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Jitendra Kumar

*Assistant Librarian, National Institute of Technology Durgapur, West Bengal, India,*  
jitendrakumar.shg@gmail.com

Amit Kumar Verma

*Professional Assistant, Babasaheb Bhimrao Ambedkar University (A Central University) Lucknow, UP, India,* amitveri@gmail.com

Rajesh Das

*Assistant Professor, DLIS, The University of Burdwan, West Bengal, India,* rajeshds99@gmail.com

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# The Anxiety of COVID-19 Outbreak and its Impact on Students' Academic Activity: a Case Study of NIT Durgapur, India

Jitendra Kumar  
Assistant Librarian  
National Institute of Technology Durgapur, West Bengal, India  
Email: [jitendrakumar.shg@gmail.com](mailto:jitendrakumar.shg@gmail.com)

Amit Kumar Verma  
Professional Assistant  
Babasaheb Bhimrao Ambedkar University (A Central University) Lucknow, UP, India  
Email: [amitveri@gmail.com](mailto:amitveri@gmail.com)

Dr Rajesh Das  
Assistant Professor  
DLIS, The University of Burdwan, West Bengal, India  
Email: [rajeshds99@gmail.com](mailto:rajeshds99@gmail.com)

## Abstract

Central Library National Institute of Technology (NIT) Durgapur, West Bengal, India conducted study after the announcement of nationwide lockdown in India to know the students' awareness about COVID-19, anxiety caused, if any, due to the Pandemic and its impact over their academic activities. Central Library also tries to find out the user satisfaction and expectations during the lockdown. Authors opted Google form as a questionnaire which contains the questions of general perception and distributed via Institute email Ids. Responses were analysed using Microsoft Excel. Two hundred fifty research scholars and postgraduate students were selected randomly for the study and 135 (54%) responses received. 107 (77%) were male and 31 (23%) were female respondents. It was found that 133 (99%) of students were aware of the Coronavirus and its impact. 60 (44%) students have no impact over their normal routine at home whereas 22(16%) were afraid of the situation, 14 (10%) were worrying constantly. 47 (35%) were experiencing anxiety and stress. 89 (66%) students believed their lifestyle is changed, the majority of the students 46 (34%) were spending 2-4 hours in the study even more. 109 (81%) students were accessing e-resources through id/passwords and 96 (71%) students agreed that the library plays an inevitable role in their study. With the commencement of online teaching learning Central Library started extending its services beyond the campus and initiated to collect id/passwords so that e-resources can be made accessible off-campus. Simultaneously library started setting up remote access tool to integrate the subscribed e-resources at a single platform.

**Keywords:** *COVID-19, SARS-CoV2, Student anxiety, Online Teaching-Learning, Library services, NIT Durgapur.*

## **Introduction:**

The Outbreak of Novel Corona virus (*SARS-CoV2, the virus causes COVID-19*) has an unprecedented impact on all segments of the society and academic sectors are not an exception. The first case of Novel Coronavirus disease (COVID-19) was identified in Wuhan, Hubei Province, China and spread to other parts of the world. The World Health Organization (WHO) declared novel Corona virus disease as a Public health emergency of International Concern. Countries like India, where maximum academic activities based on the classroom teaching-learning methods experienced a significant interruption in the traditional classroom teaching-learning and forced the academic community to continue the teaching-learning activities remotely adopting the online teaching methods. It compels to the Indian educational institutions to adopt new ways of teaching and learning through ICT (*Information Communication Technology*). The library stepped out to support with possible immediate services to the users remotely and put an extra effort to provide better services to its users during the lockdown as well as making the library a safe place for its stockholders.

## **The Novel (New) Coronavirus (COVID-19):**

Coronavirus's crown-like projections on the surfaces got its name "Corona" a Latin word means "halo" or "crown". In the 1960s, the first case of human Coronavirus identified, and its source still unknown. Existing Novel Coronavirus is new of its kind with some similarity with previous Coronavirus Severe Acute Respiratory Syndrome (SARS-CoV) and Middle East Respiratory Syndrome (MERS-CoV). On January 30 the outbreak was declared a Public Health Emergency of International Concern. Furthermore, on February 11, 2020, World Health Organisation (WHO) announced the name for the new Corona virus disease as COVID-19 (Corona virus Disease 2019). The first COVID-19 case was detected in December 2019 in Wuhan, China and gripped about 213 countries till the end of May and infected more than 22 million people across the globe by the end of July 2020.

## **National Institute of Technology Durgapur (NIT Durgapur)**

NIT Durgapur is one of the premier Institutes of the country to cater Science & Technology education in contemporary and emerging areas. It was established in 1960 as a joint venture of the Government of India and the Government of West Bengal as Regional Engineering College (REC) later on in 2003 got the status of National Institute of Technology under the full administrative and financial control of the Government of India with the status of "Deemed to be University". Under NIT Act 2007 declared as Institute of National Importance. It was started with four branches of

engineering: Civil, Mechanical, Metallurgical and Electrical Engineering for undergraduate studies. Presently Institute offers Nine (9) Bachelor of Technology (B.Tech) programmes and sixteen (16) Master of Technology (M.Tech) programmes. It also offers a two year Master of Business Administration (MBA) programme and three years of Master of Computer Applications (MCA) programmes. NIT Durgapur Library is a well-established library and subscribed to e-resources of leading publishers in the field of Science and Technology. It has more than 1.7 Lakhs of print collection.

### **Announcement of Nationwide Lockdown**

India notified its first case of Coronavirus on January 30, 2020. NIT Durgapur responded promptly and suspended all the classes immediately including any gathering, conferences and seminars etc. and NIT Durgapur fraternity was advised to maintain social and physical distancing to prevent the spread of the pandemic. By the mid of March 2020 almost all the academic institutions of the country declared to close as a precautionary measure and safety of the students and academic community. On March 24, 2020, Prime Minister of India announced a nationwide lockdown for 21 days to break the chain of infection. COVID-19 positive cases reached to 564 in India on the date of announcement as per data of the Ministry of Health & Family Welfare (MoHFW). The spread of the pandemic forced the government to extend the lockdown over and over again on April 13, May 3 and May 18, respectively. From June onwards government started the process of Unlock in phase manners as Unlock 1.0, 2.0, and 3.0 with more relaxations along with specific precautionary measures but academic institutions were still working from home and taking online classes till August 31 2020.

