitude of the users. In the changing information scenario, the information seeking behavior of the users also changed dramatically as their constant demand switched over to electronic resources than the traditional resources. The changes became imminent in view of proliferation of information resources available in multiple modes and there is a tremendous impact of the same in higher education scenario. The new dimensions of learning also added value in the changing attitude of the information needs and seeking of information. It is also coupled with the reasons for the growing number of research scholars and the faculties in higher education. Further, the constant demands of the institution and the society as a whole compelled the researchers to bring forward their research output and productivity. Generally the development in scientific research in learning and knowledge has influenced the need for changes also in the university pedagogy. (Eeva-LiisaEskolo, 1998). The foregoing discussions clearly visualises the other important aspects of user education necessary for optimisation of use of library resources.

References

- Ahsan, Ashoab and Mehta, R.D. (1987), “Problems, Needs and Approaches of Users to Information in Agriculture Science”. *ILABulletin*.22(3), 120-140.
- Allwood, C. M. &Bärmark, J. (1999).The role of research problems in the process of research. *Social Epistemology*, 13(1), 59-83.
- Balakrishnan, Shyama and Paliwal, P.K (2001), Ed. Library Information Procedure. New Delhi: Anmol Publications Pvt. Ltd.
- Balasubramanian, Geetha and Biswas, S.C. (1980), “Readers and their Reading Trends in the British Council Library, Delhi”, *Annals of Library Science and Documentation*.27 (1-4), 66-67
- Baruah, P and Tripathi, T, (1988), “An Analysis of Information-seeking Behaviour of Research Scholars vis-à-vis Existing Information Sources and Services of Burdwan. University Library: A case Study”, *IASLIC Bulletin*, 33 (2-3), 93-98
- Bazerman, C.(1994). *The Informed Writer: Using Sources in the Disciplines. 5th edition*. Boston: Houghton Mifflin Company.
- Brittain, J.M (1970), “Information and its users: a review with special reference to social sciences”. Bath: Bath University Press.
- Case, D. (2002).Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior. Amsterdam: Academic Press.
- Chadtopadhyay, B.K(1995). Borrowing behaviour of students in Teacher education College Libraries of West Bengal-A survey Report. *IASLICBulletin*.40(2), 69-72
- Chen, C.C. and Herson, P. (1982).Information Seeking: Assessing and Anticipating User Needs. Neal-Schuman: New York
- Courtney N(2001). Barbarians at the gates: A half-century of unaffiliated users in academic libraries, *Journal of Academic Librarianship*, 27(6), 473-480
- Das, KailashChandra(1995). Attitude of Teachers towards Library Oriented Instruction Programme in secondary Schools. *IASLICBulletin*.40(2), .63-68.
- Dhawan, S.M and Sachdeva, D.L(1987). Users' approach to Information in Physical Science: An Overview. *ILA Bulletin*. 22(3-4), 103-111
- Eeva-LiisaEskola (1998), University students' information seeking behaviour in a changing learning environment - How are students' information needs, seeking and use affected by new teaching methods? *Information Research*, 40 (2), Available at <http://www.shef.ac.uk/~is/publications/infres/isic/eeskola.html>
- Encyclopaedia Britannica.12, 244p.

- Faibisoff, S G and Ely, D.P., Information and Information Needs, *Information Reports and Bibliographies*, 5(5),4, Available at http://faculty.washington.edu/harryb/courses/INFO310/faibisoff_ely.pdf
- Fjallbrant, Nancy and Malley, Ian (1984).User education in Libraries. 2nd ed., London: Bingley.
- Girja, K(1990). Defining the concept of information needs.*In*.Binwal, J.C et al. social science information: problems and prospects. New Delhi: Vikas Publishing House,257p.
- Green, A. (1990). What do We Mean by User Needs.*British Journal of Academic Librarianship*,5(2), 65-78.
- Guha, B(1995). Ranganathan's fourth Law and contemporary users studies. *IASLIC Bulletin*.40(3), 97-106.
- Gupta,B.M(1979). Users' Orientation Programme.*Library Herald*.17(4), 94-103.
- Habermas, J. (1968). *Erkenntnis und Interesse*. Frankfurt am Main: Suhrkamp.(Translated by Jeremy J. Shapiro to: *Knowledge and human interests*.2nd. [English] ed. London: HeinemannEducational,1978.
- Hjørland, B. (1993). Informationsbehovogderesudvikling. IN: *Emnerepræsentationog informationssøgning. Bidragtil en teoripåkundskabsteoretiskgrundlag*.Göteborg: Valfrid. (Pp. 172-201).
- Hjørland, B. (1996). Informationsbehov - en analyse af et vanskeligt begreb. *Bogens Verden*. <http://www.kb.dk/guests/natl/db/bv/bv-96/4-96/inf.htm> (In Danish).
- Hjørland, B. (1997): Information Seeking and Subject Representation. An Activity-theoretical approach to Information Science. Westport & London: Greenwood Press.
- http://www.db.dk/bh/core%20concepts%20in%20lis/articles%20a-z/information_needs.htm.
- Ingwersen, P. (1992). *Information Retrieval Interaction*. London: Taylor Graham. Available at: http://www.db.dk/pi/iri/files/Ingwersen_IRI.pdf
- Iyengar, T.K.S and Rao, G.S Ragavendra(1987). Users' Approach to Information: A case Study in the field of Physical Science. *ILA Bulletin* .22(3-4), 95-102
- Kapasi, Kapasi, Heera(1992). Librarian in pursuit of the simple truth-users' satisfaction.*IASLIC Bulletin*.37 (4), 247-250.
- Kapoor, S.K(1980). User Education and Training Programmes: An Overview. *IASLIC Bulletin*.25(3), 129-137.

- Krik, Thomas. G (1975). Biographical instruction-a review of research in conference on the evaluation of library instruction: Evaluating library instruction. 23p.
- Kuhlthau, C.C. (1993). A principle of uncertainty for information seeking. *Journal of Documentation*, 49(4), 339-355.
- Kumar, Krishan(1985). User Education: Organisation method of Instruction and Evaluation. *ILA Bulletin*. 20(3-4), 85-98
- Kumar, Krishan. Users Survey: Identification of Users and their Information Needs in Health Science Libraries.*ILA Bulletin*. 18(1-2); 1982.p. 44-50
- Leupolt,M(1983). The information need: its structure and its implementation. *Int. forum inf. Doc.* 8(3), 3-7pp.
- Line, M. B. (1974). Draft Definitions: Information and Library Needs, Wants, Demands and Users, *Aslib Proceedings* 26(2), 87.
- Louise Limberg and OlofSundin, (2006), Teaching information seeking: relating information literacy education to theories of information behaviour, *Information Research*, 12 (1),1
- Mahapatra, R.K and Panda, K.C(2001). State of Information seeking and searching behaviour of working Journalists in Orissa: A study. *Annals of Library and Information Studies*. 48(4), 133-138
- Mitra, D.P(1983). Users Attitude to Microforms in Academic Libraries.*LibraryHerald*.22(1), 54-59.
- Morris Ruth C T(1994). Toward a user-centered information service.*Journal of the American Society for Information Science*.45(1), 20-30.
- Padmamma, S. and Vijayakumar, M. Information Seeking Behaviour of VISL Scientists: A case study. *ILA Bulletin*. 38(1); 2002.p.23-26
- Paisley, W.J. Information needs and users.*ARIST*, 3;1968. p.1-30
- Porat, U (1977). The information economy: definition and measurement. Washington: Govt. Printing House, pp 2, 108-113
- Pors, N. O. (1990). *Dødebøgerogtommehylder.Omevalueringogstyringafbiblioteketsmaterialebestand*.Valby: DanmarksBiblioteksforeningsForlag. (In Danish).
- Prasher, R.G. Information and Its Communication.*ILABulletin*.23(3); 1982.p.95-118.
- Rajaram, Shyama. Factors Affecting Human Relations in Interaction with Users in Libraries.*Library Herald*. 41(1); 2003.p.1-11
- Ranganathan, S.R (1961). Reference service. Bombay: Asia Publishing House. 2nd ed. P.27

- Rangna, V.K(1967). Language barrier to the free flow of Information.*ILA Bulletin*.Vol.3 (3-4), 205-206.
- Roberts, N (1975). Draft definition: information and library needs, demands, and uses: a comment. *Aslib Proceedings*.27, 303-313pp.
- Roberts, N. (1975). Draft Definitions: information and Library Needs, Wants, Demand and Users: A Comment, *Aslib Proceedings* 27(7), 308-13.
- Rout, R.K(1982). Measuring users' satisfaction: A quantitative Model.*IASLIC Bulletin*. 27(1), 1-8
- Sethi, A.R(1987). Information Seeking Behaviour of Area Specialists.*ILA Bulletin*. 22(3), 153-155.
- Shera, J.H (1972). The foundations of education for librarianship. New York: Becker & Hayes.
- Shores, Louis (1954).Basic reference sources. Chicago: American Library Association. 206p.
- Stone, S. (1982). Humanities Scholars: Information Needs and Uses. *Journal of Documentation*, 38, 292-312.
- Sundin, O. &Johannisson, J. (2005).The Instrumentality of Information Needs and Relevance. I F. Crestani& I. Ruthven (eds.). *Information Context: Nature, Impact, and Role: 5th International Conference on Conceptions of Library and Information Sciences, CoLIS 2005, Glasgow, UK, June 4-8, 2005*. Lecture Notes in Computer Science, vol. 3507. S.107-118. Available at: <http://www.kult.lu.se/bivil/olof/colis.pdf>
- Tague, J(1976) et al. The distribution of community information: the role of computer and computer based networks. *Aslib Proceedings* 28, 314-321.
- Taher, Mohamed and Gupta, R.K(1987). Health information for all by the year 1990: Users' Study. *ILA Bulletin*. 22(3-4), 112-115
- Taylor, R. S. (1968), Question-negotiation and information seeking in libraries. *College and Research Libraries*, 29, 178-194.
- Vasishth, C.P(1982). User Education in College Libraries. A basic frame.*LibraryHerald*.21(1-2), 33-39.
- Wersig, G. (1973). *Informationssoziologie. Hinweise zu einem informationswissenschaftlichen Teilbereich*. Frankfurt am Main: Athenäum Fischer TaschenbuchVerlag.
- Wilson, T. D. (1981). On User Studies and Information Needs. *Journal of Documentation*, 37(1), 3-15. Available at <http://informationr.net/tdw/publ/papers/1981infneeds.html>

- Wilson, T. D. (2005). Evolution in Information Behavior Modeling. Wilson's model. IN: Fisher, K. E., Erdelez, S. & McKechnie, L. (eds.). *Theories of information behavior*. Medford, NJ: Information Today. (Pp. 31-36).
- Wilson, T.D.(1981). On user studies and information needs. *Journal of Documentation* 37, 3-15.
- Wilson, T.D. (1994). Information needs and uses: fifty years of progress, Available at <http://www.information.net/tdw/publ/papers/1994FiftyYears.html>
- Wilson, T.D. (1997). Information behaviour: An inter-diciplinary persepctive. In: P. Vakkari, R. Savolainen & B. Dervin (eds.) *Information seeking in context. Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 39-50.
- Wilson, T.D. (1999). Models in information behaviour research. *Journal of Documentation*, 55 (3), 249-270.

4 Introduction

Analysis of data is the ultimate step in research process. It is the link between raw data and significant results leading to conclusions. This process of analysis has to be result oriented. It reveals the ground reality of the institution. The data obtained through the questionnaires for the given study has been analyzed below to find inferences.

