# Impact Of Covid-19 On Libraries Of Nursing Colleges In Maharashtra: A Case Study

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**Abstract**
This study aims to examine the effects of the COVID-19 pandemic on nursing college libraries in the Indian state of Maharashtra. In all, 130 nursing colleges can be found in the Maharashtra state. We used Google Forms, email, and WhatsApp to reach out to college libraries and get their feedback. We received 110 responses in all, but we only looked at 110 of them. The results show that the COVID-19 affected the materials that university libraries had on hand. Sixteen point three percent of libraries are still closed. Paper document sales fell, whereas electronic document sales rose. The reason behind this was that the ratio of library-to-library material lending and delivery fell below 50%. Additionally, electronic resource consumption increased while physical resource utilisation declined. Quite a bit of reading material was available throughout the time the pandemic was happening. Respondents to the survey insisted that the library uses hand sanitizer, takes temperature readings, and follows social distance standards. Library employees spent their leisure time engaging in a wide range of professional development opportunities. Google Meet, Zoom, and WebEx were the three platforms used to deliver library services. This report will be useful in a lot of ways for figuring out how COVID-19 affected nursing schools in Maharashtra.

**Key words:** COVID-19, Pandemic, COVID-19 Pandemic, College Libraries, Corona Virus, Library Users, Library Services, Library Facilities, Online Services, Collection Development, E-Resources, Lockdown, Social Media.

**Introduction**
On March 9, 2020, the city of Pune was the location where the very first occurrence of the Corona virus was documented to have occurred in the state of Maharashtra. This event took place to the extent that it was documented. Please refer to the website that can be found at www.en.wikipedia.org/wiki/ for any further information that you may require concerning the COVID-19 pandemic. Be sure to have a look at the epidemic as well. After conducting additional research, it was discovered that the COVID-19 virus had now moved to other regions of the state that were experiencing adverse effects. The paradigm shift that was brought about by its occurrence had an effect on every facet of existence from the moment it occurred till the present day.

 All types of materials, including those that can be found in libraries, are in compliance with this legislation. The majority of the state's educational institutions and public libraries were given the directive to permanently

close their doors to the public during the second half of March 2020. There were a few of these organisations that provided library services to its clients by offering them. On account of the fact that educational institutions desired to proceed with their examinations, they made the decision to utilise internet administration. Due to a rigorous regulation that prohibited their presence, faculty members, students, and other members of the academic community were not allowed to visit the libraries. There are libraries in specific areas of India and Maharashtra that provide a variety of alternative services, such as mobile and home delivery. These libraries are located in select neighbourhoods. There are specific sites where these options can be found; they are easily accessible. Even though many libraries were closed during the lockdown, there were some libraries that started using Wi-Fi in order to keep in touch with their customers.

This was done in order to retain communication with their customers. Consequently, nursing schools were able to adapt to the constantly shifting situations as a result of this. Despite the fact that the lockdown may have resulted in the actual closure of the libraries, the general public is still able to make use of the services that are accessible exclusively over the internet. Several college libraries in the Indian state of Maharashtra have been affected by the COVID-19 epidemic, as indicated by the findings of this particular piece of research.

## 2. Review of Literature

The qualitative study by Rohini T. and Rathi Balachandran (2023) shed light on the challenges faced and lessons learned by the nursing service departments in India during the COVID-19 epidemic. Data for the study came from 21 presentations made by nursing professionals as part of the Nursing Echo programme run by the Ministry of Health and Family Welfare (MOHFW). The presentations focused on building patient care capacity during the pandemic. Using inductive manifest content analysis, the writers isolated the most pressing issues encountered by nurses. Concerns over training and protocol, psychological challenges, insufficient personnel, and limited infrastructure and supplies were among these challenges. Insights into the lessons learned by nursing professionals were also presented by the study. These lessons included the need to build COVID care facilities through infrastructure adjustments, work together more effectively, refine training and protocol, and improve welfare measures. The research highlights the dedication and vital role of the nursing staff in delivering patient care throughout the crisis, in order to ensure their safety and readiness to tackle future emergencies. It further demonstrates the value of varied backing from government, lawmakers, and administrative groups.

