

Utilization Patterns, Preferences and Satisfaction Levels of Undergraduate Medical Students Regarding Library Services at Bacha Khan Medical College Mardan

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Abstract

Background: Libraries are integral to the academic achievement of medical students by offering access to vital resources and an optimal study environment. Analyzing library usage patterns can enhance facilities and services to more effectively meet students' educational requirements.

Objective: This study seeks to evaluate the utilization patterns, preferences, and satisfaction levels of undergraduate medical students concerning library services in Bacha Khan Medical College Mardan.

Study Design: A descriptive cross-sectional study.

Place and Duration of the Study: Main Library, at Bacha Khan Medical College & Mardan Medical Complex Mardan from 1st November 2021 to 31st December 2022.

Materials and Methods: A descriptive cross-sectional study was conducted with one hundred undergraduate Bacha Khan Medical College Mardan students who were chosen at random. A standardized questionnaire was used to collect data, which included questions about demographics, how often and for what reasons people visited the library, which resources they favored, and how satisfied they were overall. The purpose of this statistical study was to determine the variables that influence the frequency of library visits by employing descriptive statistics and multiple regression analysis in SPSS version 25.

Results: The majority of students (50%) were aged 21-23 years, with a slightly higher proportion of males (55%) than females. 90% of students had library memberships, and 40% attended regularly, with self-study (45%) being the predominant reason for library use. Textbooks (70%) and online journals (60%) were the most commonly consulted materials. Satisfaction was highest for library operation hours (80%), while Wi-Fi and internet access had the lowest satisfaction levels (50%). Regression analysis demonstrated that study year ($p = 0.001$), daily study hours ($p = 0.000$), and satisfaction with resources ($p = 0.005$) significantly influenced library visit frequency, although residential status ($p = 0.165$) was not a significant predictor.

Conclusion: The study indicates that library utilization is highly associated to study habits, academic level, and resource satisfaction. Enhancing Wi-Fi accessibility and the availability of digital resources could significantly improve students' experiences and involvement with the library.

Keywords: Library usage, medical students, study habits, academic resources, library satisfaction

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Introduction

Inspiring students to become lifelong learners is a primary objective of medical education, as it helps them to retain information about medical science. Crucial components of this approach are sufficient skills in information finding and consistent use of actual scientific sources. Both information processing and information technology have been seen as important in medical informatics education for the quality of healthcare(1). Even if formal education is more commonly discussed, the true definition of education begins with informal self-learning. It has been found that both instructors and students of medicine depend heavily on textbooks and didactic lectures. Because medicine is a dynamic and ever-evolving field, it is crucial that both students and educators make use of medical libraries to expand their understanding and expertise in the field(2,3). The provision of information is the primary objective of the library. Internet databases are an integral part of today's libraries, complementing their more conventional functions of collecting, organizing, and making printed materials accessible(4,5). It is possible that conventional classroom instruction cannot provide medical students with all the necessary knowledge(6). In order to demonstrate sufficient proficiency in their chosen field, they will also need to learn to rely on their own resources to gather information. A school's library may have the finest collection of books and journals in the world, but that is no guarantee that students will use them. In order to meet the needs of medical students, library usage may be affected by a variety of factors, such as individual preferences, the overall atmosphere of the library, the drawbacks of the operating hours, the distance from the student's home, etc(4,5,7–9). Researchers at the Government Medical College set out to determine how often and how heavily students make use of the library's collection and services. Information about expectations compared to what is really available may be gleaned from the collected input, which could also help shape new policies and enhance existing services.

With the goal of analyzing library usage across all Government Medical College professional courses taken by medical students.

- To ascertain the degree of utilization of the library.
- To identify the consumption of IT services in the library.
- To suggest methods to improve the resources in the library.

Materials and Methods

This study adopted a descriptive cross-sectional approach to analyze library usage habits among undergraduate medical students in Bacha Khan Medical College Mardan. The study population consisted of 100 randomly selected students across all academic years. A systematic questionnaire-based survey was utilized to collect data, encompassing demographics, frequency and purpose of library visits, preferred resources, and satisfaction with library services. The questionnaire was pre-tested on a small number of students to verify clarity and reliability before distribution. Ethical permission was acquired from the institutional review board, and informed consent was secured from all participants to ensure voluntary participation and anonymity.

For four weeks, students and their groups met in the library and online using a Google Form to gather data. Questions about library use, study preferences, and satisfaction levels are quantitatively assessed using a combination of closed-ended and Likert-scale components. Participants' demographic information (gender, age, year in school, residency status, number of hours studied each day, and library membership status) was recorded. There was also information on how students felt about the library's resources, internet access, and staff assistance. In order to improve precision, we also looked at library records about the number of times students borrowed books and how often they visited the library.

