ORIGINAL ARTICLE

Information Dissemination during COVID-19 Pandemic among Postgraduate Allied Health Sciences Students in Pakistan

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ABSTRACT

Purpose: This study determines the information dissemination during the Covid-19 pandemic and examine the impact on the educational activity of postgraduate students in Allied Health Sciences institute in Pakistan.

Methodology: 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 Pakistan.

Finding: The response rate of the study remained 80%. Majority of users, about 69.5% (n=66) students responded that they did not have challenges in information dissemination during Covid-19, while 30.5% (n=29) students respond that the information was poor. 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 in which 74 (78%) responded that libraries provide access to reliable and trustworthy Covid-19 pandemic information via different media. 75(79%) students are agreed on providing awareness sensitization on how to restrain the spread of Covid-19 pandemic, online and offline services provided by libraries to allied health science students, challenges faced by libraries in the dissemination of information 77 (81%) Students respond that there is inadequate skills and knowledge of utilizing the Internet resources and services. 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

Background of the Study: In the twenty-first century libraries have traditionally been considered as physical structures that house books, periodicals, manuscripts, and other forms of recorded knowledge[1]. The 21st century's information transmission techniques are the birthplace of technology, and ICT improvements are regularly transforming libraries' acquisition, storage, organization, maintenance, and delivery of information[2].

The 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[3, 4, 5].

The University Library is a site where important information resources are acquired, protected, and disseminated to enhance the teaching and learning process in the parent institutions. 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 these [6,7].

However, since 2020 like all other walks of life, library sciences too have been affected due to pandemic. Covid -19 is a novel virus discovered in Wuhan, Hubei, China on December 31, 2019, with a fatality rate that has been several times higher than seasonal flu, fever, whooping cough, shortness of breath, and acute exhaustion, which overtook the entire world in a matter of days. The WHO (2020) has proposed social separation, lockdown, and isolation or quarantine as a means of combating the outbreak. Because of this unexpected calamity, life altered in an instant. Due to the severe circumstances, all educational institutions, schools, and colleges were closed, and all human activities have been halted for the sake of safety and human welfare[8,9,10, 11,] .

Libraries are a valuable educational resource that gives access to information. Individual reading and library reading are both encouraged. This awareness is linked in the link between library and teaching. Libraries now support the transfer of information and serve as a significant instrument for social empowerment, community literacy, and learning both digitally and physically [12, 13].

Review of the literature is based on the previously released information on library services and the global spread of knowledge during the COVID-19 infection. Because student health is a top priority, governments across the world have shuttered educational facilities as a function of the COVID-19 outbreak. Education professionals have been affected by budget cuts and a lack of human resources. Furthermore, users are unable to obtain information about basic library services. Libraries are still fighting to restore operations despite a variety of interventions. Educators formally secured the library buildings and divided the workforce into shifts [14, 15, 16].

Through these interviews, the researchers were able to determine the emergency responsibilities that these libraries had during the crisis. Institutional support and community member support activities were included in the command center's responsibilitie[17, 18.]

Therefore, to deal with the speedily changing outbreak disaster in libraries, librarians need to retort to rapidly developing information guidelines for getting, interpreting, re-packaging, processing, and disseminating information to up to date the users and should be always ready to increase their capabilities to move away from the traditional ways and to adapt to virtual ways.

Objectives of the Study: The objectives of the study are to:

To explore the usability of libraries in information dissemination during COVID-19 pandemic in Allied Health Institutes of Lahore.

To identify different type of online and offline services provided by libraries to the Allied Health Sciences students during COVID-19 pandemic.

To explore the challenges faced by libraries in the dissemination of information during the COVID-19 pandemic.

Limitation of the study: The first limitation of the study is that this study only covered the students of the post-graduate institutions. Second limitation is that the study was use the self-reported questionnaire to collect data from the respondent which may affect the originality of the results. So, keeping view to this limitation of the study the result can't be generalized.