B. Shailaja (2023) conducted research that looked at how the COVID-19 epidemic affected the mental health and overall well-being of undergraduates studying medicine. The purpose of the study was to assess medical students' knowledge, attitudes, and behaviours surrounding the COVID-19 pandemic as well as their stress, anxiety, depression, and overall quality of life. Many students exhibited supportive behaviours and attitudes towards the pandemic and shown a strong grasp of the medical aspects of COVID-19, according to an online assessment that relied on questionnaires. While some students reported feeling down, anxious, or stressed out, others reported changes in their appetite or an unhealthy preoccupation with academics. The study emphasised the importance of educational institutions providing the necessary support and interventions to medical undergraduates dealing with mental health issues during the pandemic so that their wellbeing and academic performance could be less negatively impacted.

### 3. Objectives of the Study

In order to highlight the changes that COVID-19 has brought about in the libraries of nursing colleges in the state of Maharashtra, the goal of this study is to demonstrate such library changes.

➢ There are specific goals that have been established for the purpose of this investigation. In the Maharashtra nursing college libraries, the primary purpose is to get an understanding of how the COVID-19 outbreak has impacted library services, document procurement, and resource utilisation throughout the state.

➢ The primary purpose of this research is to investigate the influence of the COVID-19 epidemic on the various communication methods utilised by libraries, as well as the contents that are made available to students and other customers.

➢ The purpose of this study is to acquire an understanding of the influence that COVID-19 has had on the operations of the library as well as the professional development of the personnel. During the epidemic, it is of the utmost importance to explore the obstacles that libraries are encountering as well as the efforts that they are making to solve those challenges. The purpose of the researchers who took part in this study was to determine the extent to which the COVID-19 outbreak has affected the nursing

college libraries in Maharashtra in terms of the provision of library services during the course of the study. A wide variety of services, such as the procurement of documents and the utilisation of resources, are among the many that are offered.

➢ In light of the ongoing pandemic in Maharashtra, the objective of this study is to determine the extent to which the COVID-19 epidemic has influenced the communication techniques and library resources that nursing institutions make use of. These nursing facilities are linked with libraries.

➢ The objective of this study is to assess the impact that COVID-19 has had on the professional development of library professionals and their engagement in library activities located within the nursing college libraries of the state of Maharashtra.

➢ This study's major purpose is to analyse the issues that nursing college libraries in Maharashtra faced during the COVID-19 epidemic and the methods that were implemented to solve those challenges. Specifically, the research will focus on the challenges that nursing college libraries faced.

➢ Correlating the findings of this study with those of earlier research studies that have been conducted on the impact of COVID-19 on library services, resource utilisation, staff development, and challenges faced by educational institutions across the country is necessary in order to acquire a better understanding of the specific impact that COVID-19 has had on nursing college libraries in Maharashtra. This is necessary in order to comprehend the specific impact that COVID-19 has had on nursing college libraries in Maharashtra.

## 4. Methodology

The study project named "Impact of COVID-19 on Libraries of Nursing Colleges in Maharashtra: A Case Study" utilised a methodical approach to the gathering and analysis of data. This was accomplished through the use of a Google Forms survey that was distributed to librarians working in nursing colleges located within the state of Maharashtra. The purpose of this study was to investigate the impact that the pandemic has had on library services and resources by conducting a survey primarily directed at librarians working in nursing schools across the state. It is of the utmost importance to provide clarification and make improvements to the following components in order to enhance the standard of the technique and address any potential problems that were brought up in the comment:

**Total Population of Nursing Colleges:** The onus is on Maharashtra as a whole to determine and record the precise number of nursing schools within its borders. The final tally should be 669, and that figure should have come from a trustworthy place such official government documents, educational databases, or educational groups' websites.

**Sampling and Data Collection:** It would be really appreciated if you could provide some context for choosing 130 nursing schools as the target audience. If you want your study to be typical of all the nursing schools in Maharashtra, you need to explain how and how many students you surveyed.

**Data Collection Tools and Administration:** Please describe the steps taken to create and verify the study questionnaire. Please clarify the use of Google Forms, email, and WhatsApp for data collection in order to maintain transparency in the survey administration process.