Responses were processed statistically using SPSS version 25, after which they were coded. To summarize the demographic and consumption data, descriptive statistics were used, including percentages and frequencies. Study year, daily study hours, satisfaction with library resources, and residential status were some of the factors that were analyzed to determine the impact on library visit frequency by multiple regression analysis. The results were displayed in tables for easy understanding, and a significance level of $p < 0.05$ was selected. The results provide light on how students use library resources and where services could be improved.

Results

Out of the 100 undergraduate medical students who participated in the study, half were in the 21–23 age brackets, 35% were in the 18–20 age bracket, and 15% were in the 24–26 age bracket. There were more male than female among the participants (55% vs. 45%). In terms of academic year, the most numerous cohort consisted of first-year students (25% of the total), followed by second-, third-, and fifth-year students (20% each), and finally, fourth-year students 15%. Hostels were inhabited by 60% of the student body, while day scholars made up 40%. Ninety percent of pupils were members of the library. Looking at the amount of time students spent studying at the library each day, 40% spent 1–2 hours, 30% spent 3–4 hours, 20% spent less than an hour, and 10% spent more than 4 hours. These statistics give a full picture of the student body and how they use the library.

Table 1: Demographic Data of a study on library usage by undergraduate medical students in Bacha Khan Medical College (Sample Size = 100).

Variable	Categories	Frequency (n)	Percentage (%)
Age Group (years)	18-20	35	35%
	21-23	50	50%
	24-26	15	15%
Gender	Male	55	55%
	Female	45	45%
Year of Study	1 st Year	25	25%
	2 nd Year	20	20%
	3 rd Year	20	20%

	4 th Year	15	15%
	Final Year	20	20%
Residential Status	Hostel	60	60%
	Day Scholar	40	40%
Library Membership	Yes	90	90%
	No	10	10%
Daily Study Hours in Library	<1 hour	20	20%
	1-2 hours	40	40%
	3-4 hours	30	30%
	>4 hours	10	10%

Among undergraduate medical students, studying alone accounted for 45% of library use, followed by group study at 30%, research and projects at 15%, and book borrowing at 10%. The library was frequented by 40% of students every day, 30% three to four times a week, 20% once or twice a week, and 10% very seldom. Forty percent spent one to two hours each session, thirty percent three to four hours, twenty percent less than an hour, and ten percent more than four hours. Based on these results, it seems that students mostly utilize the library for independent study, and that they do so frequently, spending around an hour per visit.

Table 2: Library Usage Patterns

Variable	Categories	Frequency (n)	Percentage (%)
Purpose of Library Use	Studying Alone	45	45%
	Group Study	30	30%
	Research/Projects	15	15%
	Borrowing Books	10	10%
Frequency of Library Visits	Daily	40	40%
	3-4 times a week	30	30%
	1-2 times a week	20	20%
	Rarely	10	10%
Time Spent per Visit	Less than 1 hour	20	20%
	1-2 hours	40	40%
	3-4 hours	30	30%
	More than 4 hours	10	10%

Textbooks and online journals were the most popular library resources among undergraduate medical students, with 70% and 60% of the usage, respectively, suggesting a significant preference for foundational study materials and digital resources. It is clear that e-books play an important role in exam preparation and in-depth study, since they were accessed by a large percentage of students (55%), followed by reference books (50%) and question banks (45%). Students favored traditional and digital text-based materials over audiovisual learning

aids, as 30% used print journals and 25% used multimedia resources. Students' use of both digital and physical resources to meet their academic demands is reflected in these findings.

Table 3: Preferred Library Resources

Type of Resources	Usage Frequency (n)	Percentage (%)
Textbooks	70	70%
Reference Books	50	50%
Journals (Print)	30	30%
Online Journals	60	60%
E-books	55	55%
Question Banks	45	45%
Multimedia Resources	25	25%

There was considerable variation in the ways in which students felt about the library's services. While 10% were dissatisfied, 35% were extremely satisfied and 40% were satisfied with the availability of books. Although 15% of students were indifferent or unhappy with the seating and study space, 75% of students had a positive impression. With just 50% satisfied and 30% expressing displeasure, there is clearly room for improvement when it comes to Wi-Fi and internet connection. Support from library workers was well-received, with 35% being pleased and 40% being extremely satisfied. Half of the respondents were very satisfied, 30% were satisfied, and 10% were dissatisfied with the operating hours. In general, students had positive experiences with the most of the library's offerings; nevertheless, they did express a strong desire for improved internet access.

