



AN INVESTIGATION OF CONSERVATION AND PRESERVATION TECHNIQUES AND APPROACHES THE UNIVERSITY LIBRARY COLLECTION IN WEST BENGAL.

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ABSTRACT

This study investigates the preservation and conservation practices implemented in academic libraries across Kolkata, India, with a focus on print and non-print materials. Preservation, defined as the main tenance of library materials for present and future use, is crucial in the rapidly evolving information landscape. Through a structured questionnaire is tribute to librarians from 20 university libraries in Kolkata, supplemented by interviews and observations, the study evaluates current practices, identifies challenges, and proposes recommendations for improvement. Findings indicate significant investments in preservation efforts, including environmental control, staff training, and digitization. However, challenges such as material deterioration persist, highlighting the need for ongoing vigilance and comprehensive preservation strategies. Recommendations include standardizing protocols, investing in advanced technologies, and enhancing disaster preparedness. By implementing these measures, Kolkata's academic libraries can ensure the long-term sustainability of their collections, preserving valuable resources for future generations.

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Introduction

Preservation, as defined, encompasses activities aimed at maintaining library and archival materials in their original physical form or in alternative usable formats. In today's evolving landscape, transitioning from industrial to informational, the demand for swift, accurate, and dependable information is paramount. With information becoming a crucial resource influencing decision-making and development, it is often referred to as the lifeblood of society.

Preservation involves not only conservation but also methods for partially maintaining physical objects, such as through re-binding, and procedures for replacing original artifacts with converted materials while preserving their intellectual content.

Conservation is a facet of preservation, involving proactive measures to prevent damage, repair materials, and ensure the longevity of individual items. While **Srivastava & Kumar** note that conservation and preservation are often used interchangeably, they technically hold distinct meanings. Both processes aim to safeguard objects from harm, damage, or decay, maintaining them for current and future use. Preservation emphasizes ongoing maintenance, whereas conservation focuses on corrective treatments.

The current study aims to examine preservation and conservation practices undertaken by academic libraries in Mumbai, India, delving into the methods employed to protect and maintain valuable materials in their collections.

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Objectives

- To evaluate the current preservation and conservation practices implemented in university libraries across Kolkata.
- To identify challenges faced by Kolkata's university libraries in preserving and conserving information resources.
- To identify the factors contributing to the deterioration of library materials in Kolkata's university libraries.
- To understand the factors influencing the successor limitations of preservation and conservation initiatives.
- To provide action able recommendations based on the study's results to enhance preservation and conservation practices in Kolkata's university libraries.

Review of Literature

Sawant, S. (2014) delineate various aspects of conserving research library materials. They discuss the imperative of preservation, the reasons for material deterioration, what aspects should be preserved, who should undertake preservation work, the methodologies involved, and the necessity for interdisciplinary collaboration to achieve conservation objectives. Their papers are organized into nine categories: "Why preservation?"; "The nature of library materials"; "Causes of deterioration"; "The role of the librarian"; "The roles of the conservator and the scientist"; "Binding"; "Manuscripts and documents"; "Preservation, micro-recording, and other copying methods"; and "Disaster and salvage", along with "National planning".

Rashman, Y.B. (2017) highlight the challenges faced by librarians amidst budget constraints affecting the acquisition, processing, and maintenance of library collections. They note a conflict between librarians and publishers regarding solutions to preservation issues. The authors propose collaborative efforts between librarians and publishers to establish standards for library materials concerning binding and paper quality. By understanding the respective roles of publishers and librarians, they argue that preservation challenges can be effectively addressed.

Lakshmi, S., & Rajavel, V (2016) underscores essential aspects of preservation planning at a national level, emphasizing disparities between preservation approaches in developing and developed countries. They advocate for establishing uniform preservation goals across all programs and addressing pertinent factors necessary for their achievement. This approach enables each country to develop preservation programs tailored to its developmental stage. Lyall concludes by providing succinct overviews of preservation initiatives in various selected countries within the region.