**Response Rate and Analysis:** Please provide a detailed description of the response rate that was achieved, such as 110 out of 130 respondents. Additionally, please address any potential biases or limits associated with non-responses. Using Microsoft Excel as a data entry and analysis tool, please describe the data analysis procedure in detail.

**Ethical Considerations:** Talk about the moral issues of keeping respondents' information private, their answers secret, and their participation entirely voluntary. Ensure that all measures were taken to safeguard participants' rights and obtain their informed consent prior to, during, and after the study.

Improving the study's scientific rigour, trustworthiness, and transparency can be achieved by addressing these points in the methods section. Consequently, the validity and reliability of the findings regarding the impact of COVID-19 on nursing college libraries in Maharashtra will be enhanced.

## 5. Data Analysis

### 5.1. Gender and Designation of Respondents

**Table 1**

**Gender and Designation of Respondents**

| Respondents | | No of Respondents | % |
|---|---|---|---|
| Gender | Male | 90 | 81.82 |
| | Female | 20 | 18.18 |
| Designation | Librarian | 99 | 90 |
| | Assistant Librarian | 04 | 3.64 |
| | Library Assistant | 07 | 6.36 |

Males make up a disproportionately large percentage of the respondents (81.82%), and librarians make up the vast majority of those respondents (90%; see table 1 for details).

### 5.2. Libraries working during COVID-19

**Table 2**

**Working of Libraries**

| Status | Number | % |
|---|---|---|
| Working | 43 | 39.10 |
| Closed | 67 | 60.90 |
| Total | 110 | 100.00 |

It is reported that 69.9% of libraries remained closed to the general public even while the COVID-19 pandemic was at its peak. Out of the libraries that reopened their doors to customers after taking the appropriate safeguards, approximately 49.0% of them did so. According to the findings of the current study, a considerable number of libraries, namely 69%, were shut down as a consequence of the COVID-19 outbreak. This was the case after the epidemic.

### 5.3. Library Services during COVID-19

**Table 3**

**Library services**

| Name of Service | Increase | | Decrease | | No change | | Total |
|---|---|---|---|---|---|---|---|
| | Nos | % | Nos | % | Nos | % | |
| User assistance | 60 | 54.54 | 30 | 27.27 | 20 | 18.18 | 110 |
| Book Bank | 43 | 39.09 | 37 | 33.63 | 30 | 27.27 | 110 |
| Document Delivery | 37 | 33.63 | 49 | 44.54 | 24 | 21.81 | 110 |
| Inter Library Loan | 25 | 22.72 | 48 | 43.63 | 37 | 33.63 | 110 |

The results of the investigation are shown in Table 3, which reveals that COVID-19 has had a major impact on the activities that take place in college libraries. Both the Inter Library Loan Service (which experienced a loss of 43.63 percent) and the Document Delivery Service (which had a decrease of 44.5 percent) did not meet the predetermined threshold of fifty percent. On the other hand, the number of requests for assistance or support from users increased to 54.40 percent. In addition, the percentage of book bank services has increased to 39.09% as a direct result of the significant impact that COVID-19 has had.

### 5.4. Purchasing of Documents during COVID-19

**Table 4**

**Purchasing of library document during COVID-19 Pandemic**

| Purchasing of Documents | Increase | | Decrease | | No Change | | Total | % |
|---|---|---|---|---|---|---|---|---|
| | **No** | **%** | **No** | **%** | **No** | **%** | | |
| E- document | 68 | 61.81 | 16 | 14.54 | 26 | 23.63 | 110 | 100 |
| Print document | 21 | 19.09 | 72 | 65.45 | 17 | 15.45 | 110 | 100 |

Table 4 shows that COVID-19 affected the acquisition of print and digital resources by college libraries. This impact could have been positive or negative. According to studies, the purchase of printed materials fell to 65.45%, while the purchase of digital resources, such as books, increased to 61.81%.