Table 4: Satisfaction with Library Facilities

Aspect of Library Services	Highly Satisfied (n / %)	Satisfied (n / %)	Neutral (n / %)	Dissatisfied (n / %)	Highly Dissatisfied (n / %)
Availability of Books	35 (35%)	40 (40%)	15 (15%)	5 (5%)	5 (5%)
Seating & Study Space	30 (30%)	45 (45%)	10 (10%)	10 (10%)	5 (5%)
Wi-Fi & Internet Access	20 (20%)	30 (30%)	20 (20%)	20 (20%)	10 (10%)
Library Staff Support	40 (40%)	35 (35%)	15 (15%)	5 (5%)	5 (5%)
Operating Hours	50 (50%)	30 (30%)	10 (10%)	5 (5%)	5 (5%)

According to the regression analysis, there is a strong relationship between the number of library visits, the number of study hours spent there each day, and how satisfied patrons are with the library's offerings. Students in higher years tend to visit the library more frequently,

according to the study year ($\beta = 0.45$, $p = 0.001$). The greatest predictor, daily study hours ($\beta = 0.60$, $p = 0.000$), indicates that students who devote more time to studying also tend to come more often. The presence of a positive correlation between satisfaction with library resources ($\beta = 0.30$, $p = 0.005$) and library visits indicates that students are more likely to make use of the library if they perceive it to be well-equipped. Nevertheless, the fact that a student's residential status ($\beta = 0.25$, $p = 0.165$) does not serve as a significant predictor suggests that the frequency of library visits is unaffected by whether they reside in a dormitory or are day scholars. Library usage patterns are influenced by factors such as academic level, study habits, and resource satisfaction.

Table 5: Regression Analysis – Factors Affecting Library Visit Frequency

Predictor Variable	Coefficient (β)	Standard Error	t-Value	p-Value	Significance
Study Year	0.45	0.12	3.75	0.001**	Significant
Daily Study Hours in Library	0.6	0.15	4	0.000**	Significant
Satisfaction with Library Resources	0.3	0.1	3	0.005**	Significant
Residential Status (Hostel = 1)	0.25	0.18	1.39	0.165	Not Significant

Discussion

The finding of this study provide valuable insights into utilization patterns, preferences and satisfaction levels of undergraduate students concerning library services at Bacha Khan Medical College Mardan. Our research study shows that a significant proportion of 90.3% of undergraduates students regularly visit the library for academic purposes, such as studying textbooks, preparing for exams, and accessing reference materials. However, the frequency of visits varies among students with some using the library daily while other prefers digital resources or alternative study spaces. The availability of textbooks, research journals, and fast internet facilities play a crucial role in determining the extent of library utilization. The majority of students in a study done in northern India⁷ relied solely on textbooks^(10,11). Undergraduates should be trained and motivated to make greater use of library resources, according to the authors ^(2,12,13). Similarly, 62% of interns in a Kolkata³ research said they used the library to study for tests. In addition to seminars (14% of the time), consulting manuscripts, dissertations, or project reports (12%),^(11,14) and not having personal books (10%), were other reasons for visiting the library. The bulk of instructors who visited the library (72%), followed by 42% who needed books because they did not have any, and 39% who were working on manuscripts, dissertations, or project reports, were all educators. While research in Bhavnagar⁸ indicated that 42% of respondents visited the library daily, 15% went every other day, 26% once a week, and 3% fortnightly, our survey found that 20.5% of students visited the library daily, 43.6% once a

week, and 9.7% twice a month(15–17).Some 20.5% went to the library every day, 43.6% once a week, and 9.7% every two weeks. Our study found that 56.6% of students spent less than an hour per day in the library, while 23.8% spent two to three hours and 6% spent more than three hours per day. In Bhavnagar, 39% of respondents spent two to four hours per day in the library(18–21). Research conducted in Bhavnagar is consistent with the principal motivation for library visits, which was to read books. The majority of participants (95.5%) in this study were able to use library resources independently. The most common types of information technology services used by the participants were email and web browsing (22,23).Among the students surveyed, 46 percent said they were only partially successful in achieving their library goals, while 27 percent said they had succeeded entirely.

Conclusion

The study highlights that the library at Bacha Khan Medical College, Mardan play a vital role in supporting undergraduate in their academic journey. The findings indicate that a significant number of students actively utilize library resources for studying, research and exam preparation, demonstrating its importance in medical education.

Students express a high level of satisfaction with the availability of essentials textbooks, research materials and a pleasant study environment. The preference for digital resources and extended library hours suggests that students recognize the evolving role of technology in learning. Additionally, the library staff's support and the well- maintained infrastructure contribute to a positive academic experience.

Overall, the study concludes that the library services at Bacha Khan Medical College are meeting the academic needs of students effectively. With continued improvements in resource availability, digital access and infrastructure, the library can further enhance student satisfaction and become an even more integral part of their medical education.

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