### **Academic Activity and Library Services**

After reporting the spread of the pandemic, NIT Durgapur has been suspended all classes first as a precautionary measure. Students were advised to vacate the hostels and to go back to home for their safety. And started exploring the possibilities of online teaching-learning methods to overcome the academic losses of the students. Online teaching and learning facilities is the consequences of the hard work and joint initiatives of institution's teachers and staff during lockdown. The Institute has embraced the changes without compromising the quality of teaching-learning. Simultaneously Institute library started exploring the possibilities to provide teaching-learning resources online to its user community and started extending its services beyond the campus.

### **Challenges before the library in disseminating e-services during lockdown-**

All academic activities came on the track through online teaching-learning from April 2020 onwards. Initially, NIT Durgapur library uses traditional methods of discharging services, including IP based access to e-resources. With the commencement of online classes, the library started enhancing its services beyond the campus to avoid any academic loss to its user community and put an extra effort to support the online study.

The library started contacting the concerned publishers to provide access off-campus to end-users. Institute library faced the following issue in getting off-campus access:

- Some leading publishers were not ready to provide ID/Password asking to add an extra clause “institution shall be responsible for any unauthorised access of the content” in the License Agreement signed.
- Some publishers provided ID/Password for a limited period which was extended further on request.
- Some publishers provided ID/Password with a user limit.
- Limitation in activating remote access: device pairing required to activate off-campus access
- Some publishers were providing ID/Password for a single machine.

### **Library Initiatives**

Central Library, NIT Durgapur is in its transition phase. And almost ready to shift its services from traditional to technology. Most of keen projects are going on to transform of the library. Library modernisation work has initiated at the beginning of 2019. After the announced of nationwide lockdown in March 2020 and previously initiated work put on hold and library has to keep its services continue more efficiently to support online teaching-learning. Credentials were requested by the concern publishers for off-campus access of e-resources, once the access credentials received proper user guides were prepared to ease the creation of accounts and access e-resources off-campus, and ID/Passwords were shared accordingly with the request to share the same with the students who have not received. Simultaneously library concentrated in setting up remote access tool INFLIBNET Access Management Federation (INFED) to provide seamless access to the subscribed scholarly electronic resources off campus on a single platform with single log in Id and password and implemented successfully by September 2020 with the help of Inflibnet Centre, Gandhinagar, Gujrat, India.

## The objective of the study

Objectives of the present study are:

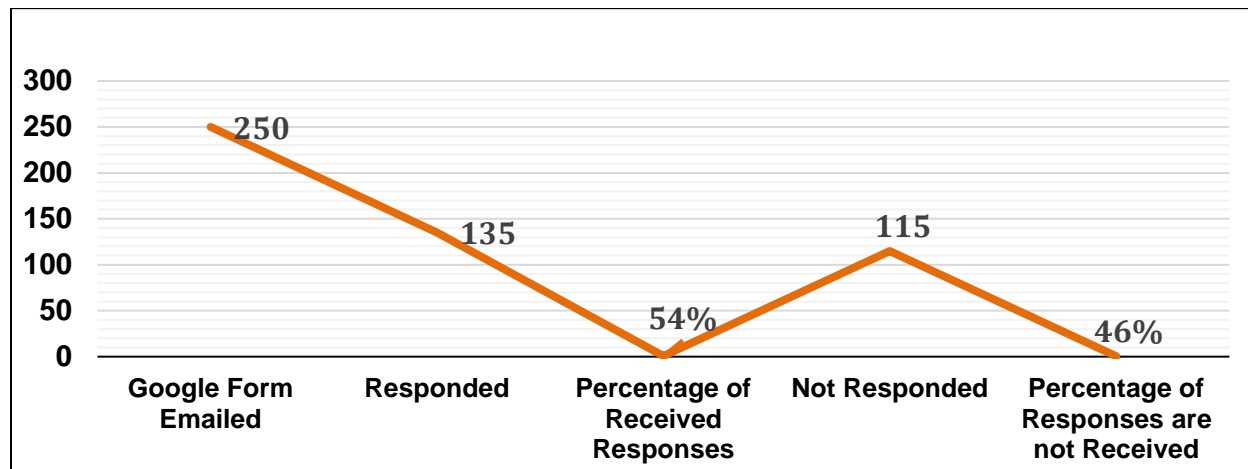
- To know the awareness of COVID-19 in among students.
- To identify the anxiety among students about pandemic COVID-19.
- To study the impact of COVID-19 on their study.
- To investigate the study management by the students during the lockdown.
- To inquire the students' concern or satisfaction about online teaching-learning.
- To know users' expectations and satisfaction about the services provided by institute library.

## Methodology and targeted user group

In April 2020, an online survey was done to collect the data, authors opted Google form to create a questionnaire and emailed to target population. The selected population for the study were Research Scholars (PhD) and Post Graduate (PG) students. Two hundred fifty students were selected randomly for this survey, and the questionnaire framed of general perception and expectations and disseminated using their respective Institute email Ids.

## Results

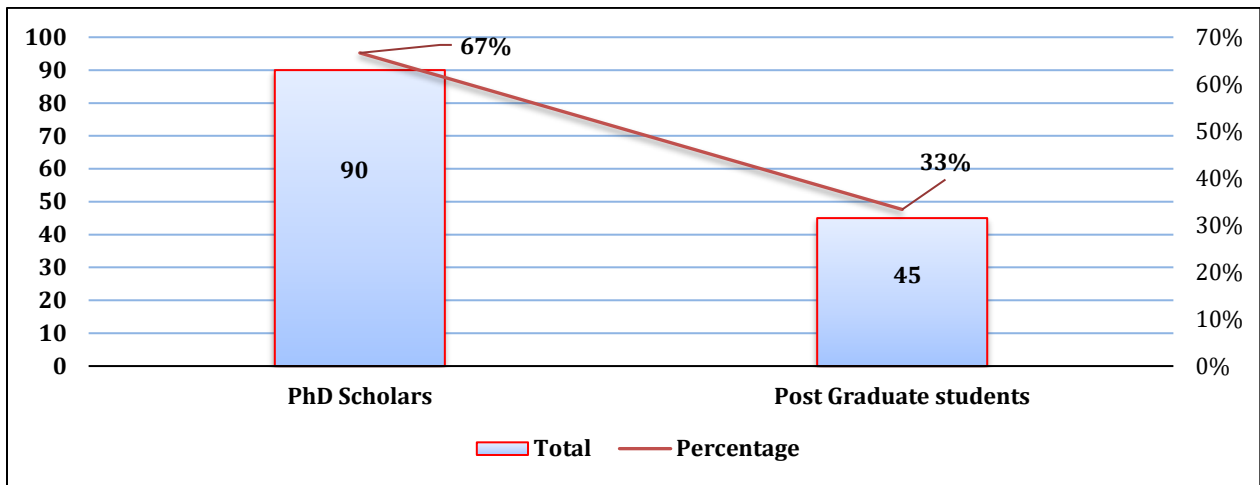
The questionnaire was shared using institute email to 150 research Scholars and 100 Post Graduate students. One hundred thirty-five responses were received and considered for the interpretation.



