

Information Providing in COVID-19 by Health Professionals in Pakistan

MUHAMMAD SHAHJAHAN¹, MISBAH JABEEN², GHULAM FARID³

¹Library Incharge Nursing Library, University of Health Sciences, Lahore Pakistan & MPhil Scholar, Minhaj University, Lahore, Pakistan

²Lecturer, Department of Computer Sciences, University of Home Economic Lahore, Pakistan & Visiting Faculty, School of Library & Information Science, Minhaj University, Lahore, Pakistan

³Senior Librarian, Shalamar Medical & Dental College, Lahore & PhD Scholar- DoIM, University of the Punjab, Lahore

Correspondence author: Muhammad Shahjahan, Email: shahuhs@gmail.com

ABSTRACT

Purpose: This study analyses the impact on postgraduate students' educational activity at an Allied Health Sciences institute in Pakistan as well as the information distribution during the Covid-19 pandemic.

Methodology: The current quantitative analysis is based on a survey that was conducted among postgraduate allied health science students in various universities in Lahore, Pakistan, to evaluate the efficacy of information distribution during the Covid-19 pandemic.

Finding: The response rate of the study remained 80%. Majority of users, Approximately 69.5% (n=66) of students said they had no trouble getting information during COVID-19, whereas 30.5% (n=29) of students said the information was subpar. Respondents of the study found highly satisfied with the efficiency of library on providing e-services during Covid-19 (P-Value = 0.487). usability of libraries in information dissemination which 74 (78%) respondents said that libraries offer access to trustworthy and reliable Covid-19 pandemic information through a variety of media There is consensus among 75 (or 79%) of the students on the importance of raising awareness and educating people on how to contain the Covid-19 outbreak, as well as the difficulties libraries face in disseminating information. 77 (81%) students said they lack the knowledge and abilities necessary to effectively use the tools and services available on the Internet. The recommendations of the study might be beneficial to enhance the effectiveness of resources and services of universities libraries.

Keywords: University Library; Library Website; Library User; Covid-19 Pandemic; Information Dissemination; Information Technology; Post Graduate Allied Health Science, Students.

INTRODUCTION

Libraries play a critical role in both individual and societal intellectual growth¹. In 2010, the ALA designated the university library "Heart of the University²." Furthermore, the Hamid, Akalumbe, and Monu and⁴ declared that the university library is a department that provides bibliographic material such as books, magazines, audio, and video aids, as well as dissemination services. Libraries are of the view that a university library is an academic warehouse that supports learning, teaching, and research in the university community by providing information resources that promote learning, teaching, and research^{5,6}.

Selected dissemination of current information and awareness services are two examples of information distribution strategies used by academic libraries to transmit information from various themes. Press releases, media files, newsletters, public relations and content are examples of these⁷. These resources provide material that has been adapted for student utilization, such as scientific and research data^{8,9}.

As a result, educational institutions have begun to provide students online interactions such as course materials along with instructions and assignments. To prevent squandering the academic year, the Pakistan Higher Education Commission (HEC) has advised universities and higher education institutions to develop an online teaching and engagement strategy as soon as feasible. HEC (2020) has provided online preparation recommendations and highlighted criteria, including the university's management system, autonomous courses, faculty, library or resource bank, technical infrastructure, student training, diagnostic system, and laboratory system. As a result of the Covid -19 pandemic issue, LIS experts developed initiatives to assist online education and engage with instructors and students. However, under the current condition, Pakistan's university libraries lack the necessary information and communication technology, facilities, and resources to function^{10,11}.

New technology that might help libraries enhance their services and boost user happiness while also providing new possibilities, university libraries, in particular, have elevated consumer expectations of library services¹². In addition, Arthur & Jackson focused on the twenty-first century, the many components of digital information service delivery, and university library communication and information technology in 2020. Print media, he noted, is a significant source of knowledge in libraries.¹³

According to UNESCO¹⁴ Covid-19 pandemic Press, closures in 138 countries have nearly quadrupled to 1.37 billion by March 24, 2020 as a large number of students have been affected in different schools, colleges, and institutions. Meanwhile, almost 60.2 million instructors have departed the classroom. (www.en.unesco.org) these rules, on the other hand, have had a huge impact on libraries all over the world. Libraries have shut down or scaled back their services¹⁵.