4.1 Analysis by Respondents

Respondents are the audiences who express their feelings and submit the data relating to the problem through questionnaire. Information seeking and need is the prime components for all types of paramedical professionals. Data relating to the institution wise respondents comprising both male and female obtained from the paramedical professionals of all the 8 various institutes including the questionnaire from the librarian are placed in Table-4.1 for analysis including a comprehensive data of all the 8 institutes in Table-4.1.1 and it is supplemented with the Graph-4.1 and 4.1.1 for clear understanding.

Table-4.1. Institute wise Respondents

| Sl.No | Name of Institute | Questionnaire Distributed | | Questionnaire Received | | % | | % of sample representation | |
|-------|-------------------|---------------------------|----------|------------------------|----------|-----------|-----|----------------------------|------------|
| | | PP | L | PP | L | PP | L | PP | L |
| 1 | ANS | 25 | 1 | 23 | 1 | 92 | 100 | 12 | 12.5 |
| 2 | HWTS | 17 | 1 | 15 | 1 | 89 | 100 | 8 | 12.5 |
| 3 | MCON | 42 | 1 | 40 | 1 | 95 | 100 | 21 | 12.5 |
| 4 | MFMNS | 33 | 1 | 31 | 1 | 94 | 100 | 16 | 12.5 |
| 5 | NS | 28 | 1 | 26 | 1 | 93 | 100 | 14 | 12.5 |
| 6 | PHSN | 23 | 1 | 21 | 1 | 92 | 100 | 11 | 12.5 |
| 7 | RIPANS | 12 | 1 | 10 | 1 | 85 | 100 | 6 | 12.5 |
| 8 | SNCHS | 27 | 1 | 24 | 1 | 89 | 100 | 13 | 12.5 |
| | Total | 207 | 8 | 190 | 8 | 92 | | 100 | 100 |

Abb. – ANS- Apollo Nursing School, School of Nursing, HWTS- Health Workers Training School, MCON- Mizoram College Of Nursing (Previously Health Workers Training School), MFMNS- MFM Nursing School, NS- Nursing School, PHSN- Presbyterian Hospital School of Nursing, RIPANS- Regional Institute of Paramedical and Nursing Sciences, SNCHS- Christian Hospital Serkawn.

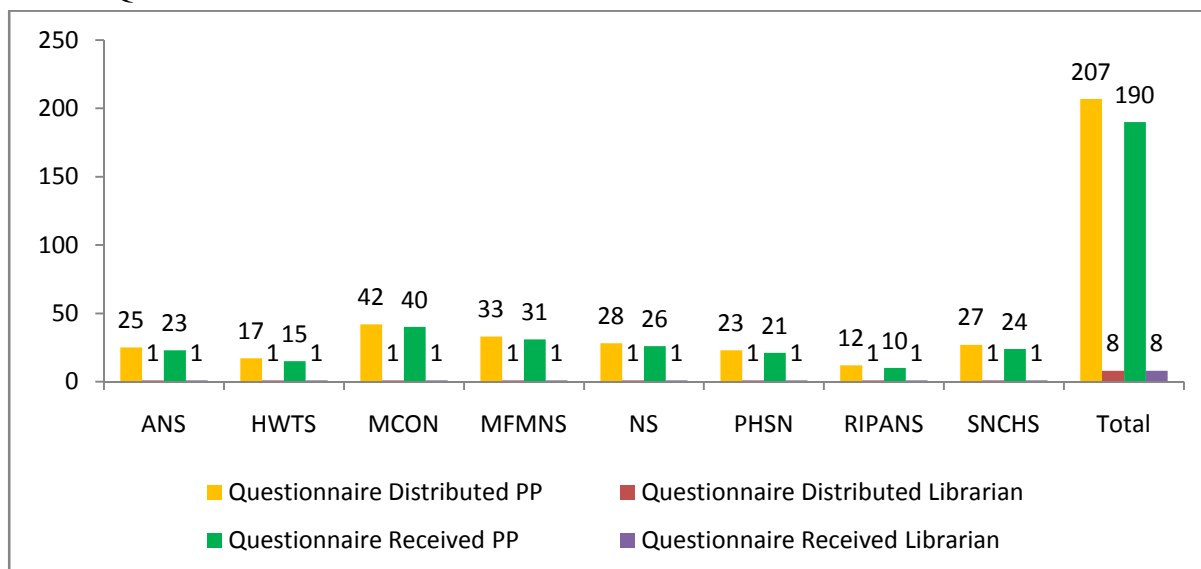
PP- Paramedical Professionals, L- Librarian

Table-4.1.1 Comprehensive Respondents

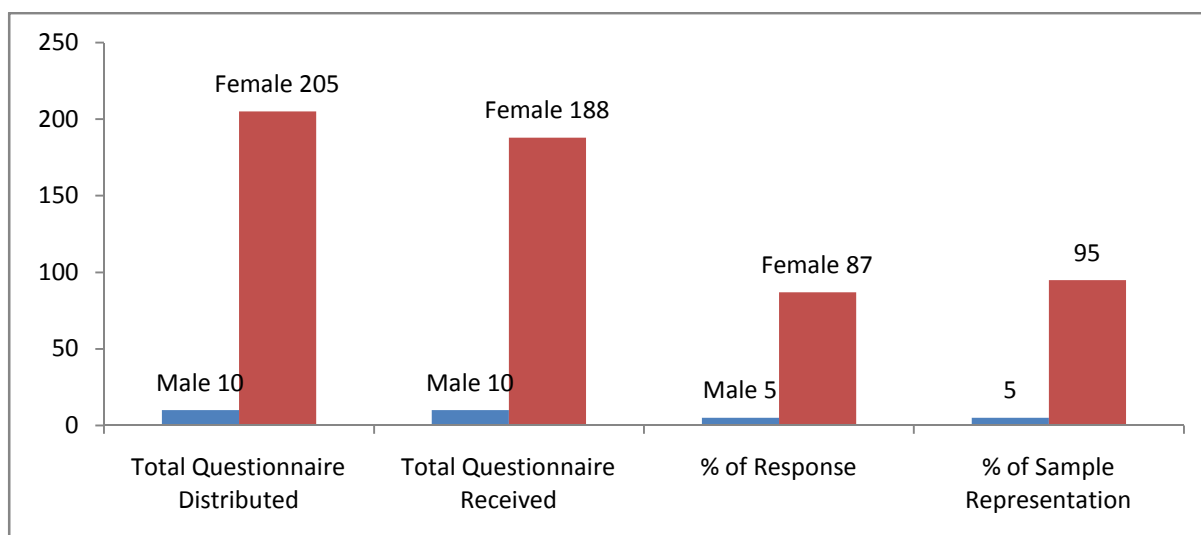
| Sl.No | Gender | Total Questionnaire Distributed | Total Questionnaire Received | % of Response | % of Sample Representation |
|-------|--------------|---------------------------------|------------------------------|---------------|----------------------------|
| 1 | Male | 10 | 10 | 5 | 5 |
| 2 | Female | 205 | 188 | 87 | 95 |
| | Total | 215 | 198 | 92 | 100 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire.



Graph-4.1. Institute wise Respondents



Graph-4.1.1 Comprehensive Respondents

While analyzing the Table-4.1 regarding the institution wise respondents it could be found that, the respondents of MCN touched the highest i.e 40 (95%) and the corresponding percentage of sample representation comes to 21 while, for MFMSN it comes to 32 (94%) with corresponding percentage of sample representation 16 and for NS it comes to 26 (93%) with 14% sample representation. Further, Table-4.1.1 on analysis found that, out of a total number 215 respondents which are the total strength constitute both 10 male and 205 female, 198 (92%) filled-in questionnaires were received from 188 female which forms 87% followed by 10 from male group that constitutes 5%. Further, the sample representation of male group comes to 5% while 95% for female. This shows that there is a good response to the questionnaire as all 10 male groups responded as against 188 out of 205 from female

group. The table further found that, the librarian of each institute has submitted their filled-in questionnaire which comes to 100% response rate for each institute.

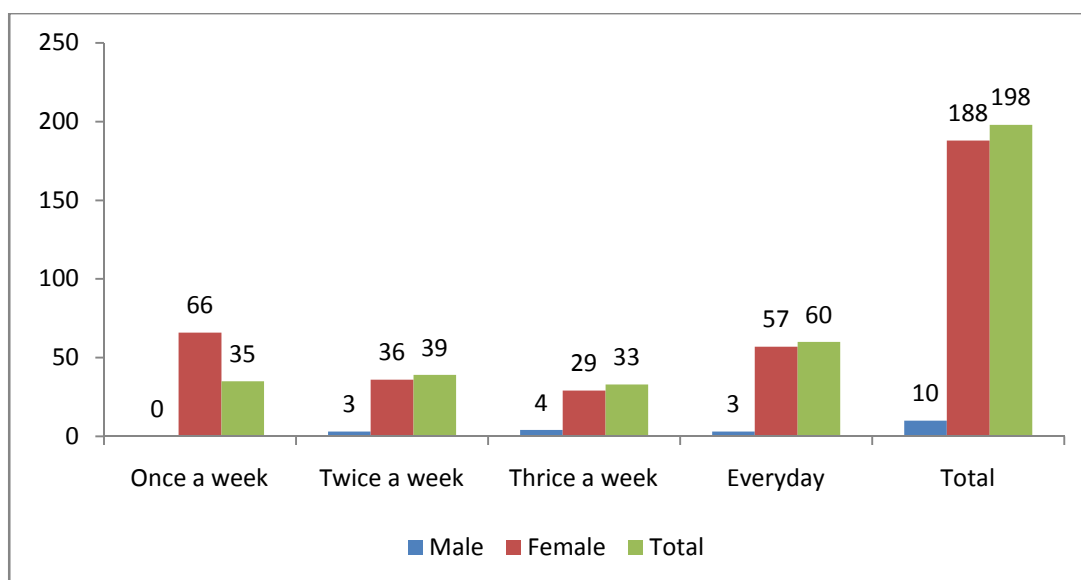
4.2 Analysis by frequency of visiting the library

Frequency of visiting the library by the users is very important as it determines the quantum of resources available in the library. The user communities visit the library for different purposes. The visit further determines the usefulness of the resources and services provided by the library. To ascertain the frequency of visit of the paramedical professionals to the library, the scholar grouped the component into five variables and the data obtained through the questionnaire is placed below in Table-4.2 supported with the Graph-4.3 for clear understanding.

Table 4.2. Frequency of visiting the library

| Sl.No | Frequency | No. of respondents | | Total | % |
|-------|---------------|--------------------|------------------|------------|------------|
| | | Male | Female | | |
| 1 | Once a week | 0 | 66 (35%) | 35 | 35 |
| 2 | Twice a week | 3 (2%) | 36 (18%) | 39 | 19 |
| 3 | Thrice a week | 4 (2%) | 29 (15%) | 33 | 17 |
| 4 | Everyday | 3 (2%) | 57 (29%) | 60 | 31 |
| | Total | 10 (5%) | 188 (95%) | 198 | 100 |

Source: Questionnaire



Graph-4.3 Frequency of visiting the library

The Table-4.2 on analysis deduced that out of 198, 188 (95%) female respondents visit the library during different phases of time while 10 (5%) male prefer to visit the library. Further out of 188 females, 66 (35%) who visit the library once a week constitute the highest followed by 57 (29%) and 36 (18%) females who prefer to visit the library thrice a week and

everyday respectively for different purposes. Likewise from male community, 4 (2%) out of 10 visit the library thrice a week followed by 3(2%) each who visit the library thrice a week and once a week respectively.