Mahapatra (2003) asserts that well-intentioned yet uninformed librarians often inadvertently damage books through the improper use of pressure-sensitive tapes, polyvinyl acetate adhesives, acidic protective wrappers, wood backing in frames, amateur lamination, and inadequate storage practices. Mahapatra identifies physical and chemical factors contributing to document deterioration, including natural paper aging due to organic constituents. They suggest that proper housekeeping can significantly mitigate inevitable degradation of documents.

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Methodology

For the study on preservation and conservation in 20 universities libraries of Kolkata's were purposefully selected based on factors like academic reputation and library of all size. A structured questionnaire consist of 5 sections on preservation and conservation of libraries was distributed to university librarians, with a complete response rate achieved. Supplementary methods like interviews and observations were utilized to enrich the data. Quantitative and qualitative data were analyzed to identify trends and insights.

Results

Section 1 : Number of Materials Preserved and Conserved at the Library

Question	Option	Response	Percentage
Print materials count?	A. <50,000	1	5%
	B. 50,000-100,000	5	25%
	C. 100,000-150,000	7	35%
	D. >150,000	7	35%
Non-print materials count?	A. <10,000	3	15%
	B. 10,000-20,000	6	30%
	C. 20,000-30,000	5	25%
	D. >30,000	6	30%
Print materials preserved?	A. <10,000	6	30%
	B. 10,000-20,000	5	25%
	C. 20,000-30,000	4	20%
	D. >30,000	5	25%
Non-print materials preserved?	A. <2,000	3	15%
	B. 2,000-5,000	6	30%
	C. 5,000-10,000	4	20%
	D. >10,000	7	35%
Total preserved materials count?	A. <20,000	5	25%
	B. 20,000-40,000	6	30%
	C. 40,000-60,000	4	20%
	D. >60,000	5	25%

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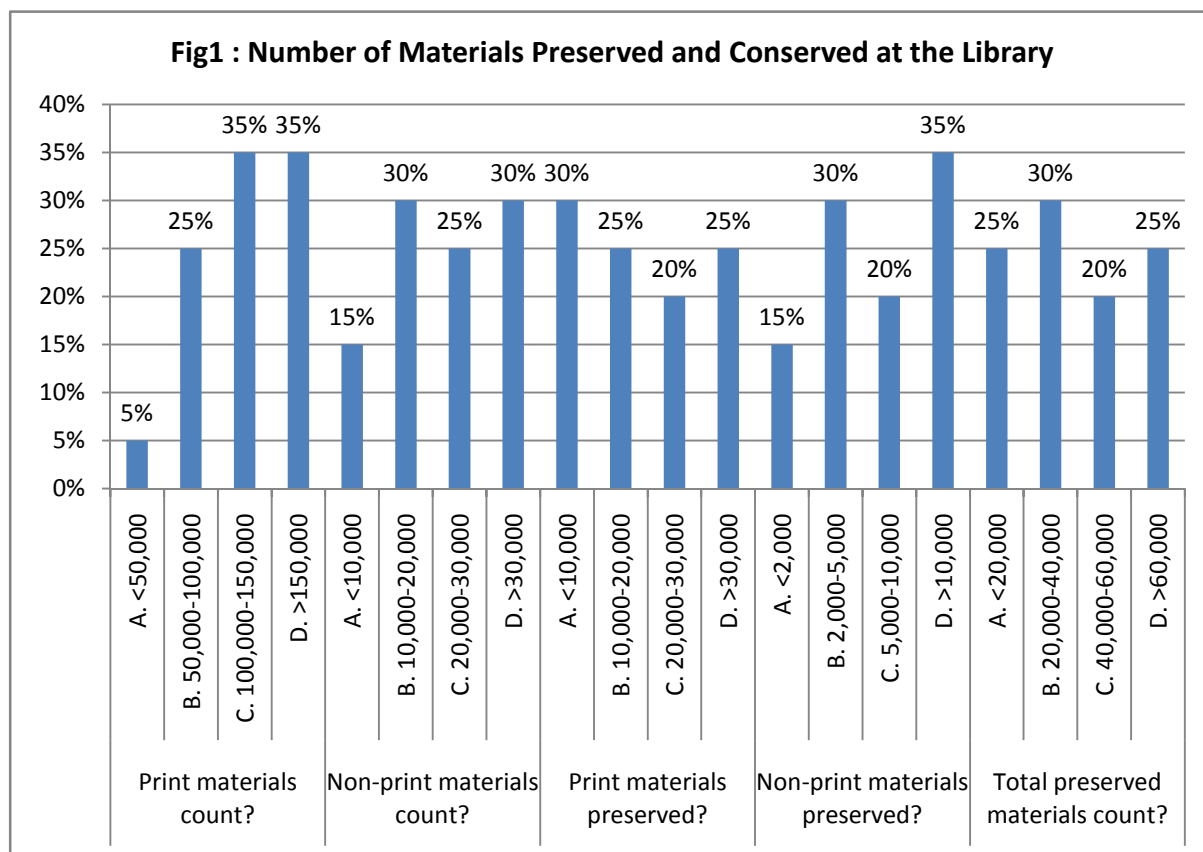
The majority of responses indicate that the library's collection falls within the range of 100,000 to 150,000 print materials, with 35% of respondents selecting this option. Only 5% reported having less than 50,000 print materials.