Additionally,¹⁶ in response to the Corona virus outbreak, the International Federation of Library Associations and Institutions (IFLA, 2020) has made important library materials available on its website. These resources are designed to help libraries provide information to the public about the spread of Covid-19 during infectious diseases (Yuvaraj, 2020). Content is provided by the American Library Association (ALA) (2020) on its Infectious Disease Preparedness website, and many resources are dedicated to the transmission of Covid-19.

The distribution of information, according to¹⁷, is the dissemination of data to the intended recipients while conforming to specific criteria such as timeliness, dependence, and so on. Personal collection, SMS / text notifications, Facebook, YouTube, QR codes, Online referral service, social media, websites, mailing lists, and OPEC,¹⁸ examples of information sharing tactics tailored to the needs of library users. The examples cited above are digital activities, but there are many more on the horizon. My Library / Personal Space is a self-service platform that allows library users to manage their accounts. Users can customize their profiles and search preferences for library collections by visiting this page.

This study will determine the information dissemination during the Covid -19 pandemic and will examine the impact on the educational activity of postgraduate students in Allied Health Sciences universities as well. This study will also play a significant role in determining the level as well as the quality of information dissemination to the postgraduate Allied Health Sciences students by university libraries of Lahore. The results of this study can be generalized to all those university libraries having similar communication and information system, policies, and circumstances.

This study will be helpful in developing strategies pertaining information dissemination for administration, library officials and policy maker. Therefore, this particular study was intended at

enhancing utilization of information dissemination tools in university libraries specifically in Lahore District.

Delimitations of the Study: The universities of the public, autonomous (Semi-Govt.) and private sectors listed on the websites of Higher Education Commission (HEC) of Pakistan with online libraries were included in this study.

Allied Health Sciences students enrolled in postgraduate programs, who regularly visited library 2-3 times a week, and had completed at least 1 year of study were included in the study.

Research Design and Methodology

Study Design: A cross-sectional descriptive study

Sample Size: Total sample size for this study was 120 health professionals.

Study Population: The population of this study was health care professionals at different universities in Lahore.

Sampling Technique: Purposive sampling method is used for the study.

Data Collection: The study population consisted of post-graduate allied health sciences students. Data was collected through questionnaires.

Data Analysis: All the collected data was examined through Statistical Package for the Social Sciences (SPSS) version 21. For quantitative variables the data represented in the custom of percentages and frequencies.

Data Analysis and Interpretations: The researcher distributed 120 copies of questionnaire among Post-Graduate Allied Health Science students of different universities of Lahore. The researcher received 95 filled questionnaires which proved that response rate of the study was 80% and sound fair. The examination of whole received questionnaires found satisfactory and useful for further analysis.

The researcher has tabulated and analyzed the collected data by using Statistical Package for Social Sciences (SPSS version 21). All the variables of the study were defined and refined in the software with purpose to enter data to take results. The researcher applied the descriptive statistics i.e., mean, standard

deviation, frequency and percentage. The findings of this analysis are being presented in form of charts, tables, columns keeping in view the nature of data collected through questionnaire. Researcher has tried further to interpret and elaborate these tables and charts for better understanding and apprehension. This chapter has been divided in to four main sections according to the structure of the questionnaire i.e., demographic information of the students, usability of libraries in information dissemination, online and offline services provided by libraries to allied health science students, challenges faced by libraries in the dissemination of information.

Explore the usability of libraries in information dissemination during Covid-19 pandemic in Allied Health Institute of Lahore:

Table 1 show that 70 (73.7%) of the respondents agreed to the use of library website during COVID-19, and 74(77.9) students are agreed production and sharing of E-files containing SOPs of Covid-19.

74 (77.9%) responded that libraries provide access to reliable and trustworthy COVID-19 pandemic information via different media. 75(78.9%) students are agreed on providing awareness sensitization on how to restrain the spread of COVID-19 pandemic.

The students of allied health science postgraduate are agreed that libraries provide digital contents to students is 62 (56.8%), connect patrons/students. Nevertheless,59(62.1%) of the respondents agree that the libraries generate and preserve an e-mail list of groups which directly exaggerated by the pandemic.