*Figure-1: Total number of users selected for the study*

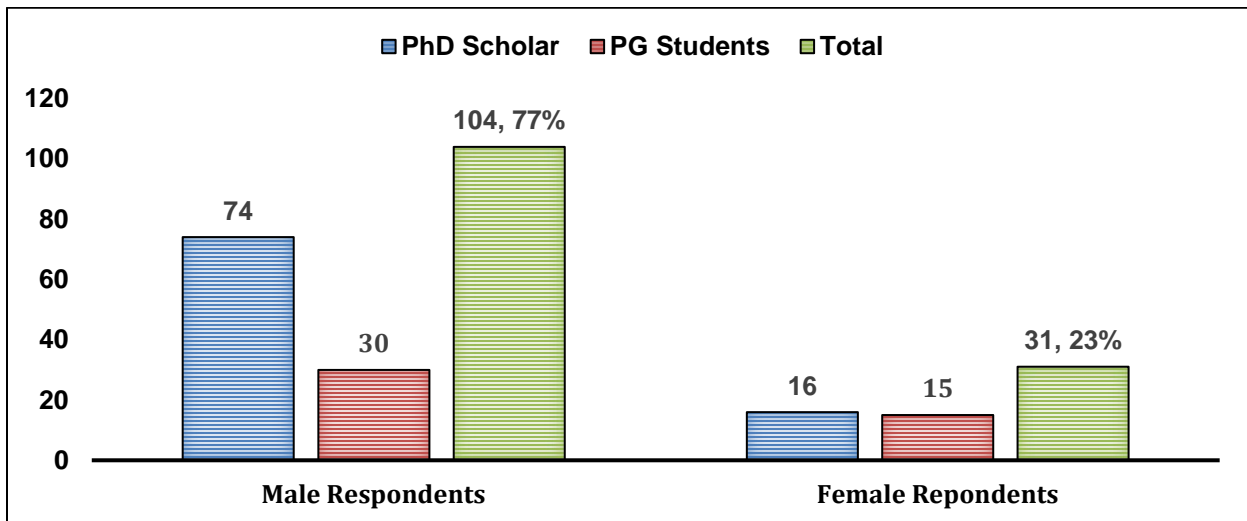
Figure 1 shows questionnaire shared to 250 library fraternities (Scholars and Students only) including 150 scholars and 100 PG students out of which 135 (54%) respondents' response

received comprises 90 PhD and 45 PG students, 115 (46%) not responded. Research scholars participated actively in comparison to the postgraduate students.



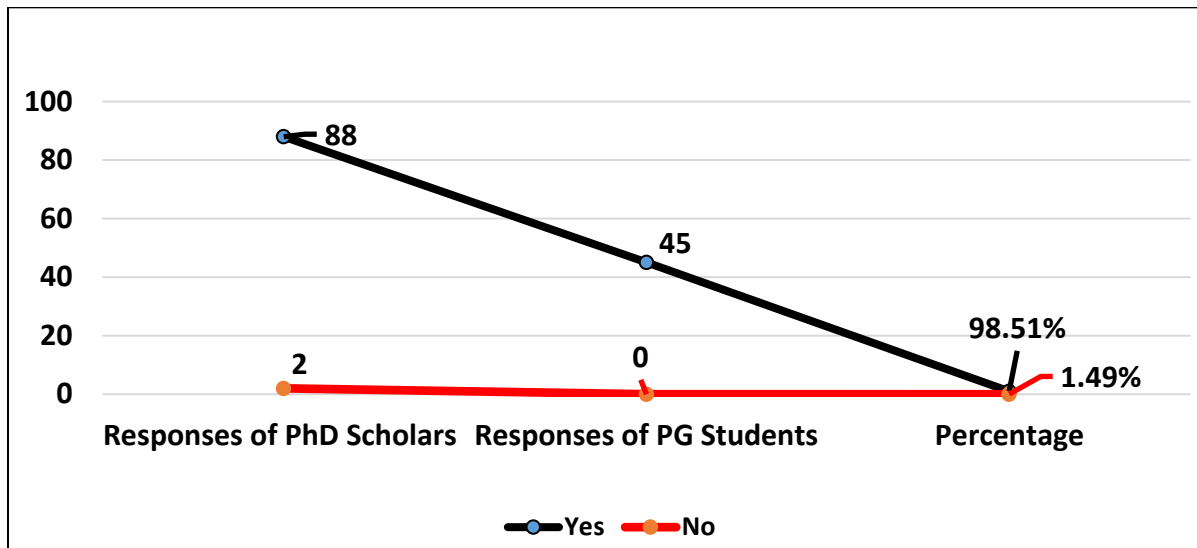
*Figure-2: Responses received programme wise*

**Figure 2:** Total of 135 students participated in the study out of which 90 (60%) research scholars and 45 (45%) postgraduate have responded to the questionnaire.