4.3 Analysis by purpose of visiting the library

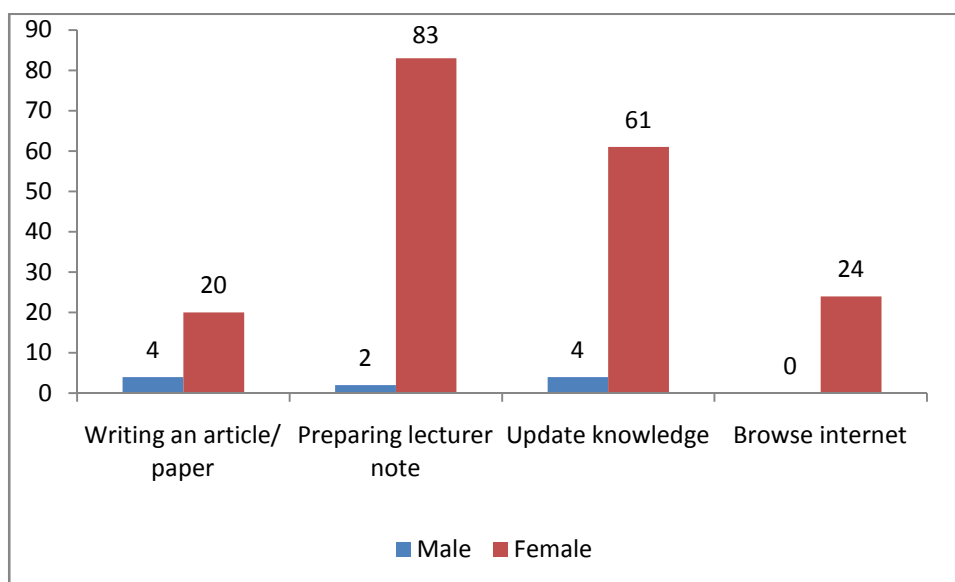
Analysis by the purpose of visiting the library is one of the major components of the analysis as it reveals the intention to visit the library by the paramedical professionals. The scholar has split the component into four variables and the respondents exercised their option. Data relating to the component were tabulated in the Table- 4.3 and it is supplemented with Graph-4.3 for easy understanding.

Table4.3 Purpose of visiting the library

| Sl. No | Purpose | No. of Respondents | | Total | % |
|--------|---------------------------|--------------------|------------------|------------|------------|
| | | Male | Female | | |
| 1 | Writing an article/ paper | 4 (2%) | 20 (10%) | 24 | 12 |
| 2 | Preparing lecturer note | 2 (1%) | 83 (42%) | 85 | 43 |
| 3 | Update knowledge | 4(2%) | 61 (31%) | 65 | 33 |
| 4 | Browse internet | 0 | 24(12%) | 24 | 12 |
| | Total | 10 (5%) | 188 (95%) | 198 | 100 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire



Graph-4.3: Purpose of visiting the library

Table-4.3 on analysis revealed that, the visit of paramedical professionals to the library for preparing lecturer note is the highest as it stands 85 (43%) out of 198 and it constitutes 83 (42%) female out 188 and 2 (1%) male out of 10. It otherwise means that, the library supplements resources to the paramedical professionals. This is followed by the visit

of the paramedical professionals to update knowledge in the profession and it stands 65 (33%) constituting 61(31%) female and 4 (2%) male out of 198. The visit to the library for writing an article/ paper and browse internet found a sorry figure as both the variables constitute 24 (12%) each out of 198. This otherwise can be interpreted that, the paramedical professionals take an effort for intellectual work including browsing internet for latest information relating to their works. The overall analysis found that, the library has quality resources that meet the information need of the paramedical professionals covered under the study.

4.4 Analysis by preference of access to library resources

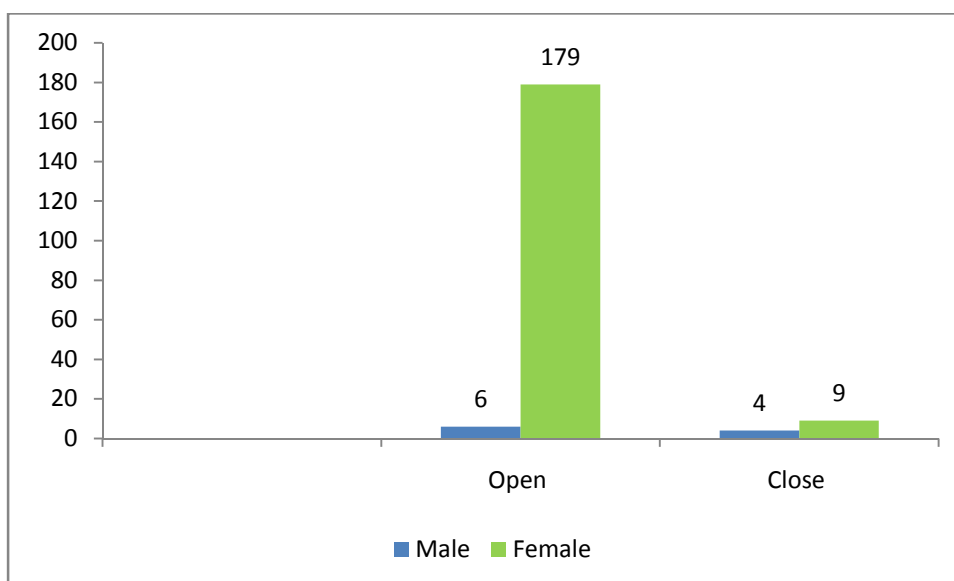
Invariably, library resources are accessed by the users in two ways types i.e, i) Open access and ii) Close access. Free/ Open access to the library leads to potential gain by the users as they freely move the stack room and make choice of their resource while, restricted access i.e, close access leads to use of resources through their physical presence and request for a specific document. But in the ICT environment, the library is also accessible through Intranet which, however, is restricted to know the availability of resources. But, in the event of non-availability of adequate current resources/information, the paramedical professionals prefer to browse on Internet for current and instant resources/ information. Therefore, to know the preference of access to the library resources, the target audiences were questioned to submit their preference out of two variables i.e, Open and Close. Data, thus, collected were placed in Table- 4.4 for analysis and it is supplemented with Graph-4.4 for better clarification.

Table-4.4. Preferences of access to library resources

| Sl. No | Access Preference | No. of Respondents | | Total | % |
|--------|-------------------|--------------------|------------|------------|------------|
| | | Male | Female | | |
| 1 | Open | 6 (60%) | 179 (95%) | 185 | 93 |
| 2 | Close | 4 (40%) | 9(5%) | 13 | 7 |
| | Total | 10 | 188 | 198 | 100 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire`



Graph-4.4: Preferences of access to library resources

Table-4.4 on analysis revealed that out of 198 respondents, 185 which constitute 179 (95%) female and 6(60%) male expressed open system as their preference to get their information need followed by 9 female (5%) and 4 (40%) male who preferred Close system. Further, access to Internet has predominance among the paramedical professionals to update in their field of interest and access resources. Mention may be made that, open system comprises accessing of resources through both Internet and Intranet.

4.5 Analysis by preference of information sources

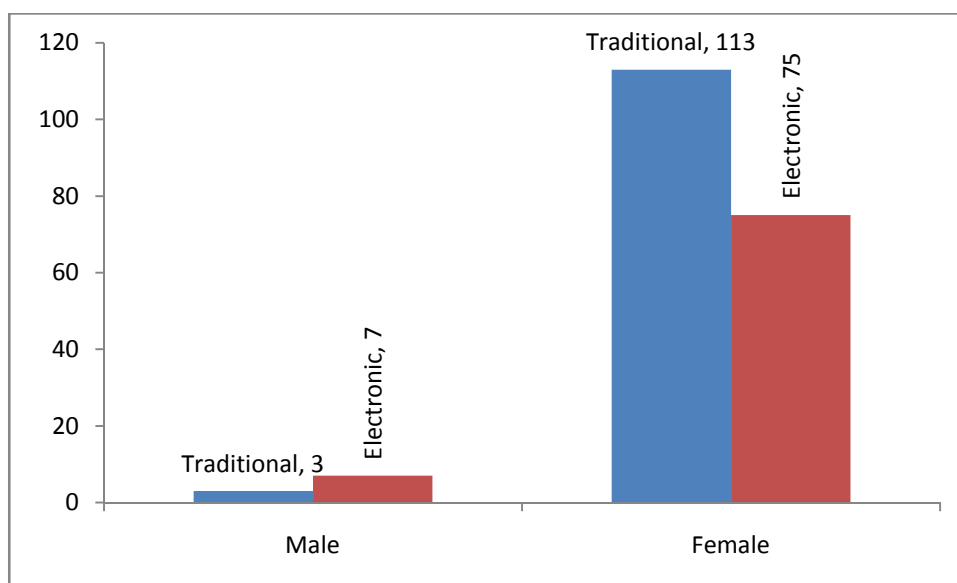
The paramedical professionals under the study, being the user communities of the library, exercise option from various information sources to find their information need. Even if multiple information sources are available, the scholar has questioned the component in two variables as reflected in the Table- 4.5 which reflects the data obtained from the user group and it is appended with Graph-4.5 for clear understanding.

Table-4.5 Preference of information sources

| Sl. No | Information Sources | No. of Respondents | | Total | % |
|--------|---------------------|--------------------|------------|------------|------------|
| | | Male | Female | | |
| 1 | Traditional | 3 (2%) | 113 (57%) | 116 | 59 |
| 2 | Electronic | 7 (4%) | 75 (38%) | 82 | 41 |
| | Total | 10 | 188 | 198 | 100 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire



Graph-4.5: Preference of information sources

Table-4.5 on analysis revealed that, the respondents use both the type of resources for different academic purposes and out of 198 respondents 116 (59%) constituting 113 (57%) female and 3 (2%) male prefer to use traditional based resources while, 82 (41%) comprising 75 (38%) female and 7 (4%) male prefer using electronic resources. It could be further found that, use of traditional resources have predominance over electronic resources among the Paramedical professionals covered under study.

4.6 Analysis by type of resources mostly used

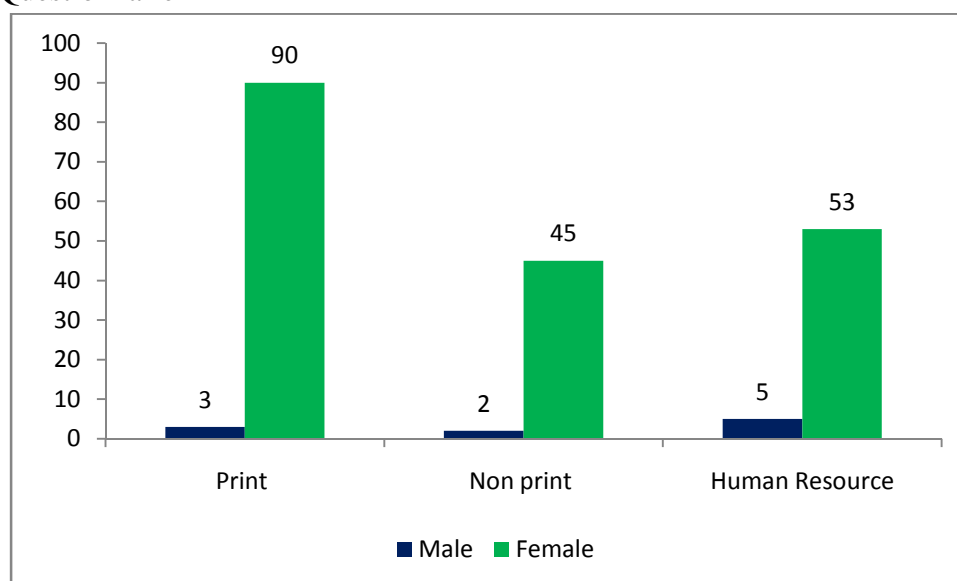
The libraries provide different types of resources to meet the varied information requirements to all categories of users and it is more prominent for the paramedical professionals as the information has a practical utility. The paramedical professionals orient with latest information in the concerned field as they are the ground level persons who attend patients directly and they apply their practical knowledge while taking care of the patients. Hence, it is essential to know the resources mostly used and the data collected from the respondents is placed below in Table-4.6 under 3 variables for analysis and it is supported with Graph-4.6. The statistical calculation is shown below in Table- 4.6-A.