Therefore, implies that some of the events organized by the allied health science university libraries to curtail the spread of COVID-19 pandemic including maintaining cautious use of PubMed, Google Scholar and news report related to COVID-19 to inform both the emergency management squad and the users (students); producing and allocation E-files containing information of COVID-19 on how to stay from COVID-19 pandemic ; establishing outreach to alert the users as well as disseminating information on COVID-19 to the user via library website. This finding is in the provision with every library.

Table 1: Usability of libraries in information dissemination during Covid-19 pandemic in Allied Health Institute of Lahore.

| Usability of libraries in information dissemination | S. A | | A | | N | | D | | S. D | |
|--|------|----|------|----|------|----|------|----|------|---|
| | % | # | % | # | % | # | % | # | % | # |
| library website usage to disseminate the data on COVID-19 for the students | 35.8 | 34 | 37.9 | 36 | 9.5 | 9 | 14.7 | 14 | 2 | 2 |
| Sharing and production of E-files comprising information on "how to remain safe from Corona. | 29.5 | 28 | 48.4 | 46 | 8.4 | 8 | 11.6 | 11 | 2.1 | 2 |
| Availability of access to reliable Information on COVID-19 through different media | 35.8 | 34 | 42.1 | 40 | 9.5 | 9 | 9.5 | 9 | 3.2 | 3 |
| Availability of awareness-- sensitization that how to decrease the spread of the COVID-19 | 40 | 38 | 38.9 | 37 | 8.4 | 8 | 10.5 | 10 | 2.1 | 2 |
| Generating and retaining of E – mails of groups straightly affected by this pandemic disease | 22.1 | 21 | 40 | 38 | 14.7 | 14 | 17.9 | 17 | 5.3 | 5 |
| Libraries have emergency -response division in Global Pandemic span. | 21.1 | 20 | 28.4 | 27 | 18.9 | 18 | 25.3 | 24 | 5.3 | 5 |
| There are relevant policies in the libraries that are about the situation of global Pandemic. | 23.2 | 22 | 30.5 | 29 | 21.1 | 20 | 20 | 19 | 5.3 | 5 |
| There are numerous channels on Communication with library consumers for situation of any emergency. | 28.4 | 27 | 32.6 | 31 | 17.9 | 17 | 15.8 | 15 | 5.3 | 5 |
| Provision or Establishment of digital fillings to library users. | 18.9 | 18 | 37.9 | 36 | 24.2 | 23 | 14.7 | 14 | 4.2 | 4 |
| loan of E-book | 26.3 | 25 | 33.7 | 32 | 17.9 | 17 | 16.8 | 16 | 5.3 | 5 |
| Organizing and setting on online running or streaming Seminars and programs on the awareness regarding COVID-19 disinformation | 27.4 | 26 | 37.9 | 36 | 18.9 | 18 | 9.5 | 9 | 6.3 | 6 |
| Curtaining open/free access databases to use for both the whole populace and pandemic researchers. | 30.5 | 29 | 43.2 | 41 | 13.7 | 13 | 9.5 | 9 | 3.2 | 3 |

Note: Strongly Agree (S.A), Agree (A), Neutral (N), Disagree (D.A), Strongly Disagree (S.D)

