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## Information Seeking Behavior of Nursing Faculty During the COVID-19 Pandemic

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### ABSTRACT

Academics Libraries have developed electronic collections to provide continuing services to their patrons especially during research. Databases and other scholarly online resources have become the main support system of many academic libraries. Beginning in March 2020, the COVID-19 pandemic had a powerfully disruptive and transformative influence on libraries all over the world and some of the services were altered. The University of Memphis Libraries was not an exception. Meeting the challenges associated with significantly increased need for online content, the University Libraries continued to provide access to scholarly resources and supportive reference and instruction services to the diverse academic communities which include the Loewenberg College of Nursing with 52 full time faculty, 785 undergraduate students, and 261 graduate students enrolled on two campuses (Office of International Research, 2019). Branch librarians, authors of this paper, support the research of nursing faculty at each campus and seek to investigate their use and satisfaction with current Health Sciences online library resources during the COVID-19 pandemic. They also assessed their information-seeking strategies throughout. The data collected in a survey served to analyze access and use of library databases, search engines, and other online resources during research inquiries and queries specifically related to COVID-19 information. While the focus group for this study is nursing faculty, findings from the study may also inform improved support of information-seeking faculty in other disciplines.

### KEYWORDS

Health Sciences Databases, Nursing Faculty Research. Electronic Resources, Library Services, Research during COVID-19

### INTRODUCTION

Databases and other scholarly online resources have become the main support system of many academic libraries. Academic libraries have developed electronic collections to provide continuing services to their patrons, especially for research purposes. The goal of this study was to research a public university's Nursing faculty's use and satisfaction with current health sciences online library resources during the COVID-19 pandemic, and to assess the information-seeking strategies of the University of Memphis nursing faculty throughout the pandemic.

Moody and Best (2021) state that during the pandemic the overall usage of services and resources was significantly impacted. The University of Memphis was not an exception. The institution is a public research university in Tennessee. Founded in 1912, the university has an enrollment of more than 22,000 students. The University is classified among R1: Doctoral Universities (Indiana University School of Education, 2021). This status describes the University as very high research activity-oriented organization that requires excellent services and resources.

### University Libraries

The University Libraries is an important resource for the University of Memphis and the Mid-South region. While their primary mission is to serve the University community, library services are extended to students and faculty from other Memphis-area universities, as well as community members. The University Libraries' website (<http://www.memphis.edu/libraries>) provides a digital gateway to the



rich research offerings at the University. As of October 2020, it provides access to approximately 395 subscription and 235 open access electronic resources (indexes, full-text databases, abstracts, streaming media), over 435,326 electronic books, and 156,772 digital monographic, government publications. All are available to University Libraries users, both on or off-campus.

The health sciences collection includes both print and electronic books and journals, and media focusing on health sciences disciplines including nursing, audiology, and speech-language pathology. Related areas of interest in the collection include public health, special education, linguistics, laryngology, otology, neurology, psychology, and sociology. The authors are librarians who work with the University of Memphis Nursing faculty in the Health Sciences branch and Lambuth Campus branch libraries.

### **COVID-19**

The World Health Organization (WHO) declared COVID-19 a global pandemic in March 2020. The pandemic had a powerfully disruptive and transformative influence on the University of Memphis Libraries. Even in times of crisis, the University Libraries provided access to research resources. The University's closure forced all activities to a remote format. Service hours for the University Libraries were shortened and available user spaces were increasingly limited throughout the University of Memphis and the Branch Libraries, but essential library services were largely preserved and delivered with appropriate modifications to ensure safe interactions in accordance with Center for Disease Control and Public Health recommendations and legal mandates. University Libraries' instructional services pivoted seamlessly to remote and synchronous content delivery methods, supplemented by creating online tutorials, full lectures (for asynchronous delivery), quick "how-to" demonstrations, and related formats for general faculty use in specific syllabi or as stand-alone in-class delivery. Throughout the pandemic, the University Libraries provided scholarly resources through the acquisition, organization, management, and preservation of the collections and through supportive reference and instruction services to the diverse academic communities. Reference, database access, research guides, and research assistance continued to be provided in the online environment via chat, email, text, and research consultations (University Libraries, 2020).

### **Loewenberg College of Nursing**

Yoshinaga et al. (2021) state that nurses are the largest professional group in the global health workforce. They are on the frontlines of the pandemic working in hospitals and other settings in diverse communities. Nursing practice aims to improve patient care outcomes by using evidence-based practice and continuous quality improvement.