RESEARCH DESIGN AND METHODOLOGY

Study Design: A cross-sectional descriptive study design has been selected for research because it provides the relevant data for

recounting the position of phenomena or associations among spectacles at an immovable point on time.

Sample Size: The sample is the number of participants included in a study; total sample size for this study was 120 postgraduate students. The calculated sample size was 120 subjects from selected universities. The sample size calculated with the confidence level equal to 95% and the margin of error equal to 7% by the following formula (González-Prida et al., 2020).

$$n = \frac{Z^2\,1-\alpha/2\ P\,(1-P)}{d^2}$$

So, we took the round figure and Sample Size 120.

Study Duration: The study duration was 6 months after approval of synopsis by Synopsis and Ethical Review Committees.

Study Setting: The research work has been supervised for proper direction and guidance at the Minhaj University Lahore. The population of the study involved post-graduate Allied Health Science student in different universities of Lahore.

After approval from the Board of Advanced Studies and Research (BOAS&R) Annexure-II, the study has been conducted in four (4) different universities in Lahore Pakistan. All the participants gave written willingness to take part in the study. An adopted questionnaire with the prior permission from the authors was used as an instrument for data collection. After approvals, data collection was carried out during June 2021 to September 2021. The acquired data was tabulated and analyzed in SPSS 21. Then the results were summarized under the frequencies and percentage of categorical data. Chi square were applied to analyze the data.

Study Population: The population of interest was post graduate Allied Health Sciences students at different universities in Lahore.

Sampling Technique: Purposive sampling method is used for the study. All the participants of study were selected because they met the pre-set criteria.

Sample Selection: The sample is a subset containing the characteristics of a large population. The following standards were established for the selection of participants:

Inclusion Criteria: All those post-graduate Allied Health Sciences students who are enrolled in the main campus of different universities and use library services.

Exclusion Criteria: Those students who are not using library services

All the other students of sub-campus of universities

All the other students at affiliated colleges with main universities campus

Ethical Consideration: These were followed according to the Board of Advance studies and research (BOAS&R) of the University.

Confidentiality and privacy of the participants were taken care.

The student's information or data was used for the sake of research only.

Proper written consent was obtained from all the participants for their voluntary participation.

Any risk or harm to the participants was avoided.

Data Collection: After approval from Board of Advance studies and research (BOAS&R) of the Minhaj University, Lahore, data were collected from the selected universities. The study population consisted of post-graduate allied health sciences students. The sample was selected according to the inclusion criteria. Institutional permission and informed consent were taken from the participants. Confidentiality was ensured. The demographic profile of the participants was recorded. 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. Chi square test were applied for comparison of mean score between two groups of non-adherences.

Data Analysis and Interpretations: Demographic Information of Library Users: The results are indicating that most of the respondents were female with percentage of 65% having 62 numbers in total of 95 while percentile of male was 35% having numbers up to 33 participants. Considering, the above discussion it concludes that representation of female in the study was more than males.

Explore the usability of libraries in information dissemination during Covid-19 pandemic in Allied Health Institute of Lahore: Table 1 show that 70 (74%) of the respondents agreed to the use of library website during COVID-19, and 74(78) students are agreed production and sharing of E-files containing SOPs of Covid-19.

74 (78%) responded that libraries provide access to reliable and trustworthy COVID-19 pandemic information via different media. 75(79%) 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 (57%), connect patrons/students. Nevertheless,59(62%) 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	
	S.A %	Number	A %	Number	N %	Number	D %	Number	S.D %	Number
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	27.4	26	37.9	36	18.9	18	9.5	9	6.3	6

Usability of libraries in information dissemination	S. A		A		N		D		S. D	
	S.A %	Number	A %	Number	N %	Number	D %	Number	S.D %	Number
Seminars and programs on the awareness regarding COVID-19 disinformation.										
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)

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.