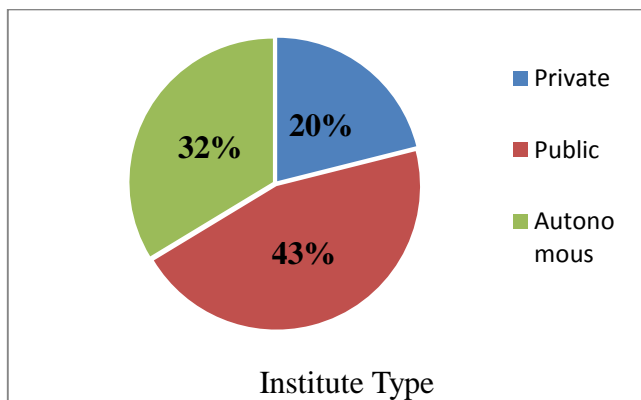


Figure 1 Percentage of different universities

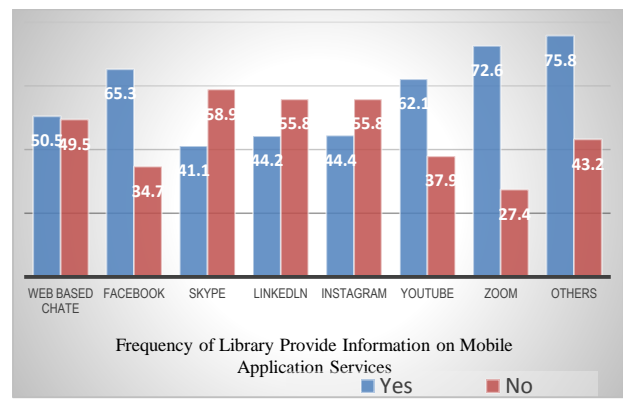


Figure 2: Frequency of library provide information on mobile application services such as Web based chat, Facebook, Skype, LinkedIn, Instagram, YouTube, Zoom, Other

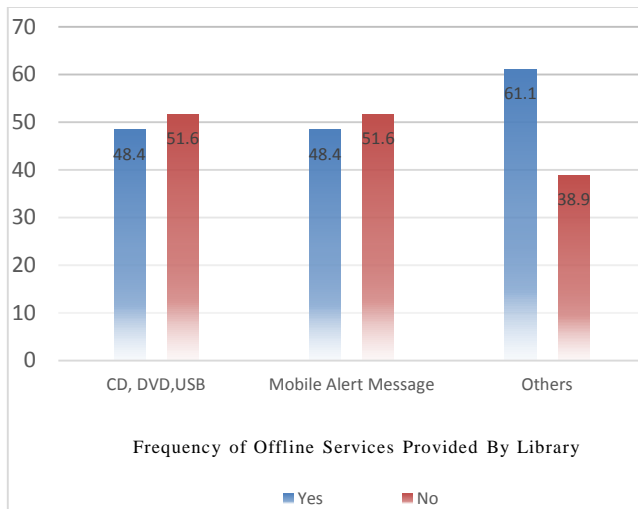


Figure 3: Frequency of offline services provided by library such as CD, DVD, USB, Mobile Alert Message, Other

Table 2: Online and offline services provided by libraries to allied health sciences students of Lahore

| Online and offline services provided by libraries to allied health sciences students | Yes | | No | |
|---|------|----|------|----|
| | % | # | % | # |
| Did the website of library release COVID-19 information? | 69.5 | 66 | 30.5 | 29 |
| Did the library website issue a closure notice? | 54.7 | 52 | 45.3 | 43 |
| Assess to library electronic resources off- Campus | | | | |
| i-Remote access, | 53.7 | 51 | 46.3 | 53 |
| ii-Free electronic resources | 61.1 | 57 | 38.9 | 37 |
| iii-others | 72.6 | 69 | 27.4 | 26 |
| Did library's social media (free messaging and status post) account release COVID-19 information? | 55.8 | 53 | 44.2 | 42 |
| Did the library's microblog (short message) release COVID-19 information? | 53.7 | 51 | 46.3 | 44 |
| Remote reference services | | | | |
| i-Email | 63.2 | 60 | 36.8 | 35 |
| ii-Telephone | 71.6 | 68 | 28.4 | 27 |
| iii-WhatsApp official Account | 52.6 | 50 | 47.4 | 45 |
| iv-QR Code | 48.4 | 46 | 51.6 | 49 |
| v-others | 67.4 | 64 | 32.6 | 31 |
| Did the library collect online course platform? | 67.4 | 64 | 32.6 | 30 |
| Did the library collect multimedia academic resources? | 56.8 | 55 | 43.2 | 40 |
| Did the library provide e- books? | 57.9 | 55 | 42.1 | 40 |
| Did the library provide online subject services? | 52.6 | 50 | 47.4 | 45 |
| Did the library provide information on mobile Application Services? | | | | |
| i-Web based chat, | 50.5 | 48 | 49.5 | 47 |
| ii-Facebook, | 65.3 | 62 | 34.7 | 33 |
| iii-skype, | 41.1 | 39 | 58.9 | 56 |
| iv-LinkedIn, | 44.2 | 42 | 55.8 | 53 |
| v-Instagram | 44.4 | 42 | 55.8 | 53 |
| vi-YouTube | 62.1 | 59 | 37.9 | 36 |
| vii-Zoom | 72.6 | 69 | 27.4 | 26 |
| viii-others | 75.8 | 72 | 24.2 | 23 |
| Did the library exclude books overdue during COVID-19? | 56.8 | 53 | 43.2 | 41 |
| Did the library provide offline services? | | | | |
| i-CD, DVD, USB, VHS, | 48.4 | 46 | 51.6 | 49 |
| ii-Mobile Alert Message | 48.4 | 46 | 51.6 | 48 |
| iii-others | 61.1 | 59 | 38.9 | 35 |
| Did the library provide paper document services? | 51.6 | 49 | 48.4 | 46 |
| Using fosters pamphlets, electronic billboard and hand out | 43.2 | 41 | 56.8 | 54 |