Responses show a more evenly distributed range, with 30% reporting collections between 10,000 to 20,000 and over 30,000 non-print materials each.

About a quarter of respondents (25%) indicated that between 10,000 to 20,000 print materials have undergone preservation efforts. Similarly, another quarter reported that more than 30,000 print materials have been preserved.

The majority of respondents (35%) reported that more than 10,000 non-print materials have undergone preservation efforts, indicating significant investment in conserving these materials.

Responses were evenly split between options, with 25% each reporting preserved material counts falling within the ranges provided.



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Section 2: Preservation and Conservation Techniques Adopted in the Library

Question	Option	Response	Percentage
Environmental control method?	A. HVAC systems	10	50%
	B. Manual monitoring	4	20%
	C. No specific control	6	30%
Handling procedure?	A. Staff training	12	60%
	B. No specific proc.	4	20%
	C. Outsourcing	4	20%
Encapsulation techniques used?	A. Lamination	8	40%
	B. No specific tech.	6	30%
	C. Traditional binding	6	30%
Approach to repair & restoration?	A. Trained conservators	11	55%
	B. Replace materials	3	15%
	C. No specific approach	6	30%
Digitization for preservation?	A. Extensively	9	45%
	B. Limited use	6	30%
	C. No digitization	5	25%

This section explores the methods and strategies employed by the library to preserve and conserve its materials. Half of the respondents (50%) indicated the use of HVAC systems for environmental control, ensuring stable conditions for preservation.