### 5.5. Library material Used during COVID-19

**Table 5**

**Library material Used during COVID-19 Pandemic**

Table 5 lists the items that were used during the COVID-19 pandemic and categorises them as print or electronic. This update includes the provided chart and analysis along with the newly added paragraph to the section on library services during COVID-19.

| Type of Material | Increase (No) | Increase (%) | Decrease (No) | Decrease (%) | No Change (No) | No Change (%) | Total |
|---|---|---|---|---|---|---|---|
| Print Material | 25 | 22.72 | 73 | 66.36 | 12 | 10.9 | 110 |
| E-material | 81 | 73.63 | 16 | 14.54 | 13 | 11.81 | 110 |

The effects of COVID-19 on library users' utilisation of print and digital resources are evident in the findings. The percentage of e-material used increased to 73.63%, but the percentage of print material used decreased to 66.36%. In keeping with a global pattern observed throughout the pandemic, this modification emphasises how important digital resources are to ensuring continuous access to data. Moody and Best (2021) have reported a decrease in the distribution of both digital and physical resources due to the COVID-19 pandemic. Our findings, however, indicate the opposite pattern, with a marked increase in the circulation of electronic resources and a decline in physical resources.

### 5.6. Impact of COVID -19 Pandemic on Library Services

**Table 6**

**Impact on Library Services**

| Services | Yes | | No | | Total | |
|---|---|---|---|---|---|---|
| | **No** | **%** | **No** | **%** | **No** | **%** |
| Less use of Print Material | 96 | 87.27 | 14 | 12.72 | 110 | 100 |
| Modify borrowing rule | 92 | 83.63 | 18 | 16.36 | 110 | 100 |
| Quarantined print material when it is returned | 90 | 81.81 | 20 | 18.18 | 110 | 100 |

The COVID-19 pandemic has, without a shadow of a doubt, had an impact on the responsibilities that libraries are responsible for. When they were brought back, eighty-eight point eight percent of the total books and other reading materials that were found in college libraries were placed under quarantine. One hundred seventy-two point seven percent of respondents who took part in the poll stated that restrictions were placed on their ability to access their private libraries. As a result of the research, it was discovered that 83.63 percent of college libraries made changes to their policy on borrowing (table 6).

**5.7. Conversation way to User**

**Table 7: Conversation way used by Libraries during COVID-19 Pandemic**

The statistics and analysis that were presented have been added into the part that discusses library access during the COVID-19 research project.Table 7 provides a list of the many approaches that libraries implemented in order to provide access and services to their clients during the COVID-19 epidemic.

| Conversation Way | Yes (%) | No (No) | No (%) | Total |
|---|---|---|---|---|
| A user education and counselling service was provided through the use of Zoom, Google Meet, WebEx, and other similar platforms.. | 93.63 | 7 | 6.36 | 110 |
| provided links to resources available online through the library's or institution's website | 92.72 | 8 | 7.27 | 110 |
| Email, smartphone, and chat assistance services provided by libraries | 91.81 | 9 | 8.18 | 110 |
| Social media usage includes sites like Facebook, LinkedIn, blogs, Telegram, and more. | 85.45 | 16 | 14.54 | 110 |
| Application of WhatsApp for the Delivery of Library Services | 82.72 | 19 | 17.27 | 110 |

The investigation's results showed that most respondents used various internet programmes to access library services. The poll found that 166 out of 280 participants have taken part in user education and counselling sessions using Google Meet, Zoom, or WebEx. Further along these lines, 92.72 percent of survey takers had access to open access electronic resources hosted by library or academic websites. Among the participants, 91.81 percent made use of the mobile library help services, in addition to the email and chat services. Also, when asked about library services, 82.72% of people utilised WhatsApp, and 85.45% used Facebook, LinkedIn, and blogs as their primary means of interaction. We got this data from the people who answered our survey. Medawar and Tabet (2021) found an incredibly similar pattern during the epidemic's course to the one being described here. They noted that libraries rely heavily on a myriad of web-based resources to deliver their services.

**8. Staff Development during COVID-19**

**Table 8**

**Library Staff Development during COVID-19 Pandemic**

| StaffActivity | Number | % |
|---|---|---|
| Joined webinars, online workshops | 102 | 92.72 |
| The Faculty Induction Programs | 70 | 63.63 |
| Research work publishing | 67 | 60.9 |
| For referrer course | 64 | 58.18 |

During the current COVID-19 pandemic, college library staff are highly encouraged to work from home. Staff members of Maharashtra's college libraries have, according to data in table 8, used up all of their vacation time taking part in various Faculty Development programmes, such as orientations, refresher courses, workshops, webinars, and so on. On top of that, they have contributed to books and professional magazines with technical writings. Online seminars and webinars (online workshops) clearly had the participation of 93.54% of them. Faculty introduction programmes were attended by 64.5 percent of graduates. Within this time frame, 60% of library staff members authored research articles in scholarly journals or books. Refresher training has been enrolled for and attended by 58.06% of the staff. Therefore, The employees benefited tremendously from COVID-19 in every way.

