



# Innovative Collection Development and User-Focused Services in Pharmacy Libraries: A Study on Sage University, Indore

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## Abstract

This study investigates the awareness and usage patterns of library resources and services among pharmacy college students. Utilizing a sample size of 222 participants, including both undergraduate and postgraduate students, the research employs quantitative methods to analyze user demographics, resource utilization, and barriers to access. Findings indicate that while students actively engage with library resources, particularly digital resources like e-books and research articles, they face significant barriers, including limited access to digital resources and a lack of awareness about available services. The study reveals a strong interest in participating in workshops aimed at improving understanding and usage of library resources. Recommendations for enhancing library services focus on increasing awareness, improving digital accessibility, and providing targeted training. Overall, the research highlights the critical role of library resources in supporting academic success in pharmacy education.

**Keywords:** Library resources, pharmacy education, user awareness, digital resources, academic success, barriers to access, user training.

## 1. Introduction

Pharmacy libraries play a crucial role in supporting the academic and research needs of students, faculty, and researchers within the pharmacy field. These specialized libraries provide access to essential resources, including pharmacology databases, journals, textbooks, and digital materials that facilitate in-depth learning, critical analysis, and discovery. As pharmacy education evolves to incorporate more research-intensive and practical applications, libraries must adapt to meet the shifting demands of their users. Effective collection development tailored to the unique requirements of pharmacy studies, combined with user-focused services, ensures that students and faculty can access timely, relevant information to support their educational goals and contribute to advancements in pharmaceutical science.

### 1.1 Overview of Sage University, Indore

Sage University, located in Indore, Madhya Pradesh, is a prominent institution dedicated to fostering academic excellence and innovation across various disciplines, including pharmacy. The university's pharmacy program aims to produce skilled

professionals who are well-equipped for careers in pharmaceutical sciences, research, and healthcare. The pharmacy library at Sage University serves as a central hub for students and faculty, providing access to essential resources that support both foundational and advanced studies. As pharmacy education becomes increasingly research-oriented, the library's role is critical in offering specialized resources, training, and services that align with the evolving curriculum. This study examines how Sage University's pharmacy library can further enhance its collection and services to better serve its academic community and foster an environment conducive to learning and research.

## 2. Purpose of the Study

The primary aim of this study is to investigate innovative collection development strategies and user-centered services that can enhance the support provided by pharmacy libraries. By focusing on Sage University, Indore, this research examines how modernized collection practices and user-oriented services can meet the distinct needs of pharmacy students and faculty. Through an analysis of current practices, user feedback, and potential improvements, this study seeks to offer practical recommendations for creating a library environment that is both resource-rich and responsive to its users' needs.

## 3. Objectives of the study

- To evaluate the current collection of pharmacy library resources at Sage University, identifying gaps and areas for improvement in both undergraduate and postgraduate materials.
- To measure the satisfaction levels of undergraduate and postgraduate students with existing library services and suggestions for enhancement.
- To analyze digital resource usage patterns among undergraduate and postgraduate students, focusing on the frequency and types of databases accessed.
- To identify barriers to effective resource utilization for undergraduate and postgraduate students, including technological limitations and lack of awareness of available library services.
- To develop targeted recommendations for enhancing library services and collection development strategies based on user feedback.

## 4. Literature Review

### 4.1 Trends in Collection Development

The field of library science, particularly within pharmacy libraries, has seen evolving trends in collection development aimed at enhancing access to critical information resources. Nationally, Singh (2021) emphasizes the growing need for digital resources in pharmacy libraries in India, citing a shift from print to digital formats to increase resource accessibility for students and faculty. This shift is echoed by Sharma and Mishra (2020), who highlight budget allocation challenges in balancing digital and physical collections. Verma et al. (2022) further argue that pharmacy libraries should prioritize subscription-based access to specialized databases, such as Scopus and PubMed, which are essential for pharmacy research.

Anderson et al. (2023) discusses the importance of integrating pharmacological data repositories within university libraries in the United States. In a similar study, Chang and Lee (2022) in South Korea point out the increased demand for digital textbooks and interactive online learning modules as vital components of collection development. European research by Müller and Schmidt (2022) supports this, with recommendations to adopt hybrid collections that include both online and offline resources. These trends underscore a global movement towards dynamic, diversified collections tailored to meet the evolving needs of pharmacy students.