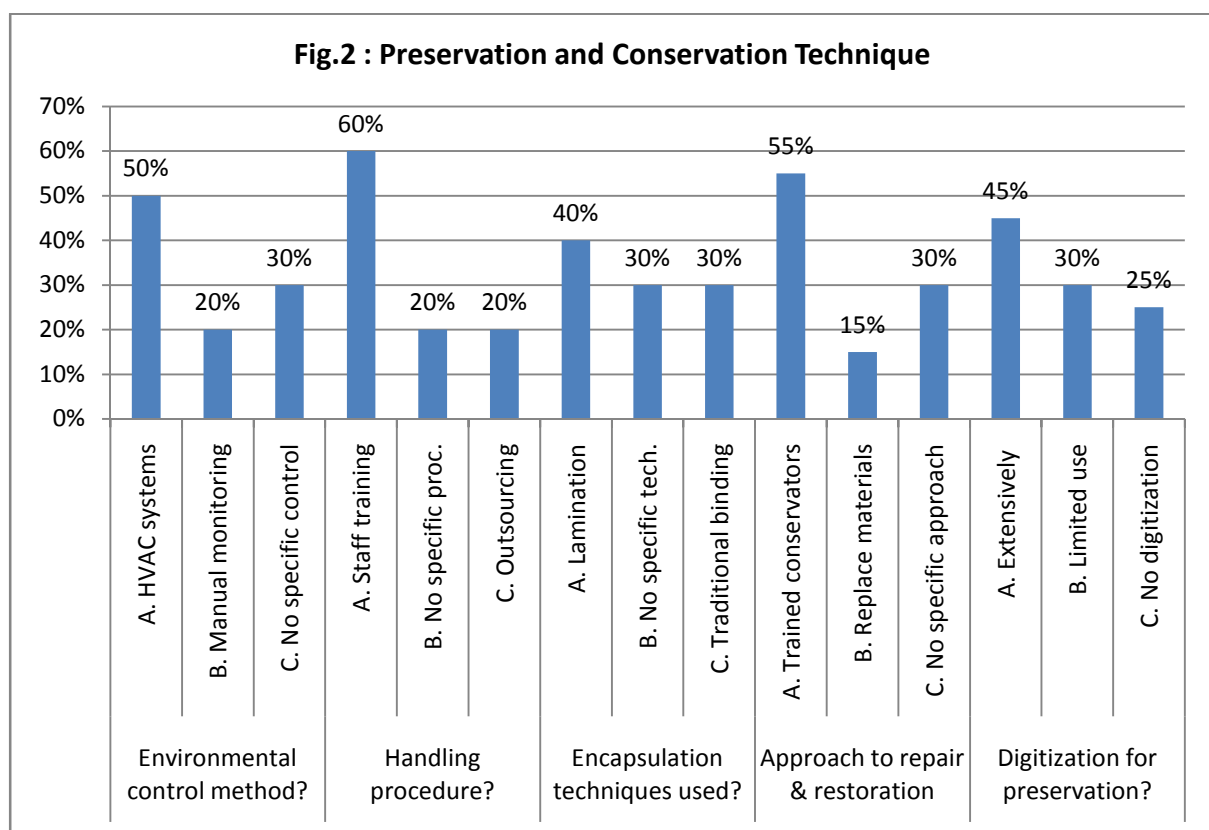
The majority of respondents (60%) reported staff training as the primary handling procedure, emphasizing the importance of knowledgeable staff in preservation efforts.

Forty percent of respondents reported using lamination and custom-made enclosures for encapsulation, indicating a commitment to long-term protection of materials.

A significant majority (55%) stated that trained conservators perform repair work, highlighting the importance of expertise in maintaining and restoring materials.

Nearly half of respondents (45%) reported extensive use of digitization for preservation purposes, reflecting the library's adaptation to modern preservation techniques.

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Section 3 : Preservation and Conservation Activities Do Neat the Library

Question	Option	Response	Percentage
Routine preservation for print?	A. Regular cleaning	13	65%
	B. No routine tasks	2	10%
	C. Outsourcing	5	25%
Routine preservation for non-print?	A. Maintenance & digit.	9	45%
	B. No routine tasks	4	20%
	C. Limited efforts	7	35%
Frequency of inspections?	A. Quarterly with Annual	8	40%
	B. Yearly only	6	30%
	C. No regular checks	6	30%
Measures for damage prevention?	A. Integrated pest mgmt.	10	50%
	B. Reactive measures	4	20%
	C. No specific measures	6	30%
Storage methods for preservation?	A. Acid-free containers	11	55%
	B. Standards helving	3	15%
	C. No specific storage	6	30%

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This section delves into the routine preservation activities and measures undertaken by the library to protect its collections.