Table-4.6: Type of resources mostly used

| Sl. No | Type of resources | No. of Respondents | | Total |
|--------|-------------------|--------------------|------------|------------|
| | | Male | Female | |
| 1 | Print | 3 (2%) | 90 (45%) | 93 (47%) |
| 2 | Non print | 2 (1%) | 45 (23%) | 47 (24%) |
| 3 | Human Resource | 5(2%) | 53 (27%) | 58 (29%) |
| | Total | 10 | 188 | 198 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire



Graph-4.6. Type of resources mostly used by the respondents

Table- 4.6-A: Statistical Calculation

| Description | Print | Non-Print | Human Resource |
|--------------------|----------|-------------|----------------|
| Mean | 46.5 | 23.5 | 29 |
| Standard Error | 43.5 | 21.5 | 24 |
| Median | 46.5 | 23.5 | 29 |
| Mode | #N/A | #N/A | #N/A |
| Standard Deviation | 61.51829 | 30.40559159 | 33.9411255 |
| Sample Variance | 3784.5 | 924.5 | 1152 |
| Kurtosis | #DIV/0! | #DIV/0! | #DIV/0! |
| Skewness | #DIV/0! | #DIV/0! | #DIV/0! |
| Range | 87 | 43 | 48 |
| Minimum | 3 | 2 | 5 |
| Maximum | 90 | 45 | 53 |
| Sum | 93 | 47 | 58 |
| Count | 2 | 2 | 2 |

Table-4.6 on analysis revealed that out of 198 respondents in total, 93 (47%) comprising 90 (45%) females and 3 (2%) males use print resources to find out their source of information followed by 47 (24%) comprising 45 (23%) females and 2 (1%) males who preferred using non-print resources and 58 (29%) comprising 53(27%) females and 5(2%)males who use human resource. It shows that, overall, print sources (47%) have dominance followed by Human Resources (29%) and non-print (24%) as the source of information for the paramedical professionals under the study. The statistical calculation placed in Table 4.6-A revealed that, the mean value for print resources comes to 46.5 followed by 23.5 for non-print resources and for human resource it comes to 29. The

standard deviation accordingly for print resources comes to 61.51829 followed by non-print resources it comes to 30.40559159, and human resource comes to 33.9411255.

4.7 Analysis by consulting source

Latest information in the medical field is essential irrespective of the types of medical staffs. Invariably, the physicians get alert through journal articles, national and international databases, conferences etc. but hardly, there is any such outlets for the paramedical professionals who appraise themselves with latest information apart from the print and electronic resources. Hence, it is evident to know the source of their update. Therefore, the scholar tried to know the different consulting source apart from the print and electronic sources. They were asked to place their option from the four variables. As some of them have chosen multiple options, the 'n' value rose to 583 instead of 198. The data is placed below in Table-8 for analysis and it is supplemented with Graph-8 for understanding.

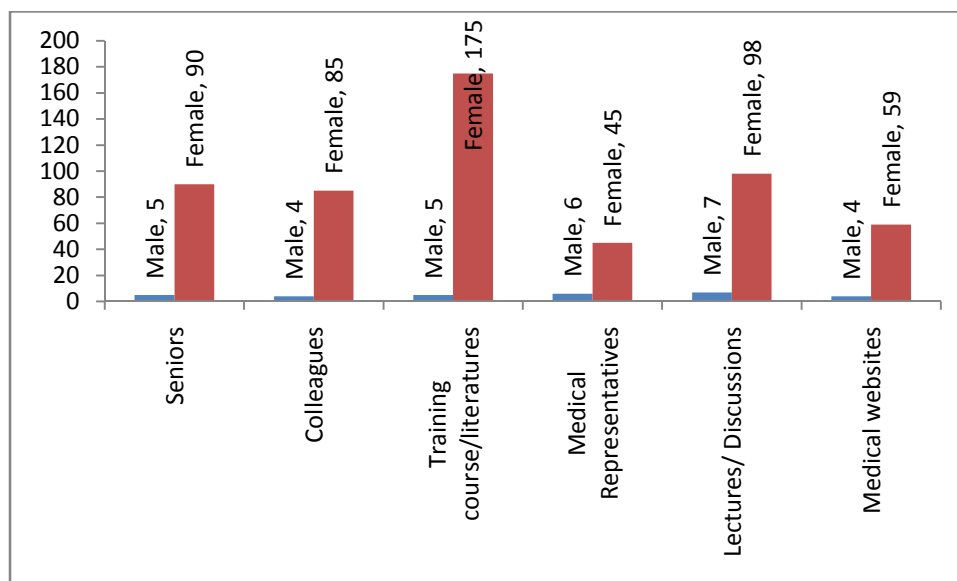
Table-4.7 Consulting Source

| Sl. No | Consulting source | No. of Respondents | | Total | % |
|--------|-----------------------------|--------------------|------------|------------|------------|
| | | Male | Female | | |
| 1 | Seniors | 5 (1%) | 90 (15%) | 95 | 16 |
| 2 | Colleagues | 4 (1%) | 85 (14%) | 89 | 15 |
| 3 | Training course/literatures | 5 (1%) | 175 (30%) | 180 | 31 |
| 4 | Medical Representatives | 6 (1%) | 45 (8%) | 51 | 9 |
| 5 | Lectures/ Discussions | 7 (1%) | 98 (17%) | 105 | 18 |
| 6 | Medical websites | 4 (1%) | 59 (10%) | 63 | 11 |
| | Total | 31 | 552 | 583 | 100 |

>.5 is rounded to the next digit, <.5 is rounded to the previous digit.

Source: Questionnaire

'n' = 558, N = 198



Graph-4.7: Consulting Source

While analyzing the Table-4.7 it could be found that out of 583, 180 (31%) comprising 175 (30%) female and 5 (1%) male primarily accept Training course/literature as their primary consulting source of information followed by 105 (18%) consisting of 98 (17%) female and 7 (1%) male who accepted Lectures/ Discussions as the consulting source and 95 (16%) comprising 90 (15%) female and 5 (1%) male 'seniors' as the consulting source. The other two variables such as, Colleagues 89 (15%), Medical websites 63 (11%), and Medical Representatives 51 (9%) equally contribute potentially as the consulting source among the paramedical professionals of the institutes covered under study.

4.8 Analysis by purpose of information need

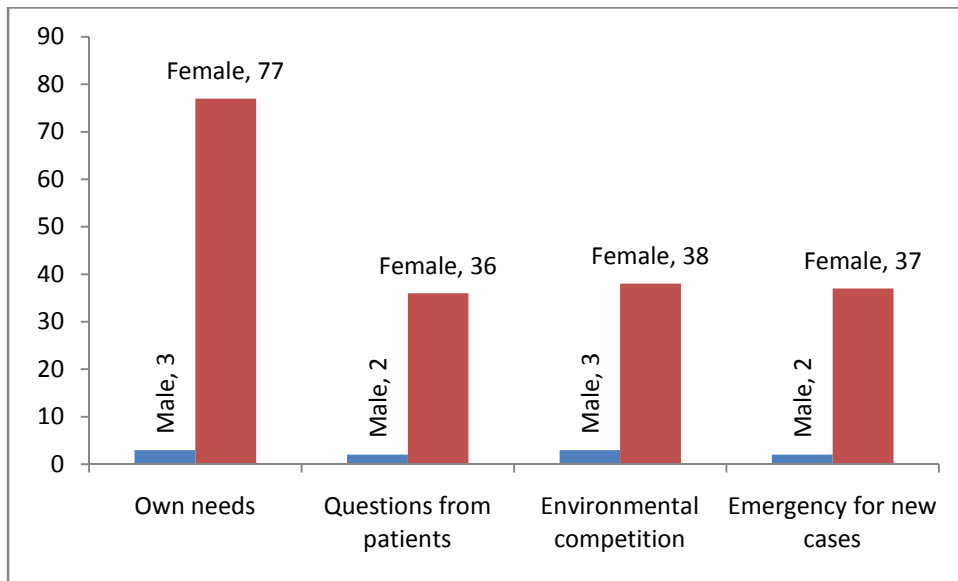
It is essential to know the purpose of using different types of information as it has practical implications in academic work. For the present study, the component has been grouped into four variables and the data so obtained through the questionnaire for the component is placed in Table- 9 for analysis supported with Graph-9.

Table-4.8 Purpose of information need

| Sl. No | Purpose | No. of Respondents | | Total | % |
|--------|---------------------------|--------------------|------------|------------|------------|
| | | Male | Female | | |
| 1 | Own needs | 3 (2%) | 77 (39%) | 80 | 40 |
| 2 | Questions from patients | 2 (1%) | 36 (18%) | 38 | 19 |
| 3 | Environmental competition | 3 (2%) | 38 (19%) | 41 | 21 |
| 4 | Emergency for new cases | 2 (1%) | 37 (19%) | 39 | 20 |
| | Total | 10 | 188 | 198 | 100 |

.5> is rounded to the next digit, <.5 is rounded to the next digit.

Source: Questionnaire



Graph-4.8: Purpose of information need

Table-4.8 on analysis found that, out of 198 respondents 80 (40%) constituting 77 (39%) female and 3 (2%) male prefer to equip themselves with latest information for their own needs while, 41(21%) i.e, 38 (19%) female and 3 (2%) male need information due to environmental completion and 39 (20%) respondents comprising of 37 (19%) female and 2 (1%) male prefer information for application to new cases in case of emergency. Further, 38 (19%) respondents need information to satisfy the need of the patients' query. This, otherwise, means that the paramedical professionals under study prepare themselves with latest information in their required field of interest for any eventuality.

4.9 Analysis by Type of Problems in accessing e-resources

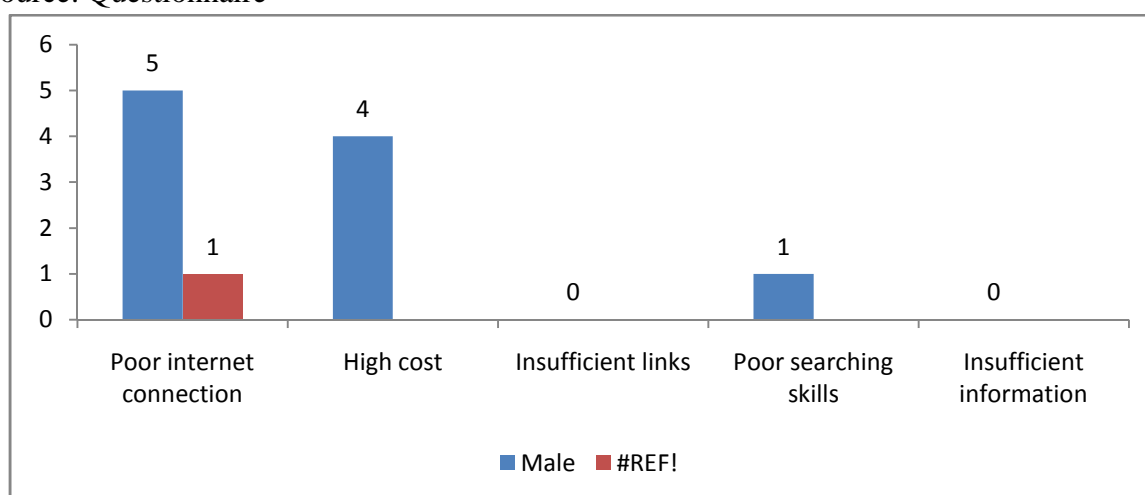
Electronic resources supplement the information need of all classes and paramedical professionals are no exception to it. The e-resources have been indispensable in all quarters and it has more practical value in life saving organization which not only yields better results while treating the patients but also gains potential value in research. The paramedical professionals equally need the electronic resources not only to know the way for better nursing the patients but also for their academic gain. They get access to Internet for e-resources through their data card and wifi but, sometimes they encounter with accessing problems. The scholar tried to ascertain the total number of respondents encountered with such problems along with the types of problems. Table-10 below shows the data of the total number of respondents those come across with such issues and the types of problems which have been divided into five variables. It is supplemented with Graph-4.9 for clear understanding. Further, the correlations among the components have been shown in Table-4.9-A.