This figure revealed the percentages of different universities students that participated in the study. The result shows three types of universities; private, government/public and autonomous. The results shown by Figure1 are indicating that a majority of the respondents were from public universities with percentage of 45.3 %. While 32(34%) students are from autonomous universities and 20 (21%) students are from private universities.

Information provides by universities libraries to their user on mobile Application are the following Web based chat, Facebook, Skype, LinkedIn, Instagram, YouTube, Zoom. The most usable

application is Zoom which is 72.6% and the other one is YouTube & Facebook which is 62.1% & 65.3%.

This chapter dealt with the analysis and interpretation of data collected from 95 Students of post-graduate allied health science institute in Lahore to elaborate information dissemination during Covid-19. Descriptive statistics and inferential statistics were used for analysis.

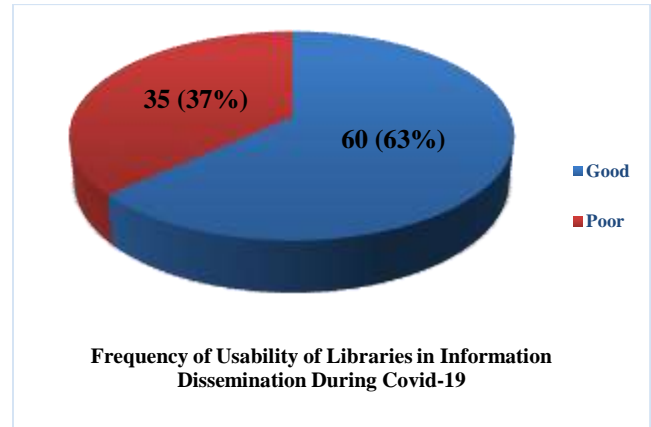


Figure-IV: Compression of usability of libraries in information dissemination during Covid-19 regarding institute type.

Online and offline services provided by libraries to allied health sciences students of Lahore: Table-2 showed online and offline services provided by libraries to allied health sciences students of Lahore. 66 (70%) students respond that library release Covid-19 information. While 57 (61%) students respond that library electronic resources off- Campus of free electronic resources are available. Similarly, 60 (63%) students respond to remote reference services such as email, WhatsApp, telephone and QR Code. 64 (67%) students respond that library provide online course platform. 55 (58%) students respond that library provide e-books during Covid-19. 46 (48%) students respond that library provide offline services such as CD, DVD, USB, Mobile alert.

To compare the usability of libraries information dissemination during Covid-19 with institute type a chi-square test was used 63% (n=60) students respond good while 37% (n=35) students respond poor. The difference was found with highly significant (P-Value = 0.00).

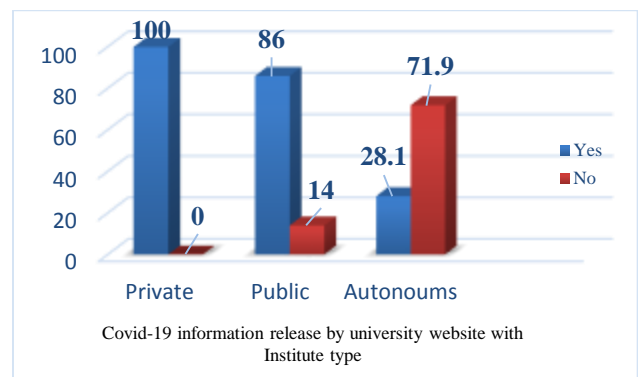


Figure- V: Comparison of Covid-19 information release by university website with Institute type

According to the outcome of Figure 4.8 showed that private universities provide 100% Covid-19 information to their respondents, while public universities provide 86% and autonomous provide 72% information to their students during Covid-19.