The University of Memphis Nursing has an enrollment of 785 undergraduate students and 261 graduate students (Loewenberg College of Nursing, 2019). The faculty has a very active research agenda. With a variety of research backgrounds, they conduct research in several areas of interest. They lead diverse collaborative efforts aiming to achieve better population health, better health care and lower healthcare costs. The data collected in the survey served to analyze access and use of library databases, search engines, and other online resources during research inquiries and queries specifically related to COVID-19 information.

### **Research Questions**

These are the authors' research questions:

RQ1. What are the informational source preferences, access points, and access point barriers of nursing faculty?

RQ2. Are there differences in those preferences, access points, and barriers during a mostly online environment like the COVID-19 pandemic?

RQ3. How do nursing faculty investigate clinical and patient care during this real-time health crisis?

RQ4. How might library professionals better support nursing faculty in their online information-seeking activities?



The Institutional Review Board (IRB) evaluated this survey protocol. They determined that this project did not meet the Office of Human Subjects Research Protections definition of human subjects' research, and 45 CFR part 46 does not apply. As such, this study was deemed not subject to IRB review.

### LITERATURE REVIEW

This study adds to the current body of research and knowledge concerning faculty information-seeking behavior. The literature review in the following sections contextualizes the concepts and principles presented and discussed here.

#### Access Points

Access points that faculty use to find electronic medical information are varied and many studies have been conducted to identify them, improve upon them, or understand their appeal more fully. Before and during the COVID-19 pandemic, studies showed that Health Sciences faculty begin their search for health-related information by accessing preferred databases such as *Medline PubMed* or *Medline Ovid* (De Groote et al, 2014; Kamada et al, 2021). Furthermore, while databases are popular access points on at least a *weekly* basis, De Groote, Shultz and Blecic (2014) found that Google was utilized more often on a *daily* basis than even the most popular database in their study, *Medline*.

Current research on how academic faculty have sought COVID-19 information is limited, but studies of information seeking by the public found that, on a daily basis, people relied heavily on the internet (Vogels et al., 2020) and often begin their search of COVID-19 information by accessing internet search engines such as Google (Shen et al., 2020; Siebenhaar et al., 2020). Moreover, in their exploration of 200 Google searches, Shen et al. (2020) found that the most common resulting information was found on reliable websites "including the CDC, academic websites, and the WHO," where CDC stands for Centers for Disease Control and Prevention and WHO stands for the World Health Organization.

Information queries are often subject to the ease of access and barriers sometimes limit use of particular resources. The Medical Library Association's InSight Initiative discussed barriers to clinical information access during their 5th summit. Eight 'pain points' were identified that "users experience when they try to access information in a clinical environment" including a "lack of time" and not having a full awareness of the resources to which they have access (Laera et al., 2021). It may be surmised that Health Sciences researchers such as nursing faculty would also be influenced by these types of barriers.

#### Information Seeking Behavior

Multiple and diverse institutions have conducted studies about their users' information-seeking behavior (Curtis et al., 1997; De Groote et al., 2014). Online databases and journals have transformed the use patterns of academic health sciences libraries. After conducting a survey of nursing faculty, Gahn, et al. (2018) discovered problems that the faculty members encountered when they were finding and accessing the literature, especially the access to full text of some articles. These studies serve as a foundation to this article's authors' research.

#### Marketing Resources and Services

Online and hybrid programs are a growing trend in higher education, and equitable access to library services and resources is vital for all patrons. Marketing and outreach about electronic services and resources is crucial for online users, who often cannot physically come to the library for materials (Harlow & Hill, 2020). Halevi and O'Hanlon (2016) state that content marketing can be powerful to create awareness about libraries services and resources. They promoted the use of remote resources using social media, the library's website, and articles about the library's services, and found that librarians need to develop creative ways to establish long-term engagement.

#### Mobile Learning

Mobile learning is becoming more prevalent due to advances and use of technology. Faculty use mobile information and communication technologies to enhance the teaching-learning experience



(Biddix et al., 2016). Forehand et al. (2021) add that the world has seen an explosion in mobile device technology over the past decade. That phenomenon adds to the impact that COVID-19 caused on nursing education programs. Mobile technologies bring endless possibilities, and its ease of use has transformed the way individuals interact with their devices and influences where and how information is accessed.

### METHOD

This study explores the search preferences and behaviors of nursing faculty during the COVID-19 pandemic. The findings of the survey identify information-seeking strategies specific to nursing faculty during the unique, mostly virtual, circumstances of a pandemic. The researchers employed a quantitative cross-sectional design to collect the data to answer the research questions that were adapted from a survey published by De Groote, Shultz and Bleic (2014) and Gahn, et al. (2018) presentation in a professional meeting.