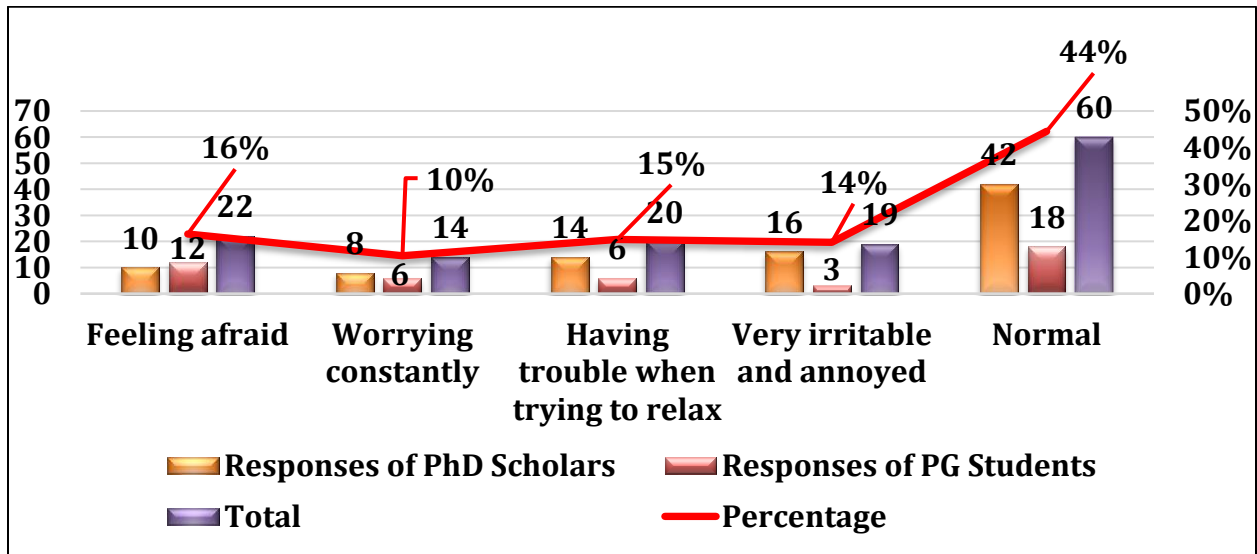
*Figure - 3: Gender wise response*

Figure 3 shows the percentage of male and female respondents, out of 135 responses 104 (77%) male and 31 (23%) female respondents, it can also identify that 90 responses were from PhD and 45 responses recorded from PG students.



*Figure – 4: Awareness of COVID-19 and Its Impact*

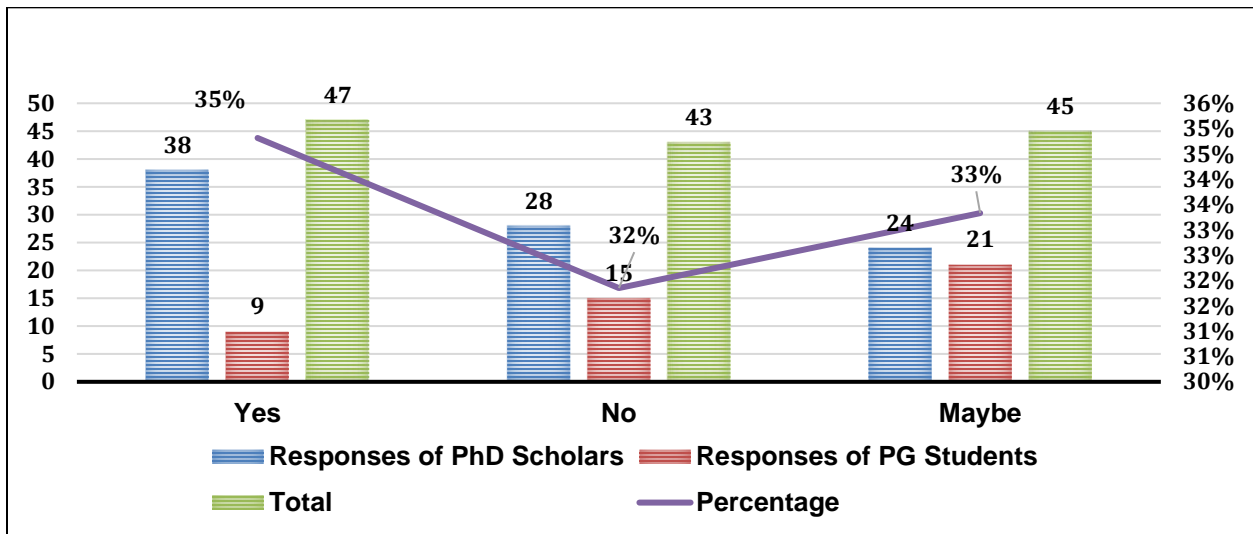
Figure 4: During the time of survey it was found that 133 (98.51%) of the respondents were aware of the Coronavirus and only 2 (1.49%) of responses showed unawareness of the pandemic. Majority of the users were aware of the pandemic.



*Figure – 5: Feelings of students during lockdown*

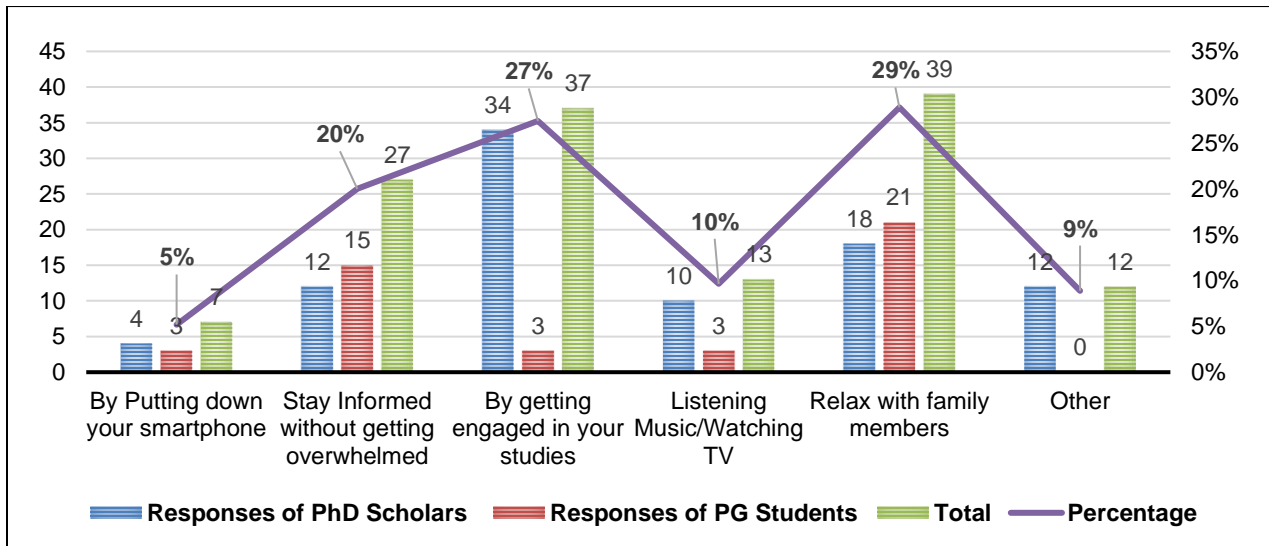
Figure 5: Figure shows that 22 (16%) students were feeling afraid of the pandemic whereas 14 (10%) students were constantly worrying, 20 (15%) students were feeling uneasy when trying to relax, and 19 (14%) students have irritation and annoyed. 60 (44%) students have no impact over them and feeling normal and engaged in their routine work as usual.