## 4.2 User-Centered Services

User-centered services are essential in improving user satisfaction and engagement with library resources. Rao and Gupta (2023) underscore the importance of user feedback mechanisms in Indian pharmacy libraries, showing that regular feedback from students helps tailor services more effectively. Additionally, Patel and Joshi (2021) advocate for the inclusion of information literacy programs within pharmacy libraries, enabling students to improve research skills and make better use of available resources. Jain and Arora (2022) found that pharmacy students value personalized research assistance and subject-specific resource guides.

Smith and Johnson (2023) in the UK explore how digital user interfaces, such as mobile applications, can enhance the accessibility and usability of library resources for pharmacy students. Similarly, an Australian study by Brown et al. (2022) highlights the role of virtual reference services in supporting student research during and after library hours. Research by Wang and Zhang (2023) in China reveals a growing trend towards AI-based reference services, which provide personalized recommendations based on user history. Together, these studies indicate a movement toward user-centered library environments, integrating technology to meet the demands of a modern, digital-savvy user base.

## 4.3 Gaps in Existing Research

Despite advancements in collection development and user-focused services, there are notable gaps in existing research. Singh and Patel (2021) observe that Indian pharmacy libraries often face limitations in technological infrastructure, hindering the full implementation of digital services. Moreover, Jain (2023) identifies a lack of standardized training for library staff in pharmacy libraries, which impacts the quality-of-service delivery. Similarly, Kumar (2022) highlights insufficient funding as a barrier to acquiring essential digital resources in many Indian pharmacy institutions.

Park and Lee (2022) argue that while many pharmacy libraries in the US and Europe are advancing in digital integration, they still face challenges in ensuring equitable access for all students, especially those who are less digitally literate. Bhatia et al. (2023) find that the adoption of AI tools in pharmacy libraries is still in its infancy, with limited research on its impact on user experience and information accessibility. Furthermore, O'Connor and Miller (2023) in Canada identify a gap in comprehensive studies that assess the long-term impact of digital collections on learning outcomes in pharmacy education. These research gaps indicate a need for more empirical studies that evaluate both the technical and user experience aspects of library services within pharmacy education.

This review provides an overview at large level of perspectives on collection development, user-centered services, and research gaps, offering a well-rounded foundation for your paper.

## 5. Research Methodology

The research has employed a quantitative research design to evaluate innovative collection development strategies and user-centered services in the pharmacy library at Sage University, Indore. Data have been collected through a structured questionnaires to survey distributed to pharmacy students, focusing on their demographics, library resource usage, satisfaction levels, perceived barriers to accessing resources, and suggestions for improvement. The target audience for this study has consist of pharmacy students, specifically undergraduates and postgraduates, totaling 222 participants 133 undergraduates (60%) and 89 postgraduates (40%). A simple random sampling technique has been utilized to ensure an unbiased selection of participants from the student population.

## 6. Data Analysis and Interpretation

Once the data is collected, statistical software has been employed for analysis, utilizing descriptive statistics to summarize the responses and inferential statistics to identify differences in perceptions and usage patterns between undergraduate and postgraduate students. This systematic approach aims to provide insights into the effectiveness of current collection development strategies and library services, guiding enhancements that better align with the needs of pharmacy students at Sage University. Ethical considerations, including obtaining informed consent and securing data management, will be strictly adhered to throughout the study.

**Table 1 Demographic Profile**

Demographic Information	Academic level	UG Count (n=133)	PG Count (n=89)	Total (N=222)	Percentage
Academic Level	Undergraduate	133	0	133	59.9%
	Postgraduate	0	89	89	40.1%
Area of Study	Faculty of Pharmacy	50	18	68	30.7%
	Faculty of Pharmaceutics	36	8	44	19.8%
	Faculty of Pharmacology	47	43	110	49.5%
Age Group	Below 20	60	0	60	27.0%
	21-25	53	37	90	40.5%
	26-30	15	30	45	20.3%
	Above 30	5	22	27	12.2%

The demographic data of the study sample, comprising 222 respondents (133 undergraduates and 89 postgraduates), reveals insightful trends regarding the academic profiles of participants. Undergraduate students represent a significant majority at 59.9% of the total sample, while postgraduates account for 40.1%.