Table-4.9 Types of Problems in accessing e-resources

| Sl. No | Type of Problems | No. of Respondents | | Total | % |
|--------|--------------------------|--------------------|-----------------|------------|------------|
| | | Male | Female | | |
| 1 | Poor internet connection | 5(3%) | 76 (38%) | 81 | 41 |
| 2 | High cost | 4 (2%) | 39 (20%) | 43 | 22 |
| 3 | Insufficient links | 0 | 26 (13%) | 26 | 13 |
| 4 | Poor searching skills | 1 (1%) | 18 (9%) | 19 | 10 |
| 5 | Insufficient information | 0 | 29 (15%) | 29 | 15 |
| | Total | 10 (5%) | 188(95%) | 198 | 100 |

.5> is rounded to the next digit, <.5 is rounded to the next digit.

Source: Questionnaire



Graph-4.9 Types of Problems in accessing e-resources

Table-4.9-A: Correlations among Problems in accessing e-resources

| | Poor internet connection | High cost | Insufficient links | Poor searching skills | Insufficient information |
|--------------------------|--------------------------|-----------|--------------------|-----------------------|--------------------------|
| Poor internet connection | 1 | | | | |
| High cost | 1 | 1 | | | |
| Insufficient links | 1 | 1 | 1 | | |
| Poor searching skills | 1 | 1 | 1 | 1 | |
| Insufficient information | 1 | 1 | 1 | 1 | 1 |

Table-4.9 on analysis found that out of 198, 81(41%) constituting 76 (38%) female and 5 (3%) male paramedical professionals of all institutes revealed that, poor internet connectivity is a genuine problem to access e-resources followed by 43 (22%) comprising 39 (20%) female and 4 (2%) male viewed it as high cost and 29 (15%) expressed as insufficient information. This shows that, getting e-resources for the paramedical staffs are encountered

with multiple problems which not only affect to expand their knowledge horizon in the field but also affects to the service quality. The libraries of the respective institute also encounter with the problems and are unable to facilitate the staffs with e-resources. While deducing the correlations among the components, it could be found that, they are perfectly and positively correlated.

4.10 Analysis by satisfaction/Dissatisfaction with the library service

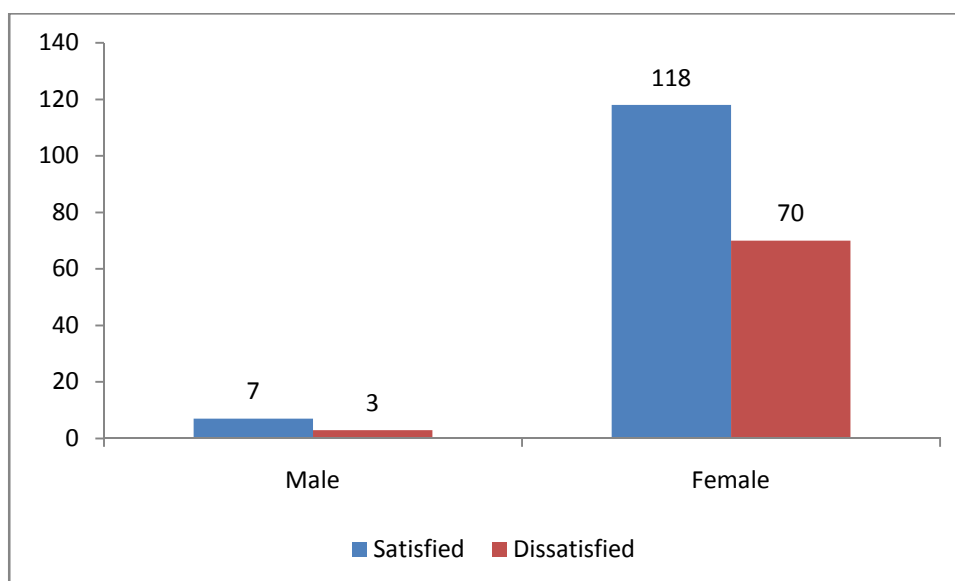
Satisfaction/ dissatisfaction, an important component of the survey reflects the personal feeling of the respondents about the library services. The respondents express their approach as satisfied when they received adequate support of resources and services from the library. For the present study, the scholar obtained the data with regard to satisfaction/ dissatisfaction from all 198 respondents which have been placed in Table 4.10 for analysis and it is supported with Graph-4.10 However, the scholar for the component ‘satisfaction’ has divided into four variables and the data obtained is placed in Table-4.10-A along with the statistical analysis in Table. 4.10-B for analysis.

Table-4.10 Satisfied/ dissatisfied with the library service

| Sl. No | Description | No. of Respondents | | Total | % |
|--------|--------------|--------------------|-----------------|------------|------------|
| | | Male | Female | | |
| 1 | Satisfied | 7(4%) | 118 (60%) | 125 | 63 |
| 2 | Dissatisfied | 3 (2%) | 70 (35%) | 73 | 37 |
| | Total | 10 (5%) | 188(95%) | 198 | 100 |

.5> is rounded to the next digit, <.5 is rounded to the next digit.

Source: Questionnaire



Graph-4.10 Satisfied/ dissatisfied with the library service

Table 4.10-A: Parameters of Satisfaction

| Sl. No | Satisfied | No. of Respondents | | Total | % |
|--------|--------------|--------------------|-----------------|------------|------------|
| | | Male | Female | | |
| 1 | Excellent | 2(1%) | 32(16%) | 34 | 17 |
| 2 | Good | 4 (2%) | 101 (51%) | 105 | 53 |
| 3 | Moderate | 3 (2%) | 40 (20%) | 43 | 22 |
| 4 | No Comment | 1(1%) | 15 (7%) | 16 | 8 |
| | Total | 10 (5%) | 188(95%) | 198 | 100 |

.5> is rounded to the next digit, <.5 is rounded to the next digit.

Source: Questionnaire

Table-4.10-B: Statistical Analysis of Satisfaction parameters

| Description | Excellent | Good | Moderate | No Comment |
|--------------------|-------------|-------------|------------|------------|
| Mean | 17 | 52.5 | 21.5 | 8 |
| Standard Error | 15 | 48.5 | 18.5 | 7 |
| Median | 17 | 52.5 | 21.5 | 8 |
| Standard Deviation | 21.21320344 | 68.58935778 | 26.1629509 | 9.89949494 |
| Sample Variance | 450 | 4704.5 | 684.5 | 98 |
| Range | 30 | 97 | 37 | 14 |
| Minimum | 2 | 4 | 3 | 1 |
| Maximum | 32 | 101 | 40 | 15 |
| Sum | 34 | 105 | 43 | 16 |
| Count | 2 | 2 | 2 | 2 |

Table- 4.10 on analysis revealed that out of 198, 125 (63%) comprising 118 (60%) female and 7 (4%) male in total expressed satisfaction on library services of their respective institute followed by 73 (37%) consisting 70 (35%) female and 3 (2%) male are dissatisfied.

The statistical analysis of the Table 4.10-A with regard to different parameters of satisfaction expressed shows that, 105 (53%) comprising 101(51%) female and 4(2%) male expressed 'good' followed by 43(22%) consisting 40 (20%) female and 3 (2%) male who viewed as 'moderate' and 34 (17%) comprising 32 (16%) female and 2 (1%) male opined 'excellent'. However, 16 (8%) reserved their comment. Overall it was found that, the services provided by the library of the respective institute are 'good'.

Further, statistical analysis of the Table- 4.10-B revealed that the mean value as a whole for 'good' is 52.5 while for 'moderate' it is 21.5 and for 'excellent' it is 17. The SD for 'good' is 68.58935778 while, for 'moderate' it is 26.1629509 and for 'excellent' it is 21.21320344. Overall, it could be found that according to the opinion of target audiences, the libraries provide good services

FINDINGS

- ☛ Institution wise analysis found that, the respondents of MCON touched the highest i.e 95% and for MFMNS it comes to 94%, for NS it comes to 93%.
- ☛ Out of 215 respondents which constitute 10 male and 205 female, 198 (92%) filled-in questionnaires were received which constitute 188 (87%) and 10 (5%).
- ☛ 35% which constitute the highest of both the male and female communities out of 198 visit the library once a week followed by 29% and 18% who visit the library thrice a week and everyday respectively. It shows that, due to inadequate resources of the users' interest, there is a tendency of less use of the library.
- ☛ Visit of paramedical professionals to the library for preparing lecturer note is the highest as it stands 43% out of 198 while, 33% visit to update knowledge in the profession. The visit to the library for writing an article/ paper and browse internet found a sorry figure as both the variables constitute 12% each out of 198 respondents.
- ☛ Out of 198 respondents, 93% expressed open system as their preference to get their information need followed by 7% who preferred Close system. Further, access to Internet has predominance among the paramedical Professionals to update in their field of interest and access resources.
- ☛ 59% out of 198 respondents prefer to use traditional based resources while, 41% prefer using electronic resources. It could be further found that, use of traditional resources have predominance over electronic resources among the Paramedical professionals covered under study.
- ☛ 47% out of 198 respondents use print resources to find out their source of information followed by 24% who preferred using non-print resources and 29% opted human resource as the source of information. The statistical calculation revealed that, the mean value for print resources comes to 46.5 while for non-print resources it comes to 23.5 and human resource comes to 29. Likewise, the standard deviation for print resources comes to 61.51829 while for non-print resources it comes to 30.40559159 and human resource comes to 33.9411255.

☛ Out of 198, 31% primarily accept Training course/literature as their primary consulting source of information followed by 18% who accepted Lectures/ Discussions as the consulting source and 16% preferred 'seniors' as the consulting source. The other two variables such as, Colleagues 15%, Medical websites 11%, and Medical Representatives 9% equally contribute potentially as the consulting source among the paramedical professionals of the institutes covered under study.

☛ Out of 198 respondents 40% prefer to equip themselves with latest information for their own needs while, 21% need information due to environmental completion and 20% respondents prefer information for application to new cases in case of emergency. Further, 19% respondents need information to satisfy the need of the patients' query.

☛ 41% out of 198 respondents paramedical professionals of all institutes revealed that, poor internet connectivity is a genuine problem to access e-resources followed by 22% viewed it as high cost and 15% expressed as insufficient information. This shows that, getting e-resources for the paramedical professionals are encountered with multiple problems which not only affect to expand their knowledge horizon in the field but also affects to the service quality. The libraries of the respective institute also encounter with the problems and are unable to facilitate the staffs with e-resources. While deducing the correlations among the components, it could be found that, they are perfectly and positively correlated.

☛ Out of 198 respondents, 63% in total expressed satisfaction on library services of their respective institute followed by 37% who are dissatisfied.

☛ The statistical analysis to different parameters of satisfaction shows that, 53% expressed 'good' followed by 22% who viewed as 'moderate' and 17% opined 'excellent'. However, 8% reserved their comment. Further, statistical analysis revealed that the mean value as a whole for 'good' is 52.5 while for 'moderate' it is 21.5 and for 'excellent' it is 17. The SD for 'good' is 68.58935778 while, for 'moderate' it is 26.1629509 and for 'excellent' it is 21.21320344.