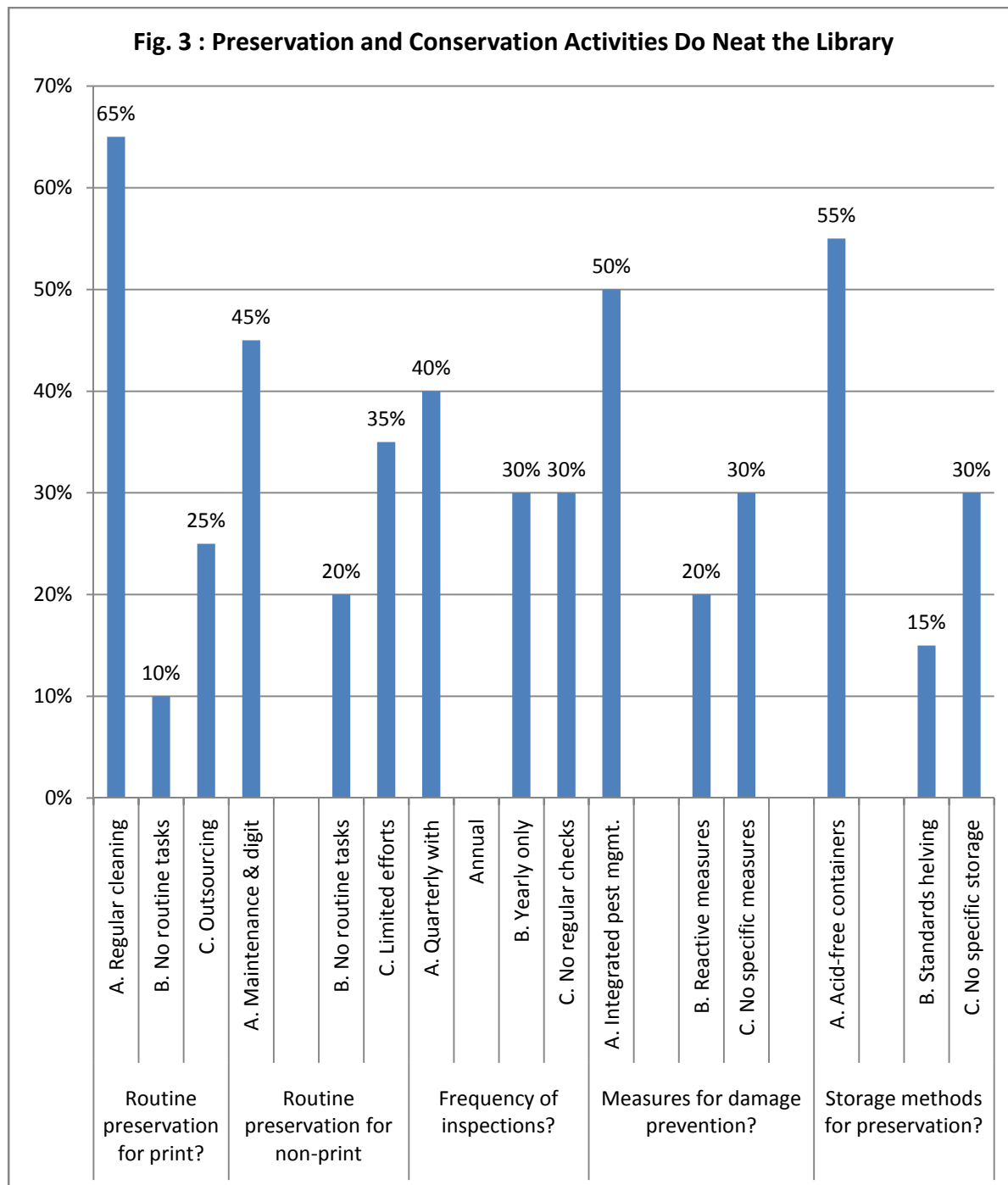
The majority of respondents (65% for print and 45% for non-print) reported conducting regular preservation activities, underscoring a proactive approach to maintenance.

40% of respondents reported quarterly inspections with annual thorough assessments, ensuring regular monitoring of material conditions.

Half of the respondents (50%) indicated the implementation of integrated pest management systems, reflecting a proactive approach to mitigating risks.