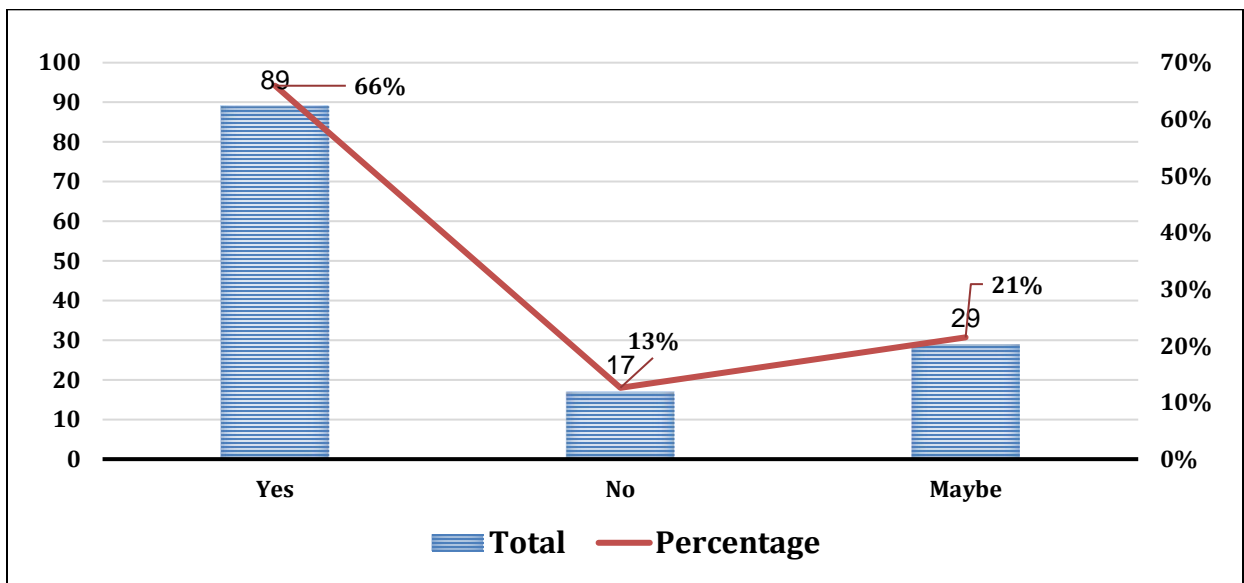
*Figure – 6: Students anxiety/stress due to Coronavirus*

Figure 6 shows that 47 (35%) students were experiencing anxiety and stress due the COVID-19 and Lockdown, whereas, 43(32%) responded that they were feeling normal as earlier. 45 (33%) students' respondents moderately and not sure whether this pandemic cause anxiety or stress to them.



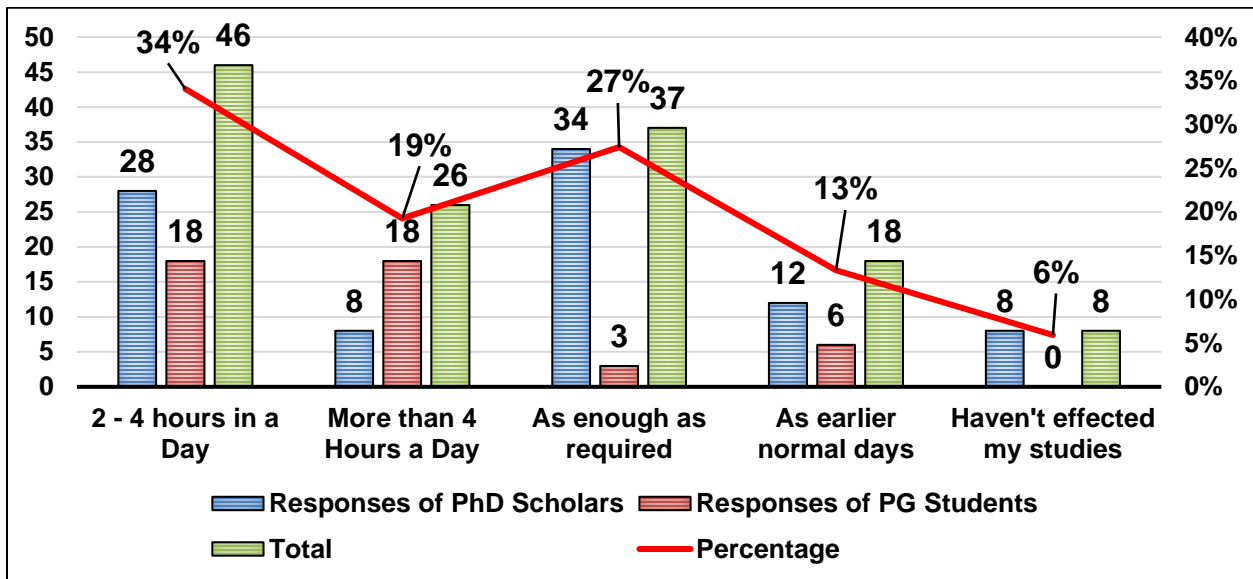
*Figure – 7: Students managed their anxiety/stress during the lockdown*

Figure 7 shows that students have adopted different methods to manage their anxiety level. 7 (5%) of respondents kept away their Smartphone. 27 (20%) students kept themselves informed about the pandemic, 37 (27%) listen to music or watched TV to manage their anxiety, 39 (29%) students spent time with their family members. 12 (9%) students were using different ways to kept themselves free from the anxiety.