5. CONCLUSION& SUGGESTION

Information plays an essential part in education for any professionals to developed their knowledge and also very important for the development of the society as well as the country. It is considered as the wealth of society. It plays an important role in all human activities and there is an ever increasing value for information. It is also considered as an essential source for human development. Along with information, communication and knowledge are essential for the development of every human activity and related with the information. Information cannot go alone without knowledge and communication. Thus, it plays the same important role in developing the society as well as the country. So, no one can deny that information, communication and knowledge are vital.

Information is power, and is the product of human brain in action. It is the data of value for decision making and needed for any action viz., research activities, planning, development and cultural activities etc. Thus the needs of information grow rapidly among the researchers, planners, decision makers, educationists, scientists etc.

The responsibilities of the paramedical professionals as per the guidelines of the Charter of Duties of Medical and Paramedical personnel issued by Roychowdhury (2002) Additional Director, Health Services states that, the paramedical professionals especially nurses need to

1. Proper setting of operation trolleys by ORAs.
2. Inform the patient and prepare him in the ward before operation and taking consent of the patient for surgery,
3. Assist the Medical Officers during the operations.
4. Keep track of instruments and swabs and their final count during surgery. Any discrepancy should be notified to the surgeon immediately
5. Ensure that Operation Theatre, equipments, instruments, linen etc are always kept ready for any emergency operation.
6. Ensure that sterilizers are always in working condition and when any repair is required, bring it to the notice of MO I/C OT at once.
7. Ensure that linen, instruments and dressing materials are sterilised effectively and timely and that they are kept under aseptic condition.
8. Ensure sterility of the Operation Theatre and the equipment.

9. Ensure that anaesthetic gases, oxygen, intravenous infusion fluids, IV Sets and lifesaving drugs are available in sufficient quantity
10. Ensure that specimens advised to be sent for histopathological examination are well preserved, properly labeled and reaches the laboratory in time without deterioration, accompanied by necessary form.
11. Arrange to send specimens for sterility test.
12. Maintain a register where details of all operations carried out are entered.
13. Ensure and follow the infection control & waste management programme of the hospital.

From the above discussions, the role of paramedical professionals could be properly understood who are really considered to be life saving persons who take the manifold responsibilities like maintain the medical records of the patients in the hospital and or nursing institutes, radiography technicians, radiologists, physiotherapists, speech therapists, audiologists, dialysis therapists, emergency technicians, emergency care practitioners, perfusion technicians, cardiac technicians and respiratory therapists etc. (Sharma et al., 2016). The paramedical professionals supplement the medical practitioners and act as supporting hands to carry out various medical related works like radiography, first aid,, nursing, emergency care of the patient and for that, they need to update themselves with latest information including the handling and operation of equipments. Further, it requires quality service and self-dedication for the cause of the patients. The higher quality of medical treatment as discussed by Talib at al. (2015) will satisfy the patients and further will improve the social perception of the hospital which helps in the brand building of the hospital. Paramedical persons (staff) have a big role in improving social perception and brand building because they always deal with the primary and basic medical needs of the patients at the root level explained by Abdulrahman (2015).

Health institutes in private sectors, government hospitals, nursing schools brand building is an important aspect to enhance the quality of medical care and infrastructure as viewed by Tiwari, Surendra Kumar and Singh (2017). This is the means to expand the horizon of medical service to the patients and discharge effectively the social responsibilities for building a better society. Proper medical care is one of the important duties and responsibilities which can be attended to the patients through proper information gathering and the library of the respective institute need to develop the resources and provide services. The role of the library does not end only by providing the resources to the paramedical professionals but also to provide resources to the patients so as to redress their miseries and

proper use of time. In the present ICT environment, the initiations of libraries are much who need to provide latest information through intranet to the paramedical professionals to improve upon the services. It requires a change in the medical environment especially in the libraries so as to support performance level of paramedical professionals in Mizoram and efforts need to be initiated to make a brand institutes.

References

- Abdulrahman, A., (2016). Influence of national culture on the social construction of health care quality, Doctoral Thesis, University of Surrey, 2016.
- Roychowdhury, S.P. (2002). Charter of Duties of Medical and Paramedical Personnel Issued by the Additional Director Health Services, Ordinance Factory Board, Kolkata, vide No. 226/ST/A/M/date 28.11.2002.
- Sharma, S., Tabasum, F., Khurana, S., and Kapoor, K. (2016).Front line worker perceptions of medication safety in India, *Therapeutic Advances in Drug Safety*. 7 (6), 248-260.
- Talib, F., Azam, M., Rahman, Z., (2015).Service quality in health care establishments: a literature review, *International Journal of Behavioral & Health Care Research*, 5 (1), 1-24.
- Tiwari, K., Surendra Kumar and Singh, P. (2017).Role of Paramedical Institutes and Staffs in Brand Building and Social Perception of Private Medical Insittutes at Lucknow, U.P., India.*International Journal of Scientific and Research Publications*, 7 (1), 244-249

5.1 SUGGESTIONS:

On the basis of findings of the study it may be suggested as follows:

1. Experienced librarians are required in each and every nursing institute's library.
2. Adequate numbers of print resources in the medical field need to be available in the library.
3. Computer with internet connectivity with high bandwidth is required for all types of users.
4. Adequate infrastructures need to be available for the development of the library for better and effective use of library resources.
5. The librarian needs to be information literate for effective dissemination of current information using the technology.
6. All the libraries should subscribe Journals, magazines and Newspapers to meet the needs of the library users.

Bibliography

- Abdulsalami, L.T., Okezie, Q.I. and Agbo, A.D. (2013).The role of the library in the promotion of knowledge societies in Nigeria.Pelagia Research Library *Advances in Applied Science Research*. 4(1):58-70. Available at www.pelagiaresearchlibrary.com.
- Abdulrahman, A., (2016). Influence of national culture on the social construction of health care quality, Doctoral Thesis, University of Surrey, 2016.
- Afolabi, M. O, (2013). Health seeking behavior and student perception of health services in a university community in Nigeria, *Open Access*, 5(5), 817-824
- Ahsan, Ashoab and Mehta, R.D. (1987), “Problems, Needs and Approaches of Users to Information in Agriculture Science”.*ILA Bulletin*. 22(3-4), 120-140.
- Allwood, C. M. &Bärmark, J. (1999).The role of research problems in the process of research.*Social Epistemology*, 13(1), 59-83.
- Anila, S., Rath, D.S., and Madalli, P, Devika(2015).Visual Information seeking and Digital Libraries, *IASLIC Bulletin*, 60(1), 3-15.
- Annual Report, Mizoram University, 2016-17
- Balakrishnan, Shyama and Paliwal, P.K (2001), Ed. Library Information Procedure. New Delhi: Anmol Publications Pvt. Ltd.
- Balasubramanian, Geetha and Biswas, S.C. (1980), “Readers and their Reading Trends in the British Council Library, Delhi”, *Annals of Library Science and Documentation*. 27 (1-4), 66-67
- Baruah, P and Tripathi, T, (1988), “An Analysis of Information-seeking Behaviour of Research Scholars vis-à-vis Existing Information Sources and Services of Burdwan. University Library: A case Study”, *IASLIC Bulletin*, 33 (2-3), 93-98
- Bazerman, C.(1994). *The Informed Writer: Using Sources in the Disciplines*. 5th edition. Boston: Houghton Mifflin Company.
- Bennett, Nancy L, et.al (2006). Information seeking behaviour and reflective practice, *Journal of Continuing Education in Health Profession*, 26, 120-127.
- Bilawar, PrakashBhairu and M. Pujar, Shamprasad(2016). Impact of e-information literacy on information seeking behavior of university teachers, *Annals of Library andInformation Studies*, 63, 176-181.
- Brittain, J.M (1970), “Information and its users: a review with special reference to social sciences”. Bath: Bath University Press.
- Case, D. (2002).Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior. Amsterdam: Academic Press.

- Chadtopadhyay, B.K (1995). Borrowing behaviour of students in Teacher education College Libraries of West Bengal-A survey Report. *IASLIC Bulletin*.40(2), 69-72
- Chen, C.C. and Hernon, P. (1982). Information Seeking: Assessing and Anticipating User Needs. Neal-Schuman: New York
- Cliff, L. Role & Importance of Paramedical Services <http://www.selfgrowth.com/articles/role-importance-of-paramedical-services> Charter of duties http://ofbindia.gov.in/download/rti_man/rti_am/Charter%20of%20Duties%20of%20Medical%20&%20Paramedical%20Personnel.pdf
- Courtright, C. (2004). Health information-seeking among Latino newcomers: an exploratory study. *Information Research*, 10(2) paper 224. Available at <http://InformationR.net/ir/10-2/paper224.html>
- Courtney N (2001). Barbarians at the gates: A half-century of unaffiliated users in academic libraries, *Journal of Academic Librarianship*, 27(6), 473-480
- Das, KailashChandra(1995). Attitude of Teachers towards Library Oriented Instruction Programme in secondary Schools. *IASLIC Bulletin*.40(2),63-68.
- Dave, R K(2012). Information Seeking Behaviour Models : An Overview, *IASLIC Bulletin*, 57(3), 147-155.
- Dhawan, S.M and Sachdeva, D.L(1987). Users' approach to Information in Physical Science: An Overview. *ILA Bulletin*. 22(3-4), 103-111
- Eeva-Liisa Eskola (1998), University students' information seeking behaviour in a changing learning environment - How are students' information needs, seeking and use affected by new teaching methods? *Information Research*, 40 (2), Available at <http://www.shef.ac.uk/~is/publications/infres/isic/eeskola.html> (Accessed on 9.10.14)
- Emergency Medical Paramedic 2010-2013. <http://www.emergencymedicalparamedic.com/paramedic-study-notes/>
- Emergency Medicalparamedic. <http://www.emergency medical paramedic.com/category/new-technologies/>
- Encyclopaedia Britannica.12, 244.
- Faibisoff, S G and Ely, D.P., Information and Information Needs, *Information Reports and Bibliographies*, 5(5),.4, Available at http://faculty.washington.edu/harryb/courses/INFO310/faibisoff_ely.pdf (Accessed on 9.10.14)
- Fatima, Nishat and Ahmad Naved(2008). Information Seeking Behaviour of the students at Ajmal Khan Tibbiya College, Aligarh Muslim university : A Survey, *Annals of Library and Information Studies*, 55, 141-144.