The majority (55%) reported using acid-free containers for storage, indicating attention to detail in preserving materials over time.

Fig. 3 : Preservation and Conservation Activities Do Neat the Library



Section 4: Causes for Deterioration of Print and Non-Print Library Resources

Question	Option	Response	Percentage
Factors for print deterioration?	A. Age, acidity, handling	14	70%
	B. Limited factors	2	10%
	C. Environmental only	4	20%
Impact of light on materials?	A. Fading, discoloration	13	65%
	B. No significant impact	4	20%
	C. Impact not considered	3	15%
Role of humidity in deterioration?	A. Mold growth, chem.	12	60%
	B. Minimal impact	4	20%
	C. No humidity control	4	20%
User behaviors causing damage?	A. Folding, tape use	9	45%
	B. No significant impact	5	25%
	C. Not considered	6	30%
Impact of environmental pollutants?	A. Air borne particulates	11	55%
	B. Limited impact	5	25%
	C. Not considered	4	20%

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This section examines the factors contributing to the deterioration of library materials.

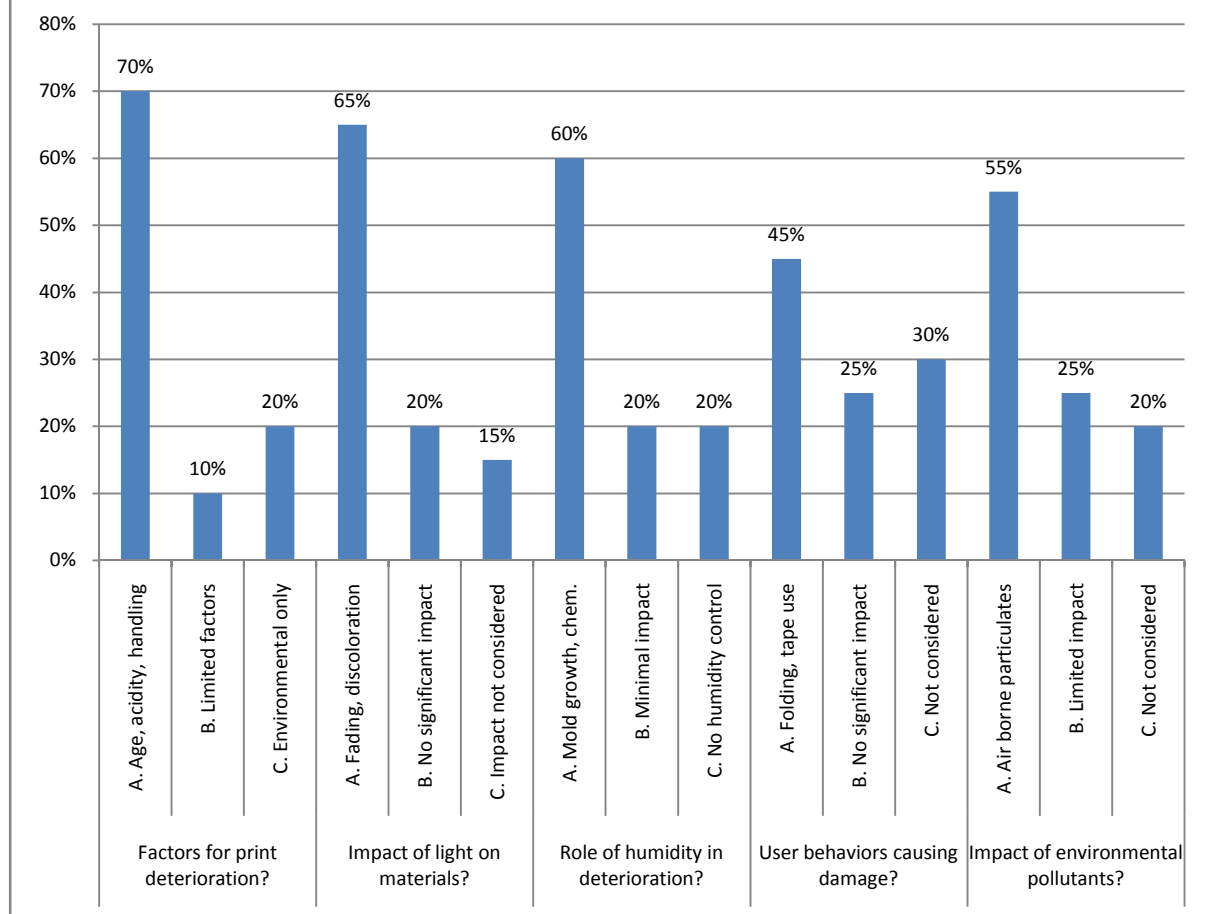
Data revealed that 70% of respondents identified age, acidity of paper, and improper handling as the main factors, highlighting the importance of proper care and maintenance.