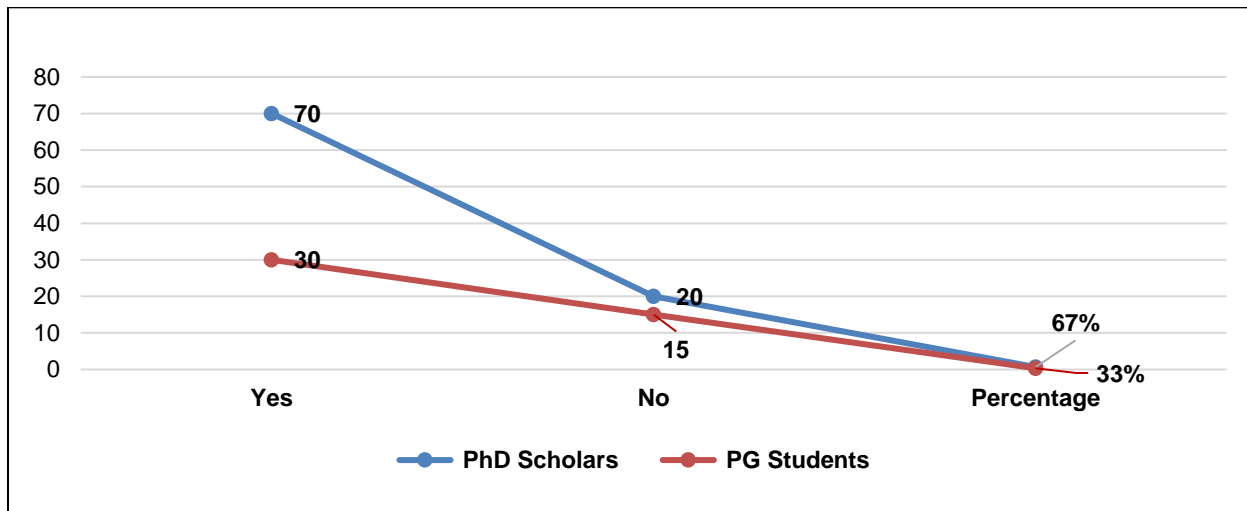
**Figure – 8: Students' lifestyle affected during the lockdown**

Figure 8 shows that 89 (66%) students believe that their lifestyle is changed due to this Covid-19 and lockdown, whereas 17 (13%) believe that it has not affected their lifestyle, rest 29 (21%) students responded moderately over this question.



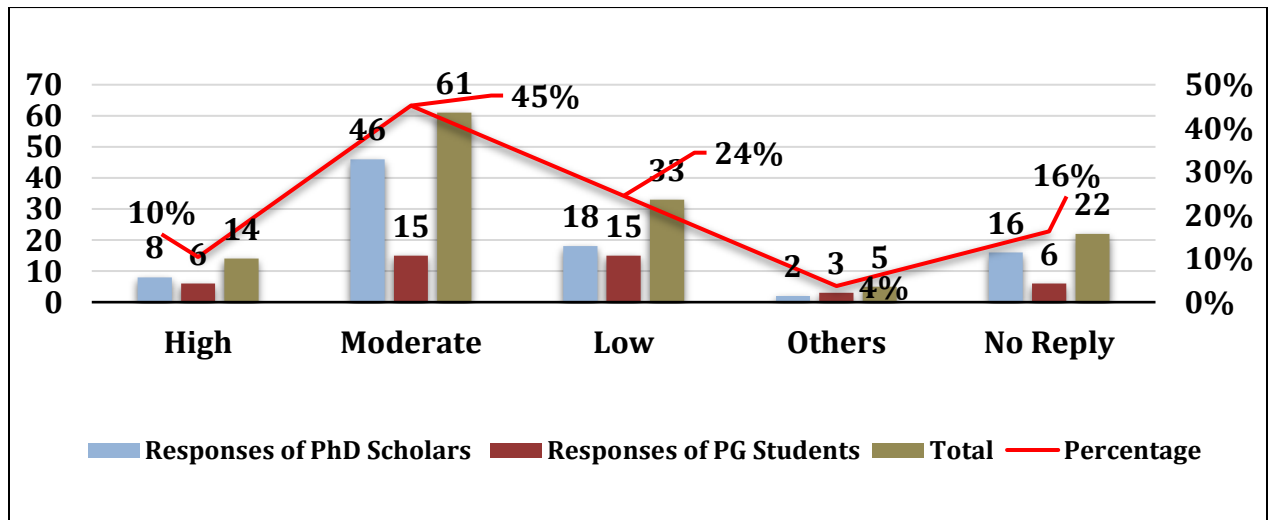
**Figure – 9: Student engaged in their studies during the lockdown**

Figure 9 Library tries to know the COVID-19 impact over their study and found that 46 (34%) students were devoting 2-4 hours per day in study, 26 (19%) students spending more than 4 hours in study. On the other hand, 37 (27%) students were studying as much required, 18 (13%) have no effect on their studies and devoted for their time in studying as earlier, and 16 (6%) students have no impact on their study.



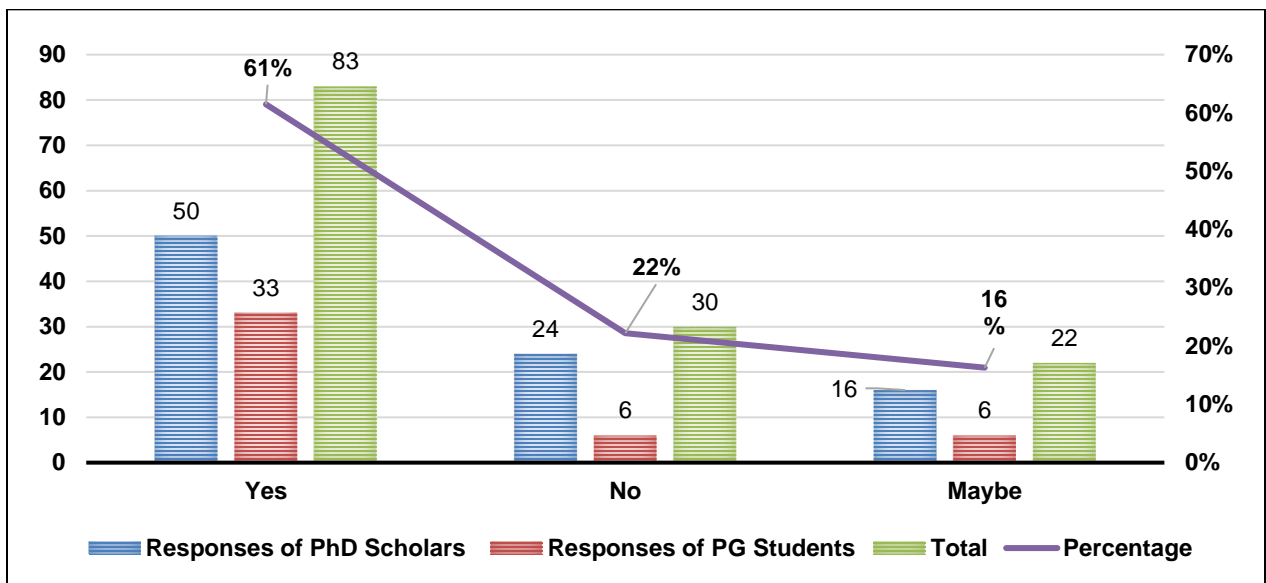
**Figure – 11:** Students installed Aarogyasetu App