- Fidishun, D(2007). Women and the Public Library: Using Technology, Using the Library. *Library Trends*, 56(2), 328-43.
- Gandhi, Kedar and Jadhav, PradeepR(2017). Preference for utilization of drug information sources among postgraduate medical residents.*Internatioal Journal of Basic and Clinical Pharmacology*, 6(12), 2859-2863.
- Gollop, Claudia J.(1997). Health information-seeking behavior and older African American women. *Bull Med LibrAssoc* April;85(2).Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC226241/pdf/mlab00095-0043.pdf>
- Gowda, Vasappa and Shivalingaiah, D(2010). Information Seeking Patterns of Researchers in the University Libraries in Karnataka State, *SRELS Journal of Information Management*, 47(1), 83-101.
- Gowda, V and Shivalingaiah, D(2010). Information Seeking Patterns of Researchers in the University Libraries in Karnataka State, *SRELS Journal of Information Management*, 47(1), 83-101.
- Green, A. (1990). What do We Mean by User Needs.*British Journal of Academic Librarianship*,5(2), 65-78.
- Guha, B. Ranganathan's fourth Law and contemporary users studies. *IASLICBulletin*.40(3); 1995.p.97-106.
- Hari Krishna Reddy, S and Karisiddappa, C.R.(1997). Information Seeking Behaviour of the Professionals in the field of disabilities with special reference to mental handicap in India, *Annals of Library Science and Documentation*, 44(2), 54-64.
- Hemminger, Bradley M. (2007). Information Seeking Behaviour of Academic Scientists, *Journal of the American Society for the Information Science And Technology* , 58(4), 2205–2225.
- Hjørland, B. (1996). Informationsbehov - en analyse af et vanskeligt begreb. *Bogens Verden*. <http://www.kb.dk/guests/natl/db/bv/bv-96/4-96/inf.htm> (In Danish).
- Hjørland, B. (1993). Informationsbehovogderesudvikling. IN: *Emnerepresentationog informationssøgning. Bidragtil en teoripåkundskabsteoretiskgrundlag*.Göteborg: Valfrid. (Pp. 172-201).
- Hjørland, B. (1997): Information Seeking and Subject Representation. An Activity-theoretical approach to Information Science. Westport & London: Greenwood Press.
- <http://agmc.nic.in/>
- <http://assammedicalcollege.in/>
- <http://civilhospitalaizawl.org/edu.htm>

- <http://colleges.ancientayurved.com/>
- <http://gmchassam.gov.in/>
- <http://neigrihms.nic.in/>
- <http://ripans.org/>
- <http://smcassam.gov.in/>
- <http://smims.smu.edu.in/home.php?t=p>
- <http://tmc.nic.in/>
- <http://www.educationindia.org.in>
- <http://www.bbcionline.org/advertisement.htm>
- http://www.db.dk/bh/core%20concepts%20in%20lis/articles%20a-z/information_needs.htm
- <http://www.dipsindia.co.in/history>
- <http://www.dipsindia.co.in/history.asp>
- <http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>
- <http://www.highereducationinindia.com/career-options/career-as-paramedics-153.php>
- <http://www.jmch.org.in/>
- <http://www.jnims.edu.in/>
- <http://www.lgbrimh.org/>
- <http://www.mdoner.gov.in/node/2025>
- <http://www.rims.edu.in/>
- <https://www.britannica.com/topic/paramedical-personnel>
- Ingwersen, P. (1992). *Information Retrieval Interaction*. London: Taylor Graham. Available at: http://www.db.dk/pi/iri/files/Ingwersen_IRI.pdf
- Iyengar, T.K.S and Rao, G.S(1987). Users' Approach to Information: A case Study in the field of Physical Science. *ILA Bulletin* .22(3-4), 95-102
- Joshua O. A and Ahmad A, A (2017). Paramedical Sciences and Services: The Need to Develop Effective Systems in Africa. *World journal of pharmaceutical and Medical Research*, 3(9), 30-33

- Kanbarkar, P.N &Afolabi, M. O, (2013). Healthcare Seeking Behaviour – A Theoretical Perspective, *Indian Journal of Research*, 6(1), 76-96
- Kapasi, K.H (1992). Librarian in pursuit of the simple truth-users' satisfaction.*IASLIC Bulletin*.37 (4), 247-250.
- Kapoor, S.K(1980). User Education and Training Programmes: An Overview. *IASLIC Bulletin*.25(3), 129-137.
- Kassulke, D., Stenner-Day, K., Coory, M. and Ring, I. (1993) Information-seeking behaviour and sources of health information: associations with risk factor status in an analysis of three Queensland electorates .*Australian Journal of Public Health*, 17(1), 51-57.
- Kari, J and Sovalainen, R(2007). Relationships between information seeking and context : A qualitative study of Internet searching and the goals of personal development, *Journal of Information Science Research*, 29, 47-69. www.sciencedirect.com
- Karisiddappa, C.R(1989). Information use pattern of Indian Historians.*IASLIC Bulletin*, 34(2), 47-54.
- Keshyap, M.M(1986). Methods for Testing Reliability and validity of a measuring Device developed for behavioural Research in Libraries.*ILA Bulletin*. 22(1-2), 10-18.
- Koovakkai, Dineshan(2008), Library related information on the university sites. *IASLIC Bulletin*.53 (2), 54-66.
- Kostagiolas, P.A, et.al (2012). Examining Patterns of Information Behavior Among Healthcare Professionals : A case study on Health Psychologists, *Journal of New Information Networking*, 17(2), 23-35.
- Krik, T.G (1975). Biographical instruction-a review of research in conference on the evaluation of library instruction: Evaluating library instruction. 23p.
- Krishnamoorthy, R.P.G and Aruladhanakar, M(1992). Information Seeking Behaviour of the members of faculties of Science and Humanities in Anna University Chennai, *Indian Journal of Information Science and Services*, 4(1), 25-31.
- Kuhlthau, C.C. (1993). A principle of uncertainty for information seeking. *Journal of Documentation*, 49(4), 339-355.
- Kumar,P, and Parida, B(2013). Information Need and Seeking Habits of the Scientists working in different Agricultural Research Institute of Odisha : A user's Study, *IASLIC Bulletin*, 58(1), 5-14.

- Kumar, Krishan(1985). User Education: Organisation method of Instruction and Evaluation. *ILA Bulletin*. 20(3-4), 85-98
- Kumar, Krishan(1982). Users Survey: Identification of Users and their Information Needs in Health Science Libraries.*ILA Bulletin*. 18(1-2), 44-50
- Laki, Damian G. (2016). Factors Influencing Health Information-seeking Behaviour among Health Care Providers at Health Facilities in Tanga region: A Case Study of Muhef Project, *Universal Journal of Public Health*, 4(6), 279-297.
- Laloo, B.T. (2002). Information Needs, Information Seeking Behaviour And Users. New Delhi: EssEss Publications.
- Lam, Mary K. & Lam, Lawrence T.(2012).Health information-seeking behaviour on the Internet and health literacy among older Australians.electronic Journal of Health Informatics; 7(2):e15
- Lambert, S. D.&Loiselle, C. G.(2007). Health information – seeking behavior. *Qualitative Health Research*, 17(8), 1006-1019.
- Leeder, C and Shah, C(2016). Library Research as collaborative information seeking, *Library and Information Science Research*, 38, 202-211.www.sciencedirect.com
- Leupolt,M(1983). The information need: its structure and its implementation. *Int. forum inf. Doc.* 8(3), 3-7.
- Line, M. B. (1974). Draft Definitions: Information and Library Needs, Wants, Demands and Users, *Aslib Proceedings* 26(2), 87.
- Louise L and Olof S, (2006), Teaching information seeking: relating information literacy education to theories of information behaviour, *Information Research*, 12 (1),1-7
- Mahapatra, G(2006). Information needs of scientists and engineers in electronic environment : A case study of Indian exploration and production Industry, *Annals of Library and Information Studies*, 53, 173-183.
- Mahapatra, R.K and Panda, K.C(2001). State of Information seeking and searching behaviour of working Journalists in Orissa: A study. *Annals of Library and Information Studies*. 48(4),133-138
- Maharana, R.K (2013). Exploring the information seeking behaviour of Medical Science Professionals: A case study of Veer SurendraSai Medical College, Burla, Odisha, *International Journal of Information Dissemination and technology*, 3(1), 62-66.
- Mahawar, K L, Verma, Shilpi, and Saha, Chhaya(2009). Information seeking behavior of the Geologists : A study in Geological survey of India, Lucknow, *IASLIC Bulletin*, 54(2), 103-113.
- Mitra, D.P(1983) Users Attitude to Microforms in Academic Libraries.*Library Herald*.22(1), 54-59.

- Mokhtar, IntanAzura(2011). Medical and Health Information Seeking among Singapore Youths: An Exploratory Study, *Singapore Journal of Library & Information Management*, 38(2), 125-132
- Morris Ruth C T(1994). Toward a user-centered information service.*Journal of the American Society for Information Science*.45(1), 20-30.
- Musib, S K(1991). Information seeking patterns in the rural areas of West Bengal, India : A Survey Report on Cottage Industries, *IASLIC Bulletin*, 36(4), 177-186.
- Padmamma, S. and Vijayakumar, M(2002). Information Seeking Behaviour of VISL Scientists: A case study. *ILA Bulletin*.38(1), 23-26.
- Paisley, W.J(1968). Information needs and users.*ARIST*, 3, 1-30
- Porat, U (1977). The information economy: definition and measurement. Washington: Govt. Printing House. 2, 108-113.
- Pors, N. O. (1990). *Dødebøgerogtommehylder.Omevalueringogstyringafbiblioteketsmaterialebestand*.Valby: DanmarksBiblioteksforeningsForlag. (In Danish).
- Potter, (William Gray). (1997). Recent Trends in statewide Academic library consortia.*Library Trends*. 45(3), 416-434
- Prasad, H.N and Tripathi, M(1998). Information seeking behavior of Physical Scientists and Social Scientists : A Report, *Annals of Library Science and Documentation*, 45(2), 41-48.
- Prasher, R.G(1982). Information and Its Communication.*ILABulletin*.23(3), 95-118.
- Rains,Stephen A.(2007). Perceptions of Traditional Information Sources andUse of the World Wide Web to Seek Health Information: Findings From the Health Information National Trends Survey. *Journal of Health Communication*, 12:667–680.
- Rajaram, S(2003). Factors Affecting Human Relations in Interaction with Users in Libraries.*Library Herald*. 41(1), 1-11
- Ranganathan, S.R (1961). Reference service. Bombay: Asia Publishing House. 2nd ed. P.27
- Rangna, V.K(1967). Language barrier to the free flow of Information.*ILA Bulletin*. 3 (3-4), 205-206.
- Ray, Kathryn & Day, Joan (1998). Student attitudes towards electronic information resources.*Information Research*, 4(2), 32-36.

- Ray S, Shibu and Baby M D(2011). Information seeking behavior of the Academics of University of Kerala in the changed Library environment, *IASLIC Bulletin*, 56(2), 111-123.
- Roberts, N. (1975). Draft Definitions: information and Library Needs, Wants, Demand and Users: A Comment, *Aslib Proceedings* 27(7), 308-13.
- Roychowdhury, S.P. (2002). Charter of Duties of Medical and Paramedical Personnel Issued by the Additional Director Health Services, Ordinance Factory Board, Kolkata, vide No. 226/ST/A/M/date 28.11.2002.
- Rout, R.K(1982). Measuring users' satisfaction: A quantitative Model. *IASLIC Bulletin*. 27(1), 1-8
- Savolainen, R(2016). Approaches to socio-cultural barriers to information seeking, *Library and Information Science Research*, 38, 52-59. www.sciencedirect.com
- Selvamani, J(2012). Information use pattern of faculty of pharmacy colleges in Chennai : A study, *Indian Journal of Information Science and Sciences*, 2(2), 30-35.
- Sethi, A.R(1987). Information Seeking Behaviour of Area Specialists.*ILA Bulletin*. 22(3-4), 153-155.
- Sharma, B and Gupta S(2012). Information seeking behavior of faculty members at Sher-e-Kashmir University of Agriculture Science and Technology, Jammu, India in internet Era : A survey, *IASLIC Bulletin*, 57(1), 23-33.
- Sharma, S., Tabasum, F., Khurana, S., and Kapoor, K. (2016).Front line worker perceptions of medication safety in India, *Therapeutic Advances in Drug Safety*. 7 (6), 248-260.
- Shera, J.H (1972). The foundations of education for librarianship. New York: Becker & Hayes.
- Shores, Louis (1954).Basic reference sources. Chicago: *American Library Association*. 206p.
- Silvio, D.H. (2006). The information needs and information seeking behaviour of immigrant southern Sudanese youth in the city of London, Ontario: an exploratory study. *Library Review*, 55 (4), 259-266
- Singh, R.K(2012). Information Seeking Behaviour of Medical Practitioners: A Case Study, *International Journal of Information Research*, 2(1), 1-7
- Starasts, Ann(2015). Unearthing Farmers information seeking contexts and challenges in digital, local and industry environments, *Library and Information Science Research*, 37, 156-163. www.sciencedirect.com
- Stone, S. (1982). Humanities Scholars: Information Needs and Uses. *Journal of Documentation*, 38, 292-312.