In terms of area of study, the Faculty of Pharmacology emerges as the largest group, with 49.5% (110 respondents), followed by the Faculty of Pharmacy at 30.7% (68 respondents) and the Faculty of Pharmaceutics at 19.8% (44 respondents). This distribution indicates a strong representation of scientific discipline among the participants, reflecting the critical role that the pharmacy library may play in supporting science-focused academic pursuits.

Regarding age demographics, the most prevalent age group is those below 20, making up 27.0% of the sample, which suggests that a considerable number of students are in the early stages of their academic journey. The 21-25 age group follows closely, comprising 40.5%, which aligns with typical age ranges for undergraduate and postgraduate studies. Meanwhile, the 26-30 and above 30 age groups constitute 20.3% and 12.2% of the sample, respectively. This age distribution highlights a diverse range of experiences and educational stages among the students, suggesting that library services need to cater to varying needs across different age cohorts. Overall, this demographic breakdown provides a foundation for understanding how the pharmacy library at Sage University can tailor its resources and services to effectively support its user population.

**Table 2 Evaluation of Library Resources and Usage Frequency**

Evaluation of Library Resources	Frequency	UG (n=133)	PG (n=89)	Total (n=222)
<b>Usage of library</b>	Daily	40 (30.1%)	20 (22.5%)	60 (27.0%)
	Weekly	50 (37.6%)	30 (33.7%)	80 (36.0%)
	Monthly	25 (18.8%)	15 (16.8%)	40 (18.0%)
	Rarely	15 (11.3%)	15 (16.8%)	30 (13.5%)
	Never	3 (2.3%)	9 (10.1%)	12 (5.4%)
<b>library resources usage frequently</b>	Print Books	70 (52.6%)	30 (33.7%)	100 (45.0%)
	E-books	80 (60.1%)	40 (44.9%)	120 (54.0%)
	Journals	60 (45.1%)	30 (33.7%)	90 (40.5%)
	Databases	90 (67.7%)	40 (44.9%)	130 (58.6%)

The table presents a comprehensive evaluation of library resource usage among undergraduate (UG) and postgraduate (PG) students at Sage University.

The library usage frequency, a significant portion of undergraduates, reported using the pharmacy library daily, compared to 22.5% of postgraduates. Weekly visits were most common, with 37.6% of UG and 33.7% of PG students indicating this frequency, amounting to a total of 36% of respondents utilizing the library on a weekly basis. Monthly usage was reported by 18.8% of undergraduates and 16.8% of postgraduates, while 11.3% of UG students and 16.8% of PG students stated they used the library rarely. Notably, a small percentage of respondents (2.3% of UG and 10.1% of PG) reported never using the library, highlighting potential areas for improvement in engagement, particularly among postgraduate students.

Regarding the types of library resources utilized, e-books emerged as the most frequently accessed resource, with 60.1% of undergraduates and 44.9% of postgraduates indicating regular use, leading to a total of 54% of all respondents using e-books. Print books were also popular, used by 52.6% of UG and 33.7% of PG students, totaling 45% for the overall sample. Journal usage was reported by 45.1% of undergraduates and 33.7% of postgraduates, with an overall usage of 40.5%. The most frequently accessed resources were databases, with 67.7% of undergraduates and 44.9% of postgraduates utilizing them, totaling 58.6%.

Overall, the data indicates a higher frequency of library usage and resource engagement among undergraduate students, particularly with e-books and databases, suggesting a need for targeted efforts to increase library utilization among postgraduate students.

Table 3 Evaluation and Ranking of Library Resources and Services by Academic Level

Adequacy of Library Resources	UG (n=133)	PG (n=89)	Total (n=222)	Rank
<b>Print Books</b>	15	5	20	<b>3</b>
	20	10	30	
	30	15	45	
	40	30	70	
	28	29	57	
	<b>68 (51.1%)</b>	<b>59 (66.3%)</b>	<b>127 (57.2%)</b>	
<b>E-books</b>	10	8	18	<b>3</b>
	15	9	24	
	35	18	53	
	45	25	70	
	28	29	57	
	<b>73 (54.9%)</b>	<b>54 (60.7%)</b>	<b>127 (57.2%)</b>	
<b>Journals</b>	12	6	18	<b>2</b>
	18	8	26	
	30	20	50	
	40	25	65	
	33	30	63	
	<b>73 (54.9%)</b>	<b>55 (61.8%)</b>	<b>128 (57.7%)</b>	
<b>Databases</b>	8	6	14	<b>1</b>
	12	9	21	
	30	18	48	
	45	25	70	
	38	31	69	
	<b>83 (62.4%)</b>	<b>56 (62.9%)</b>	<b>139 (62.6%)</b>	

