

Utilization of Electronic Resources and Services in Medical and Para-medical Colleges of Chhattisgarh: A User Study

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ABSTRACT

In the modern era, electronic resources and digital services are a significant necessity for every individual, especially in universities and college libraries, as these resources assist in research and learning. The purpose of this study is to assess the actual utilization of e-library facilities provided amongst medical and allied health students in ten colleges within Chhattisgarh. A total of 100 students representing five fields-medicine, dentistry, pharmacy, nursing, and physiotherapy-were surveyed; out of which 90 responded. as Conclusion Despite satisfactory digital material and services being provided by the libraries, there is inadequate utilization on the part of many students due to lack of awareness regarding its availability or how to access.

KEYWORDS: Electronic databases, Medical professionals, Paramedical students, Medical information resources.

INTRODUCTION

Technology has changed almost every field today, and libraries are no exception. Working in libraries has become much faster and easier with the introduction of electronic resources. As technology is growing, users are also expecting quick access to information. People can access required information without visiting libraries with the help of mobile phones and computers connected to the net. It saves time and unnecessary efforts. This paper, therefore, attempts to investigate the use of e-resources and services provided in medical college libraries in Chhattisgarh. The medical and paramedical colleges support teaching and learning. The library forms an important part in providing information to the students and teaching fraternity. In traditional libraries, the user had to invest much time in searching out small pieces of information and rely heavily on printed books. The most advantageous factor in using E-resources is that they help provide fast and easy access to vast amount of information. The libraries also get facilitated with the E-resources, as they make many of their complicated works easy and systematic. Since electronic information is gaining immense popularity, there arises an urgent need for libraries to link their work and collections with online systems in order to satisfy the demands of their users.

LITERATURE REVIEW

Sasikumar, Sathiyamurthy, and Mahadevan (2024) conducted a user-study in medical college libraries in the Chengalpattu district. Their mixed-methods research (survey + interviews) revealed the patterns of E-resource use among students, faculty, and researchers, identifying preferred types of E-resources (e-journals, e-books, databases), usage frequency, and barriers, including lack of training and limited infrastructure. They also highlighted the importance of library support services to improve utilization.

Ahamed, Lalthlamuanpuii, et al. (2023) studied resource usage in the Central Library of the Regional Institute of Medical Sciences (RIMS), Imphal. Over five academic years (2016–2021), they found a significant increase in visits and a growing proportion of users accessing E-resources, though challenges like awareness and digital literacy persisted.

Vanitha (2023) explored the awareness and attitude toward E-information resources among faculty members at Sri Devaraj Medical College, Karnataka. Her findings revealed that a substantial number of faculty members had limited awareness of available digital resources, and many believed that better Internet connectivity and more E-resources would significantly improve their academic work.

Yahya (2023) conducted a study on the information needs of paramedical students in health science colleges in Nigeria, finding that textbooks and E-resources are among the top information sources used. However, barriers like poor Internet service, constant power failures, and lack of user skills significantly hampered access.

OBJECTIVES

1. To evaluate the availability of electronic resources in medical college libraries of Chhattisgarh.
2. To identify use of IT services in the library.
3. To evaluate the type of electronic resources and services available in medical college libraries
4. To find out the purpose and frequency of using electronic resources and services in medical college libraries of Chhattisgarh.
5. To evaluate the level of satisfaction in using electronic resources and services in libraries.

RESEARCH METHODOLOGY

The primary objective of this study is to examine the use of e-resources and e-services in the medical and paramedical college libraries of Chhattisgarh. The study adopts a **quantitative research approach**. To address the research questions and achieve the stated objectives, the **survey method** was employed. A well-structured questionnaire was administered to **100 students** selected from various medical and paramedical college libraries across Chhattisgarh. The sample comprises students from **ten institutions**, including: 2 medical colleges, 2 dental colleges, 2 pharmacy colleges, 2 nursing colleges, and 2 physiotherapy colleges. The collected data will be systematically analyzed and interpreted using **charts and diagrams** to present the findings clearly and effectively.

DATA ANALYSIS AND DISCUSSION

To assess the use of internet databases and e-services in medical and paramedical college libraries, the collected data were analyzed using **charts and tables**. The following table presents a detailed analysis and interpretation of the data, highlighting usage patterns, preferences, and challenges encountered by the respondents.