Challenges faced by libraries in the dissemination of information during Covid-19 in allied health science Lahore: Table -3 showed the challenges faced by libraries in the dissemination of information during Covid-19 in allied health science Lahore. 77 (81%) Students respond that there is Inadequate skills and knowledge of utilizing the Internet resources and services, while 68 (71%) students having lack of adequate infrastructure/computers with internet connectively. Similarly, 68 (71%) students having poor Internet services delivery among network providers. 61 (64%) students having difficulties in accessing and retrieving information from the internet. While 68 (72%) students respond that there is lack of expertise among librarian to handle the online resources.

Table 2: Challenges faced by libraries in the dissemination of information during Covid-19 in allied health science Lahore

Challenges faced by libraries in the dissemination of information	S. A		A		N		D		S. D	
	S.A %	Number	A %	Number	N %	Number	D %	Number	S.D %	Number
Inadequate skills and knowledge of utilizing the Internet resources and services among the students	23.2	22	57.9	55	10.5	10	5.3	5	3.2	3
Lack of adequate infrastructure/computers with internet connectively	23.2	22	47.4	46	16.8	16	11.6	11	1.1	1
Poor Internet services delivery among network providers	30.5	29	41.1	39	16.8	16	6.3	6	5.3	5
Lack of adequate power supply	23.2	22	40	37	17.9	17	13.7	13	5.3	5
High cost of data subscription	30.5	29	32.6	31	15.8	15	16.8	16	4.2	4
Difficulties in accessing and retrieving information from the internet	26.3	25	37.9	36	20	19	14.7	14	1.1	1
Reduce Library opening Hours	25.3	24	42.1	40	15.8	15	11.6	11	5.3	5
Sanitizing of discharge library materials	31.6	30	34.7	33	23.2	22	9.5	10	1.1	1
Lack of expertise among librarian to handle the online resources	50.5	48	21.1	20	22.1	21	5.3	5	1.1	1

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

It is assertion that libraries in the world are evaluating governments to have fight against this COVID by providing out relevant information and knowledge on sensitization drill to the users, collect the information resources by the accurate and trusted sources. For example, Medline Plus, which is easy to understand by the students. Likewise, the results are in conventionality with the study of Lunds and Wang (2020) that the libraries provide and offer the links of different resources. For example, the Centre for Disease Control (CDC), provide the information on human safety tips. It is also providing the access to remote all online streaming programs. It is a part of the relevant activities to restrain the critical spread of this virus.

About 95% of private universities students have used information regarding Covid-19 which share by their universities, while 79% of public and 22% of autonomous universities students used this information.
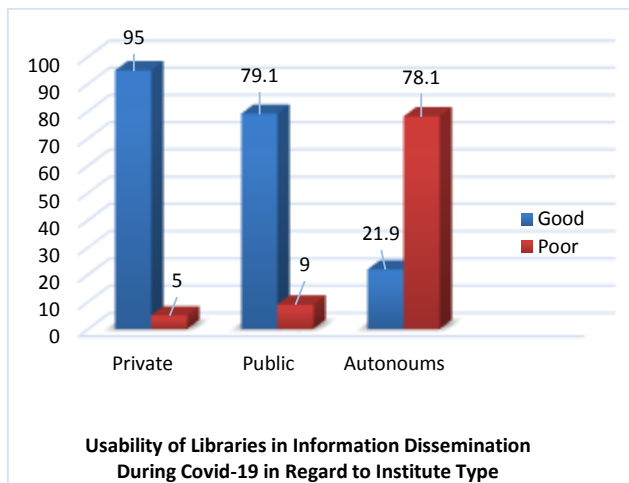