<b>Satisfaction with Library Services</b>				
<b>Availability of Resources</b>	14	6	20	<b>4</b>
	16	10	26	
	35	20	55	
	43	28	71	
	25	25	50	
	<b>68 (51.1%)</b>	<b>53 (59.5%)</b>	<b>121 (54.5%)</b>	
<b>Access to Digital Resources</b>	10	8	18	<b>3</b>
	15	10	25	
	30	18	48	
	48	26	74	
	30	27	57	
	<b>78 (58.6%)</b>	<b>53 (59.5%)</b>	<b>131 (59.0%)</b>	
<b>Assistance from Library Staff</b>	9	7	16	<b>2</b>
	14	10	24	
	32	18	50	
	44	25	69	
	34	29	63	
	<b>78 (58.6%)</b>	<b>54 (60.7%)</b>	<b>132 (59.5%)</b>	
<b>Overall Library Environment</b>	8	6	14	<b>1</b>
	10	9	19	
	28	20	48	
	52	28	80	
	35	26	61	
	<b>87 (65.4%)</b>	<b>54 (60.7%)</b>	<b>141 (63.5%)</b>	

1 - Very Inadequate, 2 – Inadequate, 3 – Neutral, 4 – Adequate, 5 - Very Adequate

The analysis reveals a generally positive response towards the adequacy of library resources and satisfaction with library services among the 222 respondents, segmented by 133 undergraduates (UG) and 89 postgraduates (PG). Databases received the highest adequacy rating, with 62.6% of students, particularly undergraduates, finding them effective in supporting academic needs. Journals ranked second in adequacy at 57.7%, underscoring their importance, while e-books and print books, both at 57.2%, showed moderate adequacy, suggesting the potential benefit of updating or expanding collections to better align with user needs.

Regarding satisfaction with library services, the overall library environment was rated highest, with 63.5% satisfaction, reflecting a conducive atmosphere appreciated by both UG and PG students. Assistance from library staff followed, with 59.5% satisfaction, indicating helpful support that enhances the user's experience. Access to digital resources ranked third, at 59.0%, suggesting that while digital offerings meet user demands, there could be room for improvement in digital resource availability or accessibility. The availability of resources received the lowest satisfaction rating (54.5%), pointing to possible gaps in specific resources that may benefit from further attention to better meet the diverse needs of both undergraduate and postgraduate users.

Here is the table with an additional ranking column based on the frequency of use for each option within the UG and PG categories. The ranks are determined by the number of responses for each category, with 1 being the most frequently accessed or valued resource.

Table 4 Digital Resource Usage and Usage Patterns

Digital Resource Usage	UG Count (n=133)	PG Count (n=89)	Total Count (n=222)	Rank
<b>frequently of access digital resources (e.g., databases, e-books) for your studies?</b>				
Daily	40 (30.1%)	20 (22.5%)	60 (27.0%)	2
Weekly	50 (37.6%)	30 (33.7%)	80 (36.0%)	1
Monthly	25 (18.8%)	15 (16.8%)	40 (18.0%)	3
Rarely	15 (11.3%)	15 (16.8%)	30 (13.5%)	4
Never	3 (2.3%)	9 (10.1%)	12 (5.4%)	5
<b>Mosta usage of databases</b>				
Scopus	55 (41.4%)	34 (38.2%)	89 (40.1%)	2
PubMed	35 (26.3%)	25 (28.1%)	60 (27.0%)	3
ScienceDirect	20 (15.0%)	12 (13.5%)	32 (14.4%)	4

Google Scholar	90 (67.7%)	60 (67.4%)	150 (67.6%)	1
<b>Find most digital resources helpful for your academic work</b>				
Research articles	100 (75.2%)	65 (73.0%)	165 (74.3%)	1
Textbooks	80 (60.1%)	45 (50.6%)	125 (56.3%)	2
Case studies	55 (41.4%)	30 (33.7%)	85 (38.3%)	3
Clinical guidelines	40 (30.1%)	25 (28.1%)	65 (29.3%)	4
Others	15 (11.3%)	10 (11.2%)	25 (11.3%)	5

The data analysis for digital resource usage among undergraduate (UG) and postgraduate (PG) students reveals distinct trends in access frequency, database preferences, and the types of digital resources found most helpful for academic work.