Table : 1 Professional distribution of the respondents

Professional distribution of the respondents		
Profession	No. of respondent	Percentage (%)
Medical	15	75%
Dental	18	90%
Pharmacy	17	85%
Nursing	20	100%
Physiotherapy	20	100%
Total	90	90%

The above table indicates the Professional distribution of the respondents. Data were collected from staff across medical and paramedical disciplines. Each discipline was given **20 questionnaires**. Of these, **15 (75%)** were returned by medical college library staff, **18 (90%)** by dental college library staff, **17 (85%)** by pharmacy library staff, and a **100% response rate** was received from both nursing and physiotherapy library staff. **Overall, a 90% response rate** was achieved from all respondents.

Table: 2 Place used for accessing the internet

Place used for accessing the internet by respondent		
Particular	No. of respondent	Percentage (%)
College campus	10	11.11%
Mobile device	40	14.44%
Library	15	16.66%
Computer Lab	25	27.77%

Respondents were asked about the location from which they access the internet to search for required information. Out of **90 respondents**, **10 (11.11%)** accessed the internet from the college campus, **40 (44.44%)** used their mobile devices, making information available at their fingertips, **15 (16.16%)** used library computers, and **25 (27.77%)** accessed information through the computer lab.

Table: 3 Availability of computers and internet in the library

Availability of computer and internet in library		
Particular	Yes	No
Medical	12 (80%)	3 (20%)
Dental	14 (77.77%)	4 (22.23%)
Pharmacy	11 (64.70%)	6 (35.29%)
Nursing	18 (90%)	2 (10%)
Physiotherapy	17 (85%)	3 (15%)

The table indicates the availability of computer and internet facilities in medical, dental, pharmacy, nursing, and physiotherapy college libraries. It shows that **12 (80%)** medical college libraries have these facilities, **14 (77.77%)** dental college libraries, **11 (64.70%)** pharmacy college libraries, **18 (90%)** nursing college libraries, and **17 (85%)** physiotherapy college libraries are equipped with computer and internet access.

Table: 4 Frequency of library information access among respondents

Frequency of library information access among respondents			
Particular	< 1 Hour	1 to 3 hours	> 3 Hours
Medical	2 (13.33%)	8 (53.33%)	5 (33.33%)
Dental	4 (22.22)	6 (33.33%)	8 (44.44%)
Pharmacy	5 (29.41)	4 (23.52%)	8 (47.05%)
Nursing	6 (30%)	7 (35%)	7 (35%)
Physiotherapy	7 (35%)	5 (25%)	8 (40%)

The above table indicates the frequency and duration of library use by respondents to access information. Among **medical college** students, **2 (13.33%)** spent less than one hour, **5 (53.33%)** used the library for one to three hours, and **5 (33.33%)** spent more than three hours. In **dental colleges**, **4 (22.22%)** used the library for less than one hour, **6 (33.33%)** for one to three hours, and **8 (44.44%)** for more than three hours. Among **pharmacy college** respondents, **5 (29.41%)** spent less than one hour, **4 (23.52%)** for one to three hours, and **8 (47.05%)** for more than three hours. For **nursing students**, **6 (30%)** spent less than one hour, **7 (35%)** used it for one to three hours, and **7 (35%)** for more than three hours. Among **physiotherapy students**, **7 (35%)** spent less than one hour, while **8 (40%)** spent more than three hours in the library accessing information and using electronic resources and services.

Table 5 Users' patterns for searching library resources

Users pattern to search available material in libraries					
Particular	Ask Librarian	Web OPA C	Online database	Library website	Medical website
Medical	10	8	6	4	6
Dental	5	10	4	3	7
Pharmacy	8	6	5	7	3
Nursing	11	9	3	2	1
Physiotherapy	14	8	2	1	1

The responses in the above table are not calculated in percentages because respondents were allowed to select more than one option. The data indicate that the majority of users consult the librarian to search for required information, with 10 medical, 5 dental, 8 pharmacies, 11 nursing, and 14 physiotherapy students reporting this preference. In comparison, web-OPAC was used by 8 medical, 10 dental, 6 pharmacy, 9 nursing, and 8 physiotherapy students to locate library materials. Use of online databases was reported by 6 medical, 4 dental, 5 pharmacy, 3 nursing, and 2 physiotherapy students, while the library website was utilized by 4 medical, 3 dental, 7 pharmacy, 2 nursing, and 2 physiotherapy students. Additionally, medical websites were accessed by 6 medical, 7 dental, 3 pharmacy, 1 nursing, and 1 physiotherapy student to obtain information.