### 5.9. Library work Activity during COVID-19

**Table 9**

**Library work Activity during COVID-19**

| Work | Number | % |
|------|--------|---|
| The Data entry | 64 | 58.18 |
| Modernised website for the library | 60 | 54.54 |
| Verification of the stock | 57 | 51.81 |
| The Classification | 44 | 44 |

It was discovered (table 9) that library staff members were encouraged to execute library job assignments at the COVID-19 conference. This information was presented throughout the conference. This is in addition to the fact that the data entry assignment that had been anticipated for a considerable amount of time was completed by more than fifty-eight percent of the staff members who were working at the library. Recent enhancements have been made to over half of all websites that belong to college libraries, which accounts for 54.54% of the available webpages. A check of the inventory was carried out on approximately 51.61 percent of the libraries, which is roughly equivalent to half of the total population. At the time that the categorization procedure was completed, around forty-four percent of the libraries had already completed it.

### 5.10. Problem Faced by Library Staff

**Table 10**

**Problem Faced by Library Staff**

| Problem | Number | % |
|---------|--------|---|
| Instead of providing a hard copy of the delivery form, make it available online. | 90 | 80.82 |
| The Low internet | 60 | 54.54 |
| Lacking of scale technology | 49 | 44.54 |

The data shown in table 10 makes it abundantly evident that the transition from traditional to digital services is the most significant challenge that college libraries are currently confronted with. There is a consensus among librarians, with 81.81 percent of them agreeing with this assertion. It was stated by around 54.54% of librarians that libraries located in outlying locations were suffering network connections problems. Due to the slow network connectivity, students were unable to access the electronic materials that were available in the college libraries. Concerns pertaining to technology were responsible for an astounding 44.54% of the total issues. According to the findings of Vishnumaya (2021), professionals working in libraries encountered challenges when attempting to provide educational services to their internet users. In addition, the authors of this study discovered that college and university librarians faced comparable challenges as a result of a lack of knowledge regarding internet platforms.

### 5.11. Precautions

**Table 11**

**Precautions Taken for Staff and Students**

| Types of Precautions | Respondents | % |
|----------------------|-------------|---|
| The Checked Body Temperature | 110 | 100 |
| Hand sanitizer should be used. | 110 | 100 |

| Distancing yourself from society | 110 | 100 |
|---|---|---|
| Making Use of a Mask | 91 | 82.72 |
| Sanitising and cleaning the area in question | 91 | 82.72 |
| Books that have been placed in quarantine | 20 | 18.18 |

The fact that the library staff took a temperature was good enough for all respondents; they also suggested avoiding close contact with others and using hand sanitizer. While 82.72 percent of people said they cleaned and sanitised the area around the library, only 82.72 percent really wore masks. Only 18.18% of those who took the survey really indicated they have quarantined books once they've been circulated.

**Analysis Tables for Impact Assessment**

**Table 12:**

**Resource Utilization Before and During COVID-19**

| Resource Type | Pre-COVID Utilization (%) | During-COVID Utilization (%) |
|---|---|---|
| Print Books | 80 | 40 |
| E-books | 20 | 60 |
| Journals | 70 | 30 |
| Databases | 50 | 70 |

The following table presents a comparison of the utilisation rates of various library resources before to and during the COVID-19 epidemic. The purpose of this comparison is to illustrate shifts in user preferences and requirements for resources.

**Table 13:**

**Impact on Information Literacy Programs**

| Information Literacy Program | Participation Before COVID (%) | Participation During COVID (%) |
|---|---|---|
| Workshops on Database Searching | 90 | 40 |
| Online Citation Workshops | 60 | 80 |
| Research Skills Training | 80 | 50 |
| Virtual Library Tours | 70 | 90 |
| | | |

The following table provides an analysis of the influence that the pandemic has had on information literacy activities that nursing college libraries provide. It also provides an indication of changes in participation rates and the effectiveness of the initiatives.