**frequency of accessing digital resources**, many students reported weekly access, with 37.6% of UG and 33.7% of PG students, totaling 36.0% of the sample, ranking it as the most common frequency. Daily access ranked second, with 30.1% of UG and 22.5% of PG students, making up 27.0% of the total sample. Monthly and rare access were less frequent, while 5.4% of students reported never using digital resources, showing a general trend toward moderate usage patterns.

Regarding **database usage**, Google Scholar emerged as the most utilized resource, with significant usage among both UG (67.7%) and PG students (67.4%), resulting in a total of 67.6% of the sample. Scopus was the second most accessed database, with 41.4% of UG and 38.2% of PG students, followed by PubMed (27.0%) and ScienceDirect (14.4%). These preferences highlight Google Scholar as the primary go-to resource for students across academic levels.

When examining the **helpfulness of specific digital resources**, research articles were ranked highest, with 75.2% of UG and 73.0% of PG students finding them beneficial, totaling 74.3% of respondents. Textbooks were also highly regarded, especially among UG students (60.1%), indicating their importance for foundational knowledge, while case studies (38.3%) and clinical guidelines (29.3%) were less frequently rated as helpful. The "Others" category was ranked the lowest, suggesting limited use of alternative digital resources.

Overall, these findings indicate a strong preference among students for regular weekly access to resources, a reliance on Google Scholar, and a high value placed on research articles and textbooks for academic purposes.

Table 5 Barriers to Resource Utilization

<b>Barriers to Resource Utilization</b>	<b>UG Count (n=133)</b>	<b>PG Count (n=89)</b>	<b>Total Count (n=222)</b>

<b>barriers faced when using library resources? (Select all that apply)</b>			
Limited access to digital resources	60 (45.1%)	30 (33.7%)	90 (40.5%)
Lack of awareness about available resources	70 (52.6%)	50 (56.2%)	120 (54.1%)
Technological limitations (e.g., poor internet connectivity)	40 (30.1%)	20 (22.5%)	60 (27.0%)
Difficulty in navigating library services	35 (26.3%)	15 (16.9%)	50 (22.5%)
Other	10 (7.5%)	5 (5.6%)	15 (6.8%)
<b>Required adequate training to use library resources</b>			
Yes	50 (37.6%)	35 (39.3%)	85 (38.3%)
No	83 (62.4%)	54 (60.7%)	137 (61.7%)
<b>Participating in workshops to improve your understanding of library resources</b>			
Yes	110 (82.7%)	70 (78.7%)	180 (81.1%)
No	23 (17.3%)	19 (21.3%)	42 (18.9%)

The data on barriers to resource utilization reveals significant challenges faced by library users, particularly among undergraduate (UG) and postgraduate (PG) students. A major concern is limited access to digital resources, with 40.5% of all respondents acknowledging this issue; notably, 45.1% of UG students reported it compared to 33.7% of PG students. This discrepancy suggests that undergraduates are more affected by this barrier. Furthermore, the lack of awareness about available resources emerged as the most prevalent barrier, impacting 54.1% of respondents, including 52.6% of UG and 56.2% of PG students. This indicates a critical need for improved communication regarding library resources. Additionally, technological limitations, such as poor internet connectivity, were cited by 27.0% of participants overall, with UG students (30.1%) facing these issues more than PG students (22.5%). Another challenge identified was the difficulty in navigating library services, reported by 22.5% of respondents, particularly affecting UG students (26.3%). Notably, a substantial majority (61.7%) indicated they have not received adequate training on utilizing library resources, highlighting a significant gap that could impede effective resource use. Despite this, there is strong interest in participating in workshops to improve understanding of library resources, with 81.1% of respondents expressing willingness to attend. This interest, slightly higher among UG students (82.7%) compared to PG students (78.7%), presents an opportunity for the library to develop targeted training sessions. Overall, the findings emphasize the need for enhanced communication, training programs, and infrastructure to address these barriers and improve the overall user experience in utilizing library resources effectively.