Figure 11 Aarogyasetu Application (AA) is a knowledge sharing protocol developed by the National Informatics Centre (NIC), India to facilitate contact tracing people infected with COVID-19 to contain the risk of infection. Here we have received the 67% responses of PhD scholars and 33% of PG students.



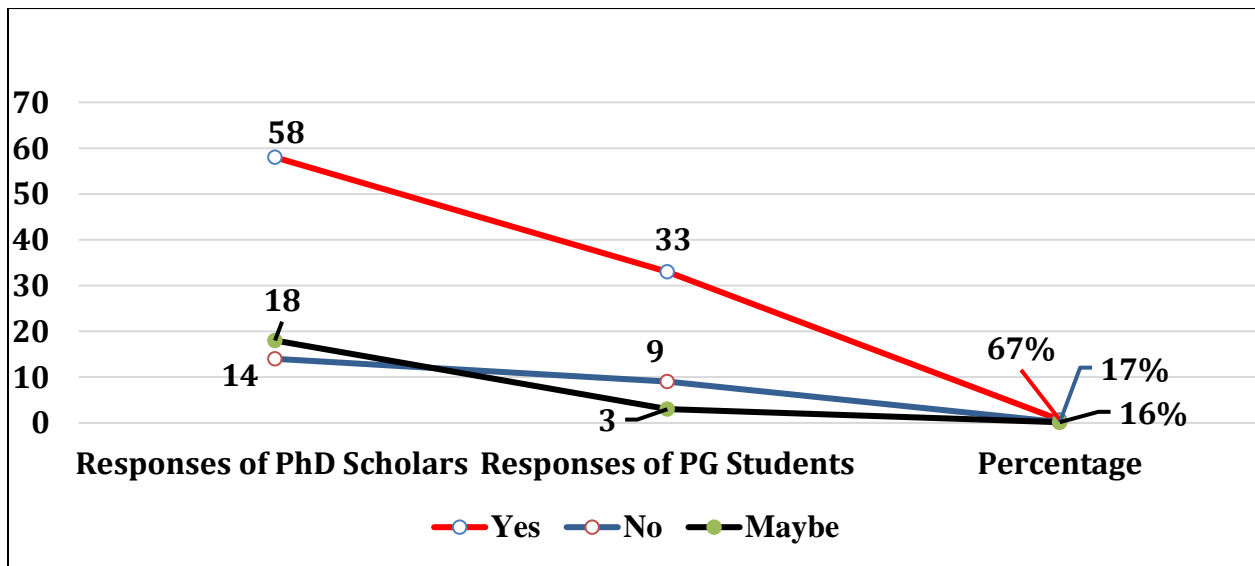
**Figure - 12:** Students' internet connectivity

Internet is the only medium to keep the study on during the pandemic, and a slow internet connection can cause an interruption in the free flow of receiving lectures. *Figure 12* shows the issue related to internet connectivity at home, which was an obstacle in attaining online classes. Only 14 (10%) students were able to access high-speed internet where 61 (45%) users were attaining classes with moderate internet speed, 33 (24%) students have very slow internet speed, 5 (4%) students have other issues and remaining 22 (16%) have not responded over this part.



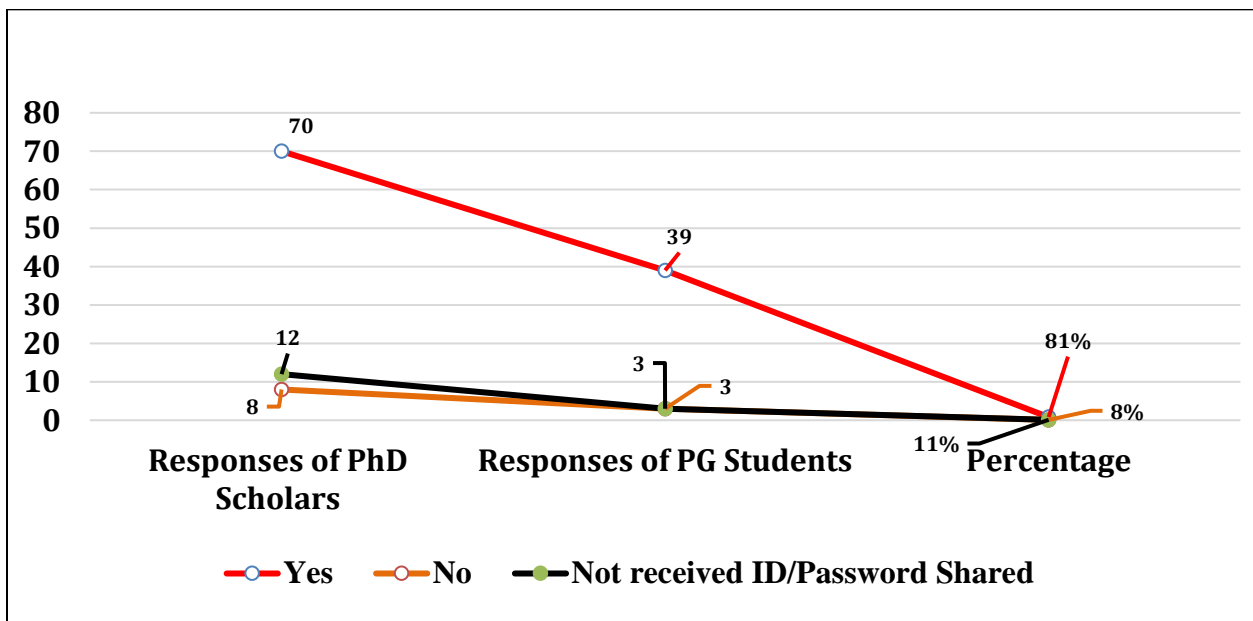
**Figure – 13:** Student availing online teaching-learning facility during the lockdown

Figure 13 shows that 83 (61%) of students were actively availing the facility of online teaching during the lockdown. 30 (22%) students were not availing this facility whereas 22 (16%) students responded as may be; it may be due to the logistic problems such as internet connectivity, device for the classes or may not be acquaintance with online teaching-learning during that time.