Frequency of Challenges Faced by Libraries in the Dissemination of Information
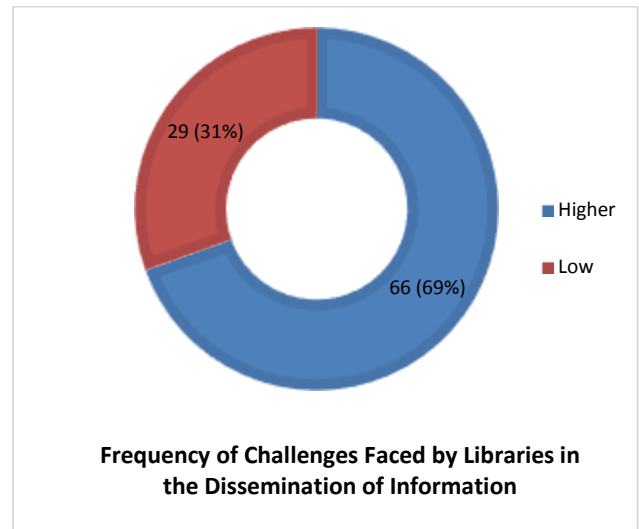
Figure-2: Frequency of challenges faced by libraries in the dissemination of information during Covid-19 with different type of institute

To Frequency of challenges faced by libraries in the dissemination of information during Covid-19 with different type of institute a chi-square test was used. 70% (n=66) students responded that they did not face challenges in information dissemination during Covid-19, while 31% (n=29) students

Usability of Libraries in Information Dissemination During Covid-19 in Regard to Institute Type

Figure-1: Compression of usability of libraries in information dissemination during Covid-19 regarding institute type

responded that the information was poorly transferred among students. The difference was found not significant (P-Value = 0.487).
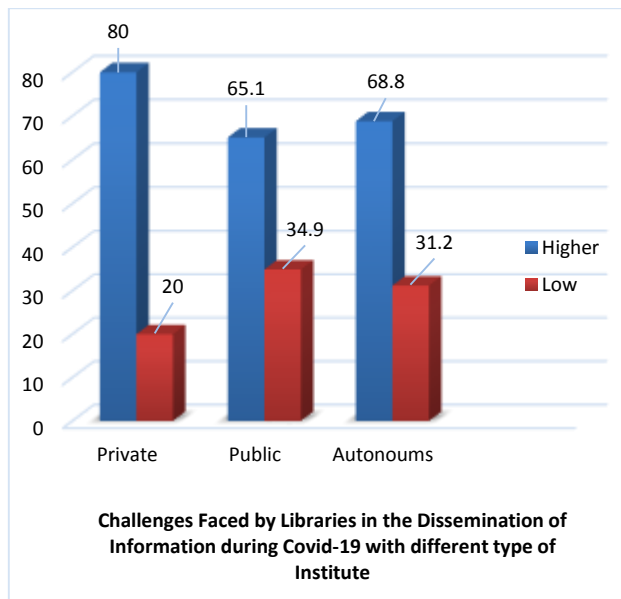

Figure-3: Comparison of challenges faced by libraries in the dissemination of information during Covid-19 with different type of institute

Challenges faced by students during Covid-19 dissemination of information using libraries are numerous. 35% of public universities students, while 31% of autonomous university students faced challenges during Covid pandemic during library services usage.

DISCUSSION

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

At the time of pandemic, 74% student showed willingness to use the sharing of E-Files containing SOPs pertaining to Covid-19. Similarly, study result showed that 61% respondents responded that production and sharing of E-flier contained valuable information and SOPs regarding covid-19 for safety. Similarly, [21] has reported in his study that libraries have active role in Covid-19 pandemic by increasing public awareness regarding prevention and SOPs[22, 23, 24]

CONCLUSION

Information dissemination during covid-19 pandemic has been a big challenge for libraries. However, by using different resources and expertise they overcame the situation. Not only offline resources are utilized, but also introduce online channels and different website to communicate proper and authentic information to students.

Implication: This study opens the new horizon for researchers to investigate the additional ways /mode of information to communicate with the student. Extensive research in Pakistan can be conducted by using financial and human resources on a large sample size in order to achieve significant and generalized results.

A variety of study population like medical universities, colleges and schools can be taken as study participant in future studies.

Recomndation: Keeping in view the findings of the research, following recommendations in terms of implications practice for university librarians to improve information dissemination, and implications policy for university authorities, policy makers and HEC, will overcome the weak areas highlights in the study and more likely bring improvement in university library websites of Pakistan.

The studies can be conducted to evaluate the information seeking behavior of different user groups during any crises.

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