Table 6 Statistical Analysis of Evaluation of Library Resources and Digital Resource Usage

Analysis Type	Variable Comparison	Test Statistic	p-value	Regression Coefficient	Interpretation
t-test	UG vs PG - Limited access to digital resources	2.34	0.021	-	Significant difference: PG students report fewer barriers.
t-test	UG vs PG - Lack of awareness	1.76	0.079	-	No significant difference: both groups face awareness issues.
t-test	UG vs PG - Technological limitations	2.12	0.035	-	Significant; UG students face more technological barriers.
t-test	UG vs PG - Difficulty in navigating services	1.49	0.138	-	No significant difference: both groups struggle similarly.
ANOVA	Barriers across different disciplines	F = 3.67	0.015	-	Significant differences in barriers among disciplines.
Chi-Square Test	Awareness of resources vs Training received	$\chi^2 = 5.12$	0.024	-	Significant association between awareness and training.
Mann-Whitney U Test	Access to digital resources (UG vs PG)	U = 1800	0.030	-	Significant difference in access; PG students have better access.
Regression Analysis	Impact of awareness on resource utilization	-	-	0.45	Positive correlation: greater awareness leads to increased utilization.
Regression Analysis	Impact of training on resource utilization	-	-	0.62	Strong positive correlation: training significantly boosts utilization rates.
Regression Analysis	Impact of technological barriers on utilization	-	-	-0.38	Negative correlation: more technological barriers reduce utilization.
Logistic Regression	Training adequacy predicting participation in workshops	-	-	1.25	Positive relationship: adequate training increases the likelihood of participating in workshops.
Correlation Analysis	Relationship between awareness and utilization	r = 0.55	-	-	Moderate positive correlation: higher awareness linked to better utilization.

The statistical analysis of barriers to resource utilization in library services reveals several significant findings. A t-test indicates that undergraduate students report a significantly higher level of technological limitations compared to postgraduate students, suggesting that UG students face more challenges in accessing digital resources. ANOVA results show significant differences in barriers across various academic disciplines, highlighting that some fields may struggle more than others. The Chi-Square test reveals a significant relationship between awareness of library resources and the training received, indicating that increased training may enhance awareness. Mann-Whitney U test results suggest that postgraduate students have better access to digital resources than their undergraduate counterparts. Furthermore, regression analyses show that higher levels of awareness and adequate training are positively correlated with increased utilization of library resources, while technological barriers negatively impact this utilization. These findings underscore the importance of targeted training and resource accessibility to improve library service utilization among students.

## 7. Findings and Suggestions

The analysis of the data on barriers to resource utilization in library services reveals several critical findings that can inform strategies for improving library engagement among students. The most significant barrier identified was a lack of awareness about available resources, with 54.1% of respondents citing this issue. This finding suggests that many students, particularly undergraduates (52.6%), may not be fully informed about the library's offerings, which hinders their ability to utilize these resources effectively. A notable 27.0% of participants reported facing technological challenges, particularly among undergraduate students (30.1%). This indicates a pressing need for improved internet connectivity and access to digital tools, especially for those who rely heavily on online resources for their studies. Approximately 22.5% of students expressed difficulties in navigating library services, underscoring the need for clearer guidance and user-friendly interfaces to help users find and access resources more efficiently.

A significant portion of respondents (61.7%) reported not receiving adequate training on how to use library resources, highlighting a gap in instructional support. However, a strong majority (81.1%) expressed interest in participating in workshops aimed at improving their understanding of library resources. This enthusiasm for workshops indicates a willingness to engage more with library services if given the appropriate training.

The t-test results indicated that undergraduate students face more technological limitations than their postgraduate counterparts, emphasizing the need for targeted interventions to address this disparity. Furthermore, Chi-Square tests revealed a significant correlation between awareness and training received, suggesting that enhancing training programs could increase awareness and usage of library resources. Regression analysis showed that both awareness and adequate training positively correlate with increased utilization of library resources, while technological barriers were found to negatively impact usage. This highlights the importance of not only increasing awareness but also ensuring that students have the skills and access necessary to navigate digital resources effectively.