DISCUSSION

The major objective of the present study is to explore the usability of libraries in information dissemination and the different offline and online services extended to the users along with the challenges faced by libraries in the dissemination of information during covid-19 pandemic in Postgraduate Allied Health science institutes of Lahore.

To achieve the objective research analysis is divide into the following phases:

Phase-1: Usability of libraries in information dissemination during COVID-19 pandemic

Different resources have been utilized by libraries to share the information to facilitate students during pandemic. According results of the study during covid-19 pandemic more than 70% respondents have used the online resources to get access to required information. The result of the current study is in line with the study conducted in Nigeria, where 61 % respondents agree that they get information from online libraries during pandemic (Adigun et al., 2020). Similarly, the study conducted in China in 2020 reported that 94% of Chinese libraries released Covid-19 information through their website^{19,20,21}.

Phase-2: Online and offline services are provided by libraries to the post-graduate students during COVID-19 pandemic

More than 74% respondents agreed that libraries provided access to reliable information regarding Covid-19 by using different electronic media resources. Congruent study published in China reports that libraries have the highest percentage (about 87%) of off-campus access through virtual private network (VPN) and to support the society, many electronic resources database have been launched with free time limit edition^{22,23}.

Phase-3: Challenges faced by libraries in the dissemination of information during the COVID-19 pandemic

To provide information during the pandemic of Covid-19, libraries faced different challenges in different institutions. The main challenges confronted during the pandemic Covid-19 included shortage of resources, lack of skills and knowledge expertise. 63% students faced issue due to inadequate power supply and 72% students reported difficulties in access to retrieving information network (internet) during Covid-19.

Similarly, in Nigeria the study reported that 76% people faced power supply issues and 71% had inadequate skills and knowledge of utilizing the internet resources^{24, 25,26}.

CONCLUSION

University libraries are important institution and integral part of any university, which needs to be explored to enhance its services and resources in accordance with the needs of its users and researcher. Present quantitative study is based on survey method that was carried out to assess the effectiveness of information dissemination during Covid-19 pandemic among postgraduate allied health science students in different universities in Lahore on a sample of 95 students.

Implication

- The dissemination of information recommended that there should be extensive use of the sources for the dissemination of information since it provide for user of libraries in the universities.
- This study plays a significant role in determining the level as well as the quality of information dissemination of the postgraduate allied health sciences students at universities. The results can be generalized to all those universities libraries having similar communication and information system.

Recommendation

- Case studies can be conducted to evaluate the usefulness, usability, and/or impact of individual library information usage for various research methods and study.

- Studies can be conducted to evaluate the information seeking behavior of on online catalog User-based studies can be conducted to evaluate the services offered by university libraries.