65% identified fading, discoloration, and mold growth as consequences of exposure to light and humidity, emphasizing the need for environmental control measures.

45% highlighted folding pages and using adhesive tape as user behaviors causing damage, while 55% recognized the impact of environmental pollutants, signaling awareness of external threats.



Fig. 4 : Causes for Deterioration of Print and Non-Print Library Resources



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Section 5: Preservation and Conservation Activities Do neat the Library

Question	Option	Response	Percentage
Cleaning methods for print?	A. Dry cleaning, surface	10	50%
	B. No specific methods	4	20%
	C. Routine methods	6	30%
Identifying conservation needs?	A. Regular inspections	11	55%
	B. Replace materials	3	15%
	C. No specific process	6	30%
Ongoing projects for preservation?	A. Ongoing digitization	8	40%
	B. No ongoing projects	5	25%
	C. Limited efforts	7	35%
Preservation prioritization?	A. Based on significance	10	50%
	B. No specific criteria	3	15%
	C. No prioritization	7	35%
Disaster preparedness plan?	A. Comprehensive plan	9	45%
	B. Limited measures	5	25%
	C. No plan in place	6	30%

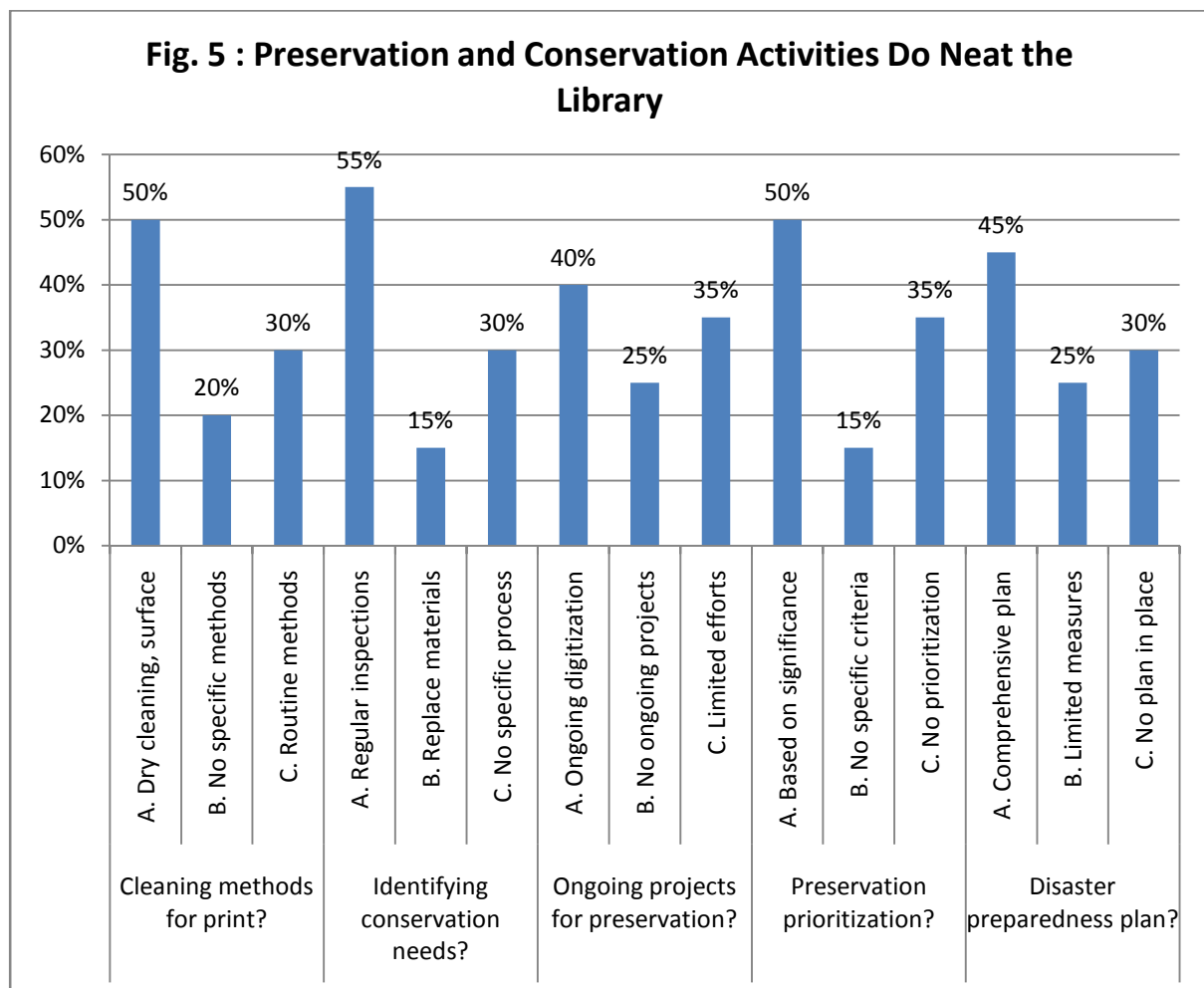


This section focuses on ongoing preservation projects and the library's disaster preparedness efforts.

40% of respondents reported ongoing digitization and conservation projects, demonstrating a commitment to continuous improvement in preservation efforts.

Half of the respondents (50%) stated that preservation efforts are based on the significance, condition, and user demand, ensuring strategic allocation of resources.

45% reported having a comprehensive disaster preparedness plan in place, indicating proactive measures to safeguard materials against unforeseen events.