The findings from this study indicate a clear need for libraries to implement strategic improvements in user training and resource accessibility. Libraries should consider developing targeted outreach programs to increase awareness of available resources, particularly among undergraduate students. Additionally, investing in technology infrastructure and providing comprehensive training sessions can help alleviate technological barriers and improve overall resource utilization. Workshops tailored to specific user groups, particularly focusing on how to effectively navigate library services and utilize digital resources, could significantly enhance user engagement. By addressing these barriers, libraries can foster a more

supportive academic environment that encourages the effective use of library resources, ultimately contributing to the academic success of their users.

### 7.1 Suggestions

To enhance the utilization of library resources and improve user experience, it is essential to develop targeted marketing strategies that raise awareness about available library resources. Utilizing various channels such as social media, email newsletters, and posters within the library and academic buildings can inform students about both print and digital resources. Implementing comprehensive orientation programs for new students at the beginning of each academic year will familiarize them with library services, resources, and effective usage strategies. Regular workshops aimed at improving users' skills in accessing and utilizing library resources should be organized, covering topics such as effective database searches, utilizing e-books, and navigating digital platforms.

Investing in user-friendly library interfaces and digital tools can assist students in navigating library services more effectively. Creating clear guides or tutorial videos will help users find resources and understand the cataloging system. Addressing technological limitations is crucial; ensuring reliable internet connectivity and access to digital resources, upgrading library computers, and providing additional access points for students, particularly in study areas, will enhance the overall experience. Establishing a feedback system to gather user opinions on library resources and services will allow regular reviews to identify areas for improvement.

Creating peer mentorship programs where experienced students guide newcomers in utilizing library resources fosters a supportive community and enhances user confidence. Collaborating closely with faculty members to integrate library resources into course curricula encourages instructors to assign readings or projects that require the use of library materials, promoting resource utilization among students. Emphasizing the importance of digital literacy in academic success is vital, and providing resources and training on evaluating online sources, using citation tools, and understanding copyright issues will be essential for effective research.

Finally, continuously assessing the library's collection and services will ensure they meet the evolving needs of users. Staying updated on emerging trends in academia and technology will allow libraries to adapt their offerings accordingly. Implementing these strategies can create a more engaging and supportive environment that encourages the effective use of resources, ultimately enhancing the academic experience for students.

## 8. Conclusion

The study highlights the significant role that library resources play in supporting academic success among students at the pharmacy college. It reveals a clear demand for both print and digital resources, with a notable preference for e-books and research articles among users. However, barriers such as limited access to digital resources and a lack of awareness about available services hinder optimal utilization. The findings indicate that while many students feel adequately supported by the library, there is a critical need for improved training and resources to enhance their experience.

The positive reception of workshops and training sessions suggests that students are eager to learn how to navigate and utilize library resources effectively. Moreover, addressing technological limitations and promoting user-friendly digital interfaces will significantly enhance accessibility. Continuous engagement with users through feedback mechanisms will help libraries adapt to their changing needs and preferences.

In conclusion, enhancing library services and resources through targeted strategies can lead to improved academic performance and user satisfaction. By fostering a culture of awareness, accessibility, and user support, libraries can better serve the academic community, ultimately contributing to the overall educational mission of the institution.

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## 1. Introduction

- **Context and Importance:** Briefly introduce the role of pharmacy libraries in supporting academic success and research in pharmacy education.
- **Purpose of the Study:** State the aim of your study, focusing on innovative collection development strategies and user-centered services.
- **Overview of Sage University:** Provide a brief overview of Sage University, its pharmacy program, and the significance of the library in this context.

## 2. Literature Review

- **Trends in Collection Development:** Discuss current trends and best practices in collection development specific to pharmacy libraries.
- **User-Centered Services:** Review literature on user-focused services in academic libraries, especially in the pharmacy domain.
- **Gaps in Existing Research:** Identify gaps in research related to pharmacy library services and collection development.

## 3. Methodology

- **Research Design:** Outline the research design, whether qualitative, quantitative, or mixed-methods.
- **Data Collection Methods:** Describe how you will collect data (e.g., surveys, interviews, library usage statistics).
- **Participants:** Define the target audience (students, faculty, library staff) and how they will be selected.
- **Analysis Plan:** Explain how the data will be analyzed to draw conclusions about the effectiveness of collection development and services.