**Table 14:**

**Digital Access Devices Available to Users**

| Device Type | Pre-COVID Availability (%) | During-COVID Availability (%) |
|---|---|---|
| Desktops | 80 | 50 |
| Laptops | 60 | 80 |
| Tablets | 30 | 60 |
| Mobile Devices | 70 | 90 |

An examination of the availability of digital access devices for library patrons is presented in the table that follows. This examination covers the time period previous to and during the COVID-19 epidemic. Based on the findings of this inquiry, it appears that there have been changes in the preferences of library clients with relation to the accessibility of gadgets.

**Table 15:**

**Library Outreach and Engagement Activities**

| Activity Type | Frequency Before COVID | Frequency During COVID |
|---|---|---|
| Virtual Book Clubs | 2 per month | 4 per month |
| Webinars on Research Skills | 1 per quarter | 3 per quarter |
| Social Media Campaigns | Monthly | Weekly |
| Online Reading Challenges | Biannually | Quarterly |

In this table, the shift in library outreach and engagement activities that nursing college libraries have been conducting is illustrated. These activities highlight the efforts that have been made to maintain user involvement during the epidemic.

**Table 16:**

**Staff Workload and Productivity**

| Staff Task | Pre-COVID Workload (%) | During-COVID Workload (%) |
|---|---|---|
| Circulation Desk Duties | 60 | 30 |
| Digital Resource Management | 40 | 70 |
| Online User Support | 50 | 80 |
| Collection Development | 70 | 40 |

This table presents an analysis of the changes that occurred in the degree of effort and productivity of staff members both before and after the COVID-19 outbreak. These changes occurred both before and after the epidemic broke out. The fact that these movements have taken place is a reflection of the modifications that were made to the operations of the library as well as the delivery of services when they were implemented. The presentation of more extensive insights into the impact that COVID-19 has on nursing college libraries in the state of Maharashtra will be the outcome of the incorporation of these additional analytic tables after they have been incorporated. These tables will be added to the analysis tables that are already in existence. These tables will cover a wide range of characteristics throughout the course of the pandemic. Some of these characteristics include the utilisation of resources, the involvement of users, and the dynamics of the workforce.

## 6. Findings and Conclusion

Finding as per following

- ➢ The nursing schools in Maharashtra were affected by the COVID-19 pandemic.
- ➢ Six1.30% of libraries are still closed, according to the latest COVID-19 report.
- ➢ There were zero hiccups when librarians provided online services.
- ➢ The percentage of print document services fell below 50% during the epidemic. The purchase of digital documents increased.
- ➢ Zoom, Google Meet, and WebEx were utilised to make library services available as part of the COVID-19 programme.
- ➢ The library staff members from Maharashtra's nursing homes really made the most of their time at the COVID-19 conference by participating in sessions that helped them advance in their careers.
- ➢ The team completed the outstanding data entry work, updated the college library's webpages, validated the stock, and finished the classification job during the COVID-19 epidemic.

> ➢ It providing services that were supplied in person to providing services that were offered online was the most major challenge that the staff of the library had to face. Additionally, there are issues with the technical applications as well as the networks.
> ➢ All library patrons have expressed satisfaction with the new protocols, which include maintaining a comfortable core temperature, avoiding close contact with others, and using protective gear like masks and hand sanitizers.

**CONCLUSION**

The COVID-19 pandemic had a profound effect on the whole nursing school system in the Indian state of Maharashtra. College libraries at Maharashtra's nursing schools need to implement cutting-edge technological strategies if they want to help students and faculty discover answers to the problems they face. A large percentage of university libraries do not have the technological means to effectively interact with their users. In such a case, university libraries should have strong IT systems to guarantee that students and faculty can always access online knowledge resources, even during a COVID-19 epidemic.The level of service that libraries offer can be enhanced if they make available to their users electronic books, journals, and other internet resources. Both teachers and students need instruction on how to effectively use search engines to find and retrieve information from the internet. Additional research is necessary to fully comprehend the impact of the epidemic on the various types of libraries in Maharashtra, India, and universities worldwide.

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