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Table 6 Online databases available in medical and paramedical college libraries

Online databases available in medical and paramedical college libraries					
Particular	Medical	Dental	Pharmacy	Nursing	Physiotherapy
Pub Med	10(66.67%)	2 (11.11%)	3 (17.65%)	5 (25%)	2 (10%)
EMBASE	6(40%)	3 (16.67%)	5 (29.41%)	3 (15%)	3 (15%)
Cochrane Library	12 (80%)	4 (22.22%)	8 (47.06%)	2 (10%)	10 (50%)
Pub Med Central	8 (53.33%)	6(33.33%)	12 (70.59%)	4 (20%)	1 (5%)
Medline	2 (13.33%)	1 (5.55%)	3 (17.65%)	1 (5%)	4 (20%)
Pro-Quest	11 (73.33%)	8 (44.44%)	10 (58.82%)	5 (25%)	7 (35%)
E-books	13 (86.67%)	9 (50%)	14 (82.35%)	8 (40%)	10(50%)
E-journals	7 (46.67%)	4 (22.22%)	9 (52.94%)	2 (10%)	5 (25%)
E-thesis	1 (6.67%)	1 (5.55%)	2 (11.76%)	2 (10%)	3 (15%)

The table shows the usage of various databases and electronic resources by students across medical and paramedical colleges. PubMed was accessed by 10 medical, 2 dental, 3 pharmacy, 5 nursing, and 2 physiotherapy students, while EMBASE was used by 6 medical, 3 dental, 5 pharmacy, 3 nursing, and 3 physiotherapy students. Cochrane Library was accessed by 12 medical, 4 dental, 8 pharmacy, 2 nursing, and 10 physiotherapy students, and PubMed Central by 8 medical, 6 dental, 12 pharmacy, 4 nursing, and 1 physiotherapy students. MEDLINE was less used, with 2 medical, 1 dental, 3 pharmacy, 1 nursing, and 4 physiotherapy students accessing it, while Pro-Quest was used by 11 medical, 8 dental, 10 pharmacy, 5 nursing, and 7 physiotherapy students. Among electronic resources, E-books were accessed by 13 medical, 9 dental, 14 pharmacy, 8 nursing, and 10 physiotherapy students; E-journals by 7 medical, 4 dental, 9 pharmacy, 2 nursing, and 5 physiotherapy students; and E-thesis by 1 medical, 1 dental, 2 pharmacy, 2 nursing, and 3 physiotherapy students. These findings indicate that PubMed, Cochrane Library, Pro-Quest, and E-books are the most frequently used resources, while MEDLINE and E-thesis are less utilized.

Table 7 Purpose behind users' access to electronic library resources

Purpose of using electronic resources					
Particular	Medical	Dental	Pharmacy	Nursing	Physiotherapy
Update Knowledge	12	8	6	9	10
Support learning and Research Requirement	10	16	4	10	6
Reference Purpose	8	6	11	16	6
Finding quick information	13	14	15	18	17
Lending and borrowing	11	12	12	17	1
Access e-journals and books for assignment	10	9	13	18	14

The data in the above table are not presented in percentages, as respondents could select more than one option. The table indicates that students use library electronic resources for multiple purposes. Updating knowledge was reported by 12 medical, 8 dental, 6 pharmacy, 9 nursing, and 10 physiotherapy students. For learning and research, 10 medical, 16 dental, 4 pharmacy, 10 nursing, and 6 physiotherapy students used these resources. Reference purposes were cited by 8 medical, 6 dental, 11 pharmacy, 16 nursing, and 6 physiotherapy students. For finding quick

information, 13 medical, 14 dental, 15 pharmacy, 18 nursing, and 17 physiotherapy students utilized library electronic resources. In terms of lending and borrowing articles and books, 11 medical, 12 dental, 12 pharmacy, 17 nursing, and 18 physiotherapy students reported usage. Additionally, accessing e-journals and e-books for assignments was reported by 10 medical, 9 dental, 13 pharmacy, 18 nursing, and 14 physiotherapy students. These findings highlight the diverse ways students engage with library electronic resources and services.