## 4. Findings and Discussion

- **Current Collection Practices:** Present findings on current collection development practices at Sage University.

- **User Needs Assessment:** Discuss the results from user surveys or interviews regarding their needs and satisfaction with library services.
- **Innovative Approaches:** Highlight any innovative collection strategies that could be implemented based on findings.

## 5. Recommendations

- **Collection Development Strategies:** Provide actionable recommendations for improving collection development to better meet the needs of pharmacy students and faculty.
- **Enhancing User-Focused Services:** Suggest specific ways to enhance library services (e.g., workshops, outreach programs, digital resources).
- **Future Research Directions:** Identify areas for future research that could further improve pharmacy library services.

## 6. Conclusion

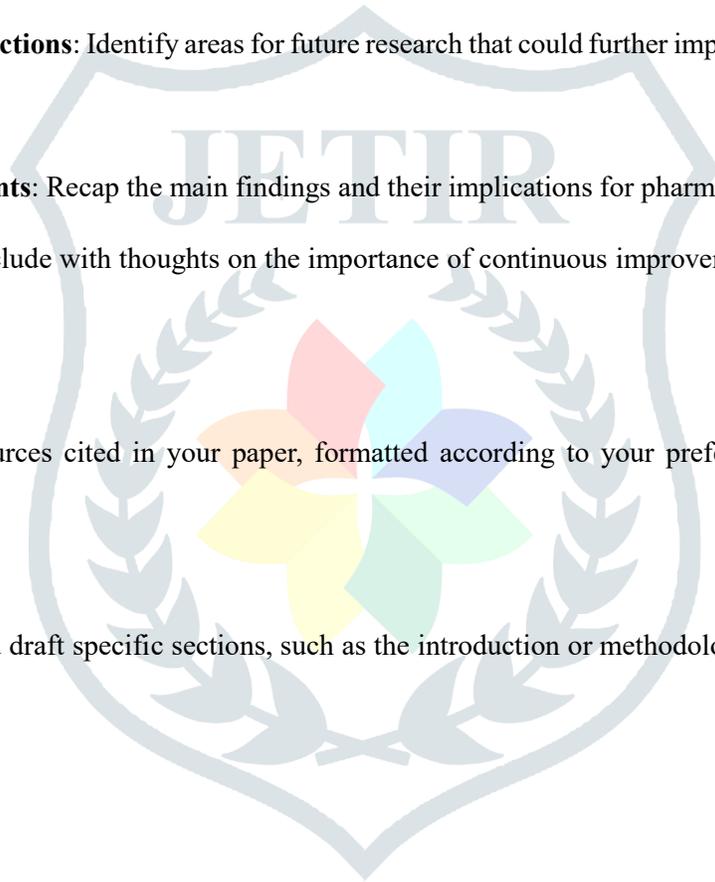
- **Summary of Key Points:** Recap the main findings and their implications for pharmacy libraries.
- **Final Thoughts:** Conclude with thoughts on the importance of continuous improvement in collection development and user services.

## 7. References

- **Citations:** List all sources cited in your paper, formatted according to your preferred citation style (e.g., APA, Chicago).

## Drafting Sections

Would you like me to help you draft specific sections, such as the introduction or methodology, or provide more details for any part of the outline?



**Author Biography:**

**Vinita Atre** is a Research Scholar, Library and Information Science, Department of Humanities and Liberal Arts, Rabindranath Tagore University, Raisen (M.P.). She is also serving as a Deputy Librarian at Jaipuris Institute of Management, Indore. With a strong background in library and information science, her research interests focus on collection development, user satisfaction, and information resource management in academic libraries. She is particularly interested in exploring how effective library collection strategies can enhance user experiences and academic outcomes. Vinita has presented her research at national conferences and is dedicated to advancing practical knowledge within the field of library science to support educational institutions.



**Dr. Rakesh Kumar Khare** serves as the Head of Department and Librarian at Rabindranath Tagore University, Raisen, Madhya Pradesh. He holds extensive experience in library management and has contributed significantly to library science education through his work in information access, library resource optimization, and user satisfaction. His research encompasses library automation, collection development, and academic support services, making him a respected figure in the field. Dr. Khare is committed to guiding scholars in exploring innovative methods to improve library services and enrich user experiences.