- Stvillia, B and Choi, W(2015). Mobile Wellness application seeking behavior by college students- An exploratory Study, *Library and Information Science Research*, 37, 201-208. www.sciencedirect.com
- Sundin, O. &Johannisson, J. (2005).The Instrumentality of Information Needs and Relevance. I F. Crestani& I. Ruthven (eds.). *Information Context: Nature, Impact, and Role: 5th International Conference on Conceptions of Library and Information Sciences, CoLIS 2005, Glasgow, UK, June 4-8, 2005*. Lecture Notes in Computer Science, vol. 3507. S.107-118. Available at: <http://www.kult.lu.se/bivil/olof/colis.pdf>
- Tague, J(1976) et al. The distribution of community information: the role of computer and computer based networks. *Aslib Proceedings* 28, 314-321.
- Taher, Mohamed and Gupta, R.K(1987). Health information for all by the year 1990: Users' Study. *ILA Bulletin*. 22(3-4), 112-115.
- Talib, F., Azam, M., Rahman, Z., (2015).Service quality in health care establishments: a literature review, *International Journal of Behavioral & Health Care Research*, 5 (1), 1-24.
- Taylor, R. S. (1968), Question-negotiation and information seeking in libraries. *College and Research Libraries*, 29, 178-194.
- Tiwari, K., Surendra Kumar and Singh, P. (2017).Role of Paramedical Institutes and Staffs in Brand Building and Social Perception of Private Medical Insittutes at Lucknow, U.P., India.*International Journal of Scientific and Research Publications*, 7 (1), 244-249
- Vasishth, C.P(1982). User Education in College Libraries. A basic frame.*LibraryHerald*.21(1-2), 33-39.
- Wellstead, Peta(2014). A study of information seeking behaviours and processes of New Zealand Men during Periods of Life stress, *Journal of Education for Library andInformation Science*.<http://Scholargoogle.com>
- Wijetunge, Pradeepa(2015). Information Resources usage by the agriculture undergraduates of university of Peradeniya, Sri Lanka, *Annals of Library and Information Studies*, 62, 77-83.
- Wilson, T. D. (1981). On User Studies and Information Needs. *Journal of Documentation*, 37(1), 3-15. Available at <http://informationr.net/tdw/publ/papers/1981infoneeds.html>
- Wilson, T. D. (2005). Evolution in Information BehaviorModeling.Wilson's model. IN: Fisher, K. E., Erdelez, S. &McKechnie, L. (eds.). *Theories of information behavior*. Medford, NJ: Information Today. (Pp. 31-36).
- Wilson, T.D(1981). On user studies and information needs. *Journal of Documentation* 37, 3-15.

- Wilson, T.D. (1994). Information needs and uses: fifty years of progress, Available at <http://www.informationr.net/tdw/publ/papers/1994FiftyYears.html>
- Wilson, T.D. (1997). Information behaviour: An inter-diciplinarypersepective. In: P. Vakkari, R. Savolainen& B. Dervin (eds.) Information seeking in context. Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland. London: Taylor Graham, 39-50.
- Wilson, T.D. (1999). Models in information behaviour research. *Journal of Documentation*, 55 (3), 249-270.
- Wilson, T.D. (2000). Human information behavior.*Informing Science*, 3(2), 49-56. Retrieved 21 November, 2007 from <http://inform.nu/Articles/Vol3/v3n2p49-56.pdf>
- www.indiastudychannel.com
- Ybarra, Michele L(2008). Health information seeking among Mbararan adolescents: results from the Uganda Media and You survey. *Health education research*.23(2), 249– 258

QUESTIONNAIRE
On
INFORMATION SEEKING BEHAVIOUR OF PARAMEDICAL PROFESSIONALS
IN MIZORAM

Sir/Madam,

I am pursuing my M.Phil research project on the above topic under the supervision of Prof. R N Mishra, Dept. of Lib. & Inf. Science, Mizoram University, Aizawl. I, therefore, request to kindly co-operate me by filling up the following questionnaire for the purpose. I express my gratitude for generous efforts.

Thanking you.

H. Miriami
M.Phil Scholar
Dept. of Lib. & Info. Science
Mizoram University

The respondent is requested to put tick [] mark in the space provided in each question or provide information wherever necessary.

A. INFORMATION ABOUT THE RESPONDENT

1. Name of the Respondent: _____

Designation: _____

Address: _____

E-mail: _____

2. Name of the Institution: _____

3. Area of specialization: _____

4. Sex : Male Female

5. Do you visit the library: Yes No

If yes, how often? Once a week

Twice a week

Thrice a week

Everyday

Occasionally

6. Purpose of visiting the library
- | | | | |
|---------------------------|--------------------------|------------------|--------------------------|
| Writing an article paper | <input type="checkbox"/> | Writing a book | <input type="checkbox"/> |
| Preparing a lecturer note | <input type="checkbox"/> | Update knowledge | <input type="checkbox"/> |
| Starting a project | <input type="checkbox"/> | Browse internet | <input type="checkbox"/> |
| Others (Please specify) | <input type="checkbox"/> | : _____ | |
7. Does the library display new arrival of documents?
Yes No
8. Can you access library resources from your working area?
Yes No
9. Mention the type of access you prefer to use in the library
Open system Close system
10. Does the library provide adequate information relating to your interest area?
Yes No
11. Do you face any problem due to information limitations?
Yes No
12. Type of information you need
Current Retrospective
- Others (please specify) : _____
13. Which type of information do you need? Traditional Electronic
14. Mention the reason for your information need.
Own needs Questions from patients
- Environmental competition Emergency of new cases
15. From where do you get your required information?
Library Internet Mobile Doctors
- Radio Television Database Senior professionals
- All of the above
16. What type resources do you mostly use?
Print resources Non-print
- Human resource
- Others (please mention) : _____

17. What type of print resources do you mostly use?

Books Journals

Newspapers Brochure

Leaflet Others (please mention) : _____

18. What type of information sources do you prefer?

Primary sources Secondary sources

Tertiary

19. Can you access e-resources from your institute library?

Yes No

20. Do you face any problems while accessing e-resources?

Yes No

21. What are problems/constraints do you face while accessing e-resources?

Poor internet connection High cost Insufficient Links

Poor searching skills Insufficient information

22. In case of difficulties, whom do you consult for getting information?

Seniors Colleagues Medical practitioners

Both seniors and colleagues Chemists Medical Representatives

23. Are you satisfied with the library services?

Yes No

24. If no, please state the reasons

25. Please suggest improving the library services.

Signature

QUESTIONNAIRE
On
INFORMATION SEEKING BEHAVIOUR OF PARAMEDICAL PROFESSIONALS
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Sir/Madam,

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Thanking you.

H. Miriami
M.Phil Scholar
Dept. of Lib. & Info. Science
Mizoram University

The respondent is requested to put tick [] mark in the space provided in each question or provide information wherever necessary.

A. GENERAL

1. Name of the Library: _____
2. Year of establishment: _____
3. Name of the Librarian: _____
or Library in-charge _____
4. Qualification of the Librarian: _____
6. Prof./Doctor-in-Charge of the Library, if any _____
7. URL of Library _____
8. E-Mail of the Library _____

9. LIBRARY STAFF

- 9.1 Professional _____ Semi Professional _____ Non Professional _____
Temporary _____ Contractual _____
Other than the above category _____

B. LIBRARY RESOURCES

10. Total collections/ resources of the Library:

| S.No | Type | 20012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
|------|------------------|------------------|----------|----------|----------|----------|
| | | Total no. | Addition | Addition | Addition | Addition |
| 1 | Books | | | | | |
| 2 | Back volumes | | | | | |
| 3 | Current Journals | | | | | |
| 4 | National | | | | | |

| | | | | | | |
|----|---------------|--|--|--|--|--|
| 5 | International | | | | | |
| 6 | Theses | | | | | |
| 7 | Ref. Tools | | | | | |
| 8 | CD-ROM | | | | | |
| 9 | DVD | | | | | |
| 10 | E-Books | | | | | |
| 11 | Databases | | | | | |
| 12 | National | | | | | |
| 13 | International | | | | | |

11. What are the current practices is being followed in selecting resources in your library?
 Personal visit OPAC Web OPAC
 Mobile Others(please mention):_____

C. LIBRARY BUILDING

12. Does the Library provide adequate space for various types of services to the clientele?
 Yes No
13. Does the Library provide enough number of seats for the faculties/ researchers/ students?
 Yes No

D. PROCESSING OF LIBRARY MATERIALS

14. Time required for processing of library resources.
- a. One week
- b. Two week;
- c. More than two weeks
- d. One Month
- e. More than one month
15. Physical form of catalogue adopted.
- a. Card;
- b. Ledger.

E. READER'S SERVICE

16. Total working hours of the library?
- a. Week days. _____ Hours (Time From _____ to _____)
- b. Sundays. _____ Hours (Time From _____ to _____)

17. Does the library remain open during holidays and vacation? Yes No
If no, please state the reasons.

18. What type of issue system do you like?
a. Electronic Method
(If electronic method, please state the reason)

b. Traditional Method

19. Do you provide active Reference service to the readers Yes No

If yes, please state the method of disseminating of services

a. Through document;

b. Through electronic form;

c. Through any other media (Please state) _____

20. Do you provide Documentation Service? Yes No

21. Status of computerisation of the library. Partial Total

If partial, which section (s) of the library are computerized?

Acquisition

Cataloguing

Circulation

Serials control

Back volume

Text Book

Any other (Please mention) _____

22. Amount spent by your library for subscribing electronic resources/ Journals during the year?

• 2012-2013 Rs. _____

• 2013-2014 Rs. _____

• 2014-2015 Rs. _____

• 2015-2016 Rs. _____

- 2016-2017 Rs. _____

23. What are all the Networked Services (NS) provided by your library?

Services YES NO

- | | | |
|--|--------------------------|--------------------------|
| ▪ Electronic Data Interchange (EDI) | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Automated Cataloguing | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Automated Circulation | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Virtual Reference | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ E-CAS | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Online Databases | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ CD-ROM/DVD | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Electronic Thesis and Dissertations (ETD) | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Multimedia Databases (<i>audio and video etc.</i>) | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Standards (<i>CD-ROM or intranet version</i>) | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Internet facilities | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ E-mail | <input type="checkbox"/> | <input type="checkbox"/> |
| ▪ Video and Teleconferencing | <input type="checkbox"/> | <input type="checkbox"/> |

24. If your library provides automated library catalogue services, please tick mark the type of service(s)?

- OPAC
- Web OPAC
- Both
- Any other services _____

25. If your library provides online information access, please tick mark the type of materials provided access.

- E-books
- E-journals
- Abstracting databases
- Open access journals (free)
- Any other services _____

26. Please provide the infrastructure facilities available in the library

- | | | | |
|-----------------------|-----|---------------------|-----|
| ▪ No. of Computers | ___ | No. of Scanners | ___ |
| ▪ No. of Barcode | ___ | Scanners | ___ |
| ▪ No. of Printers | ___ | No. of Photocopiers | ___ |
| ▪ No. of Fax Machines | ___ | No. of Telephones | ___ |
| ▪ No. of TVs | ___ | No. of VCP/VCRs | ___ |
| ▪ No. of Projectors | ___ | | |

27. Suggestions to improve the library:

Signature