This descriptive, exploratory study uses the institutional online survey platform Qualtrics, which includes advanced data analysis and reporting features, social media integration, and collaboration opportunities. The survey involved answering a series of multiple-choice questions with space for comments and two open-ended questions. It took approximately 10 minutes to complete.

The survey was sent through the Loewenberg College of Nursing Administration Associate to all 119 nursing faculty members which included 56 full-time and 63 part-time nursing faculty members, and the participants were faculty members from the Loewenberg College of Nursing at two campuses. The faculty survey response rate was lower than expected, but researchers did receive 31 responses (26% response rate). Although the participation was not as high as expected, the data gathered is useful to plan services and assess online resources.

### SURVEY RESULTS

In question 1, participants were provided a list of online resources and asked how often they searched them to find articles for research purposes during the COVID-19 pandemic (see Appendix A, Table A1). On a daily basis during the pandemic most nursing faculty began their research with Google (see Figure 1). Google was also highly utilized on a weekly basis (see Figure 1). Google Scholar and the Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases were the most frequently used databases on a weekly basis (see Figure 1). The Medline (EBSCO, Ovid or PubMed) and UpToDate databases were also frequently accessed on a weekly basis for research purposes. In fact, only 12.9% never accessed CINAHL and only 10% never accessed Medline (EBSCO, Ovid or PubMed). Primal Pictures and StatRef were the least-utilized sources of those provided, as 86.21% never accessed Primal Pictures and 80% never accessed StatRef.

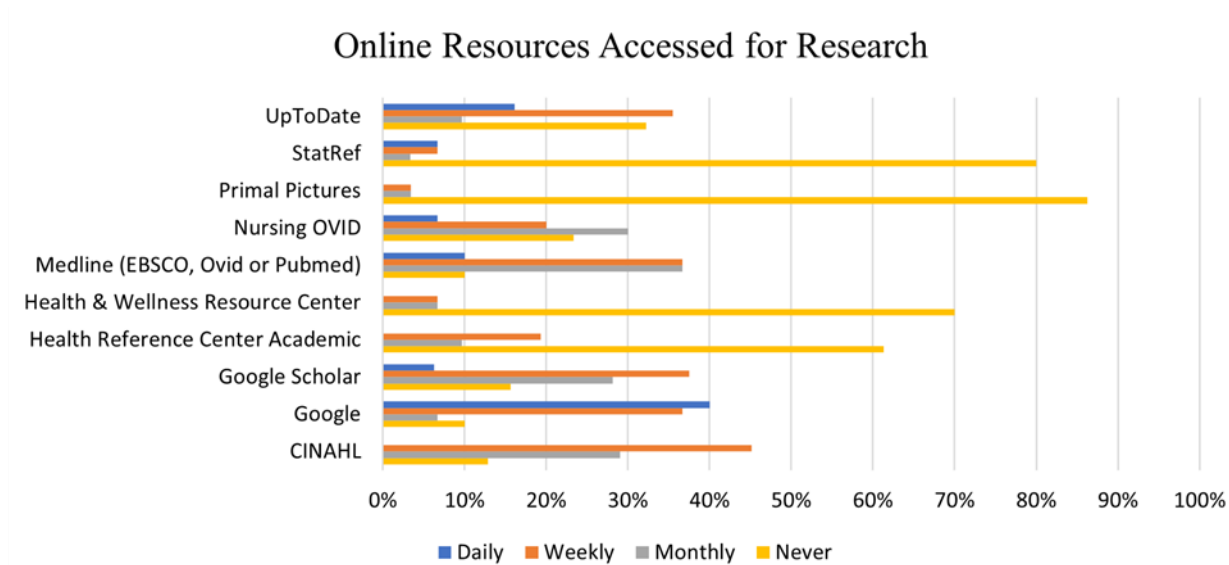
In question 2, participants were asked to list their “most frequently used database during the pandemic,” and why they used it (see Appendix A, Table A2). Participants responded with names of databases and websites and search engines. After compiling the open-ended results, researchers discovered that CINAHL was the most frequently used database of nursing faculty during the pandemic and was noted for its ease of use and relevant nursing information. Google Scholar and Medline were other frequently used databases. Several respondents noted the convenience of Google and one explained that it provided the “most information possible including news sources.” Other databases and sources of information were not as popular.

In question 3, participants were provided a list of online resources and asked how often they searched them to find “non COVID-19 related clinical and patient care information” (see Appendix A, Table A3). On a daily basis, most participants turned to either the UpToDate database or the Centers for Disease Control and Prevention (CDC) website for non-COVID-19 related clinical and patient care information, while most participants checked the American Nurses Association (ANA) website or the CDC on a monthly basis for information (see Figure 2). On a weekly basis most participants searched for non-COVID-19 related clinical and patient care information in the