To further enhance preservation efforts, libraries should prioritize standardization of protocols, investment in advanced technologies, and collaboration with preservation experts. By implementing standardized preservation protocols and procedures, libraries can ensure consistency and efficiency in preservation activities across institutions. Additionally, investing in advanced environmental control systems, staff training programs, and collaborations with trained conservators can optimize preservation conditions and address complex conservation needs effectively. Furthermore, proactive measures to mitigate risks posed by user behaviors, environmental pollutants, and other external threats, along with comprehensive disaster preparedness plans, are essential to safeguarding library collections for future generations.



Conclusion

In conclusion, the study sheds light on the preservation and conservation practices employed by academic libraries in Kolkata, India, highlighting both commendable efforts and areas for improvement. The findings reveal a significant investment in preservation techniques, including environmental control, staff training, and digitization, reflecting a proactive approach to maintaining library collections. However, challenges such as material deterioration due to various factors persist, underscoring the need for ongoing vigilance and comprehensive preservation strategies.

To enhance preservation efforts, libraries should prioritize standardization of protocols, adoption of advanced technologies, and collaboration with preservation experts. Additionally, proactive measures to mitigate risks posed by user behaviors, environmental pollutants, and other external threats, along with comprehensive disaster preparedness plans, are crucial for safeguarding library collections. By implementing these recommendations, Kolkata's university libraries can ensure the long-term sustainability and accessibility of their valuable resources, preserving them for future generations of scholars and researchers.

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