REFERENCES

1. Ferguson S. Are public libraries developers of social capital? A review of their contribution and attempts to demonstrate it. *The Australian Library Journal*. 2012 Feb 1;61(1):22-33.
2. Zepke N, Leach L. Improving student engagement: Ten proposals for action. *Active learning in higher education*. 2010 Nov;11(3):167-77.
3. Dongardive P. Information repackaging in library services. *International Journal of Science and Research (IJSR)*. 2013 Nov;2(11):204-9.
4. Chukwuji CN, Umeji CE. The Role of University Library for enhanced University-Industry Relationship. *Library Philosophy and Practice*. 2020:1-3.
5. Garnar M, Tonyman J. Library as place: Understanding contradicting user expectations. *The Journal of Academic Librarianship*. 2021 Sep 1;47(5):102391.
6. Wright LB. Assessing library instruction: A study of the relationship between attendance, retention, and student success. *The Journal of Academic Librarianship*. 2021 Sep 1;47(5):102431.
7. Awoyemi RA, Awoyemi RO. Beyond the Physical Library Space: Creating a 21st Century Digitally-Oriented Library Environment. In *Handbook of Research on Records and Information Management Strategies for Enhanced Knowledge Coordination 2021* (pp. 189-203). IGI Global.
8. Beetseh K, CLN FN, CLN TA. Librarians' Perception on the use of Social Media as a tool for Preventing the Spread of Coronavirus (COVID-19) in Benue State. *Library Philosophy and Practice*. 2021 Mar 1:1-20.
9. Farid G, Zaheer S, Khalid A, Arshad A, Kamran M. Evaluating Medical College Lib Guides: A Usability Case Study. *Pakistan Journal of Medical & Health Sciences*. 2022 Aug 26;16(07):461-.
10. Batool SH, Malik A, Safdar M, Ali AF. Pandemic Information Access Challenges and Expectations about the Post-Covid Era: A Survey of Pakistan Students' Opinion Regarding Academic Libraries' Services and Staff. *The Journal of Academic Librarianship*. 2022 Nov 1;48(6):102604.
11. Rafiq M, Batool SH, Ali AF, Ullah M. University libraries response to COVID-19 pandemic: A developing country perspective. *The Journal of Academic Librarianship*. 2021 Jan 1;47(1):102280.
12. Kakhki MK, Asl NM, Parirokh M. Assessment of customer knowledge management in academic libraries: Design and validation of a checklist. *The Journal of Academic Librarianship*. 2021 Dec 1;47(6):102459.
13. Mihelj S, Kondor K, Štětka V. Audience engagement with COVID-19 news: The impact of lockdown and live coverage, and the role of polarization. *Journalism Studies*. 2022 Apr 26;23(5-6):569-87.
14. Suarez-Lopez JR, Cairns MR, Sripada K, Quiros-Alcala L, Mielke HW, Eskenazi B, Etzel RA, Kordas K. COVID-19 and children's health in the United States: Consideration of physical and social environments during the pandemic. *Environmental research*. 2021 Jun 1;197:111160.
15. Storr VH, Haefele S, Lofthouse JK, Grube LE. Essential or not? Knowledge problems and COVID-19 stay-at-home orders. *Southern Economic Journal*. 2021 Apr;87(4):1229-49.
16. Chisita CT, Chizoma US. Rethinking academic library space amidst the COVID-19 pandemic in South Africa: preparing for the future. *Information Discovery and Delivery*. 2021 Mar 22.
17. Wu Q, Hu W, Wang H, Liu P, Wang X, Huang B. Spatial distribution, ecological risk and sources of heavy metals in soils from a typical economic development area, Southeastern China. *Science of the Total Environment*. 2021 Aug 1;780:146557.
18. Razouk M. Expanding of occidental food companies toward the oriental markets: internationalisations of H3 company in Dubai market case study (Doctoral dissertation).
19. Guo J, Huang J. Information literacy education during the pandemic: The cases of academic libraries in Chinese top universities. *The Journal of Academic Librarianship*. 2021 Jul 1;47(4):102363.
20. Zhou J. The role of libraries in distance learning during COVID-19. *Information Development*. 2022 Jun;38(2):227-38.
21. Wang L, Guo X, Zhao N, Ouyang Y, Du B, Xu W, Chan TC, Jiang H, Liu S. Effects of the enhanced public health intervention during the COVID-19 epidemic on respiratory and gastrointestinal infectious diseases in China. *Journal of Medical Virology*. 2022 May;94(5):2201-11.
22. Zhang Z, Feng G, Xu J, Zhang Y, Li J, Huang J, Akinwunmi B, Zhang CJ, Ming WK. The impact of public health events on COVID-19 vaccine hesitancy on Chinese social media: national infoveillance study. *JMIR Public Health and Surveillance*. 2021 Nov 9;7(11):e32936.
23. Shi Y, Li C, Luo L. Impact of the COVID-19 pandemic on Chinese college students' information behavior and library needs: A qualitative study. *The Library Quarterly*. 2021 Apr 1;91(2):150-71.
24. Olayemi OM, Adamu H, Olayemi KJ. Perception and readiness of students' towards online learning in Nigeria during covid-19 pandemic. *Perception*. 2021;3(1):4-21.
25. Rahman A. Using students' experience to derive effectiveness of COVID-19-lockdown-induced emergency online learning at undergraduate level: evidence from Assam, India. *Higher Education for the Future*. 2021 Jan;8(1):71-89.
26. Bariham I, Ondigi SR, Kiio M. Preparedness of Ghanaian senior high school instructors for application of online learning in social studies instruction amid the Covid-19 pandemic. *Social Education Research*. 2021:52-64.