Table 8 Users' satisfaction level with the library's electronic resources and services

Users' satisfaction level with the library's electronic resources and services					
Particular	Medical	Dental	Pharmacy	Nursing	Physiotherapy
multiple search result	14	11	8	15	18
slow internet accessibility	10	17	14	17	9
limited computers	8	10	5	18	8
lack of knowledge by library staff	11	8	10	10	11
difficult to find perfect information	13	18	16	14	15

The table presents the difficulties faced by students in accessing electronic resources and services, with respondents allowed to select multiple options, so the data are presented in absolute numbers. A number of students from different disciplines reported that receiving multiple results for a single query created confusion, including 14 medical, 11 dental, 8 pharmacy, 15 nursing, and 18 physiotherapy students. Low internet connectivity was another significant issue, reported by 10 medical, 17 dental, 14 pharmacy, 17 nursing, and 9 physiotherapy students. Limited availability of computers in the library was a problem for 8 medical, 10 dental, 5 pharmacy, 18 nursing, and 8 physiotherapy students, with nursing students being the most affected. Additionally, 11 medical, 8 dental, 10 pharmacy, 10 nursing, and 11 physiotherapy students faced difficulties due to insufficient knowledge of library staff, which hindered proper guidance in accessing e-resources. Furthermore, verifying the authenticity of information was challenging for 13 medical, 18 dental, 16 pharmacy, 14 nursing, and 15 physiotherapy students because multiple results made it difficult to find precise information. Overall, while medical college libraries generally provide sufficient electronic resources and services, paramedical college libraries require improved infrastructure, better implementation of electronic resources, and enhanced staff training to facilitate smoother access and support for users.

SUGGESTIONS

- ❖ Although libraries are equipped with sufficient computers and internet access, users tend to spend very little time there.
- ❖ Only about 44% of users spend more than three hours in the library, indicating a need to enhance library services to attract more users.
- ❖ Many users prefer asking librarians for information rather than using Web-OPAC, online databases, or the library website, either due to limited content on the website or lack of awareness about available services. Conducting user orientation sessions can help familiarize users with library resources and services.
- ❖ E-books, e-journals, and e-these are more frequently used than other medical databases, primarily because users are unfamiliar with these databases. Library staff should provide guidance and demonstrate effective search techniques to encourage broader database usage.

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- ❖ User training is essential to improve the utilization of electronic resources, as many users do not know how to access information from electronic databases efficiently.
- ❖ The number of computer terminals should be increased, along with reliable Wi-Fi and internet access, to support user needs.
- ❖ Parametric institutions should expand their electronic resources to enable students to access global knowledge relevant to their field.

CONCLUSION

With the rapid evolution of technology, individuals are increasingly relying on the internet as their primary source of information. This shift underscores the importance of providing comprehensive electronic resources and services in all libraries. Consequently, libraries must gradually move away from conventional print-based materials and services toward digital platforms, replacing physical books and journals with e-books, e-journals, online databases, and electronic theses. The present study explored the utilization of electronic resources and services by medical and paramedical students in Chhattisgarh. The findings reveal that a wide array of electronic resources and specialized medical databases is readily available, supporting students and professionals in enhancing their knowledge. However, it was observed that users predominantly prefer e-books and e-journals rather than engaging extensively with electronic databases. Most users focus primarily on curriculum-related study materials, derived from various textbooks and reference sources, while spending comparatively less time exploring information from broader, global resources.

REFERENCES

- [1] Akinbo, O. T., & Omideyi, D. A. (2022). Levels of awareness and use of electronic information resources by pharmacy undergraduate students at the University of Ibadan, Nigeria. *International Journal of Education, Library and Information Communication Technology*, 1(1).
- [2] Anbarasu, J. A., & Muruganandham, G. (2019). Use of e-resources by undergraduate students of Meenakshi Medical College Hospital & Research Institute, Kanchipuram, Tamil Nadu. *International Journal of Arts, Science and Humanities*, 6(3), 1–6.
- [3] Anasuya, V. (2017). Usage of electronic resources by the medical, dental and paramedical science professionals in Karnataka. *DESIDOC Journal of Library and Information Technology*, 37(3), 158–164.
- [4] Das, R. (2020). Use of e-resources by the users of the Gauhati Medical College and Hospital (GMCH), Guwahati: A study. *International Journal of Research in Library Science*, 6(2), 189–198.
- [5] Haribhai, T. R. (2015). Use of e-resources in medical college libraries: A study based on Gujarat state. *International Journal of Allied Practice, Research and Review*, II(X), 5–10.
- [6] Jagadish, M. V. (2020). Awareness and use of e-resources by college students, Hunsur, Karnataka. *International Journal of Library and Information Studies*. ISSN: 2231-4911.
- [7] Siwatch, A. K., & Malik, S. K. (2018). E-resource use by science faculty and research scholars: A case study of Panjab University, Chandigarh. *Journal of Advancements in Library Sciences*, 5(2), 27–35.