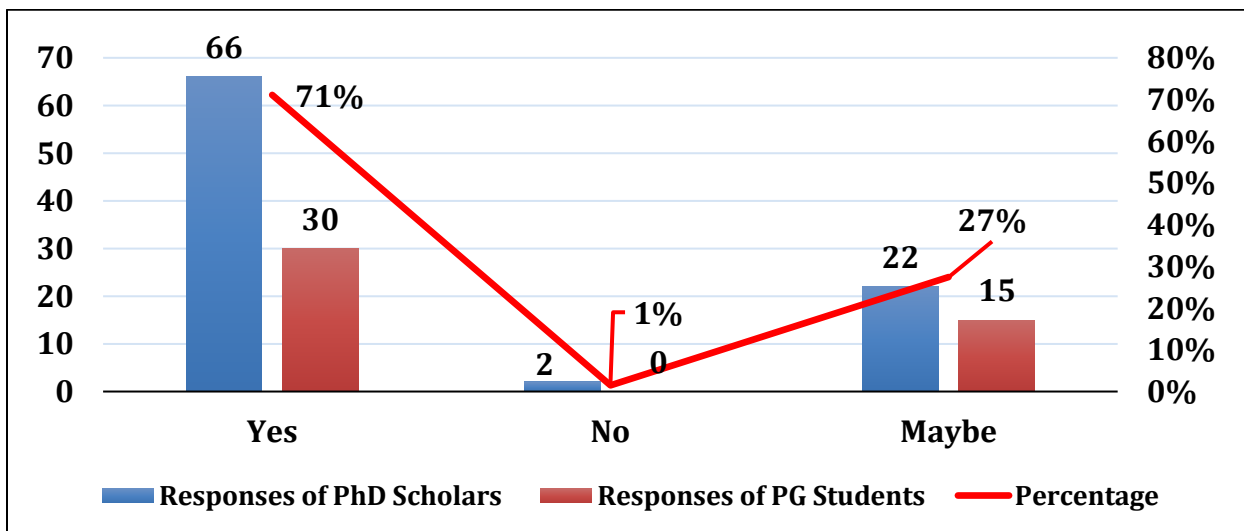
**Figure - 14:** Students are availing services provided by the Central Library

Figure 14 Library tries to find out whether students were availing services during lockdown provided to them, found that 91 (67%) of respondents were using e-resources remotely during this period, 24(17%) of respondents mentioned they are not using the services provided by the library. It may be due to the slow internet connectivity in their regions, and 17 (16%) respondents were not sure about the services rendered.



*Figure – 15: Accessing e-Resources through user ID/Password*

Figure 15 shows 109 (81%) students were using the e-resources through Id/password they have received. 11 (8%) students were not using the e-resources through id/passwords, and 15 (11%) have not received the Id/Password it may be due to the ignorance of using Institute email Id.



*Figure – 16: Users' perception of the role of Central Library during the lockdown*

Figure 16 shows 96 (71%) of respondents agreed that institute library plays an inevitable role in supporting their study by providing off-campus access to the e-resources, 2 (1%) respondents were not agree with the role of the library in their study and not sure of its services supporting their study, 37(27%) students were not sure about the role of the library in their study.

## **Discussion & Suggestions**

NIT Durgapur assumed online teaching in the month of April 2020. This survey was made to study the impact of Coronavirus on their study, and anxiety caused along with the user satisfaction and expectations from the library. To support teaching-learning, the library started sharing the Id/passwords to access e-resources off-campus. Due to the Coronavirus, less than 50 % of the students were feeling normal, and 56% of students have a different kind of restlessness such as feeling afraid or worrying because of the outbreak, some of them feeling annoyed. The positive part was that students engaged themselves in study few of them accepted that their study is affected; the slow internet connection was another obstacle in their study, and 24% students were facing problem due to slow internet connection. The majority of the students (61%) were attending online classes, 22 % were not able to attend classes it may be due to the internet connectivity, or they had some logistic issue. Most of the students agreed of getting updates from the library from time to time to access e-resources, few of them were not sure about the services initiated by the library.

The internet plays a vital role in keeping connect faculty and students with each-other. In February 2017 Government of India has taken the initiative to provide high-speed internet connectivity to 150,000 villages under "Digital Village" scheme with a vision to bridge the gap between rural and urban areas and to connect with rest of the world and to promote online activity in rural areas. If this would have happened earlier, students could have better internet speed which is an inevitable demand of the hour to ensure inclusive online learning. Libraries may take this pandemic as an opportunity to enhance its services by adopting the new methods and techniques to serve the users and to meet their information needs. Remote access tools, digital library, 24\*7 accesses, enriching online resources, online book recommendation system, digital upload etc. incorporating new services are the way to made readily available Institute generated along with subscribed e-resources remotely and supporting online teaching-learning.

## **Conclusion**

The purpose of this study was to find out users' issues and expectations in the pandemic as well as to know their awareness about COVID-19. It was found that maximum students were aware of the pandemic and engaged themselves in the study as per their requirements. They were managing their anxiety differently; some of them keep themselves informed, alternatively listening to music, watching TV or spending their time on social media. 67% of students have installed Aarogyasetu App for contact tracing as suggested by Government of India. 67% of students were availing services of the library, where 16% of them were not sure. They were using Id/password to access e-resources. 71% believed that the libraries played an imperative role in supporting teaching-learning. New initiatives and facilities are in progress for the smooth and uninterrupted services. The library is adopting new Library Management Software (LMS), developing a digital library. Setting up remote access tool and media lab to record lectures at its final stage and expected to start functioning in coming days. Recorded lectures will be catalogued and preserved in the library and uploaded on digital library portal for easy access whereas INFED provides single platform to access e-resources. A modern library is in its initial stage with smart services viz. research support,

article alert service, video library service, online book recommendation system, digital uploads for the users and ask the librarian and chat now etc. like many contemporary services help users to access library e- resources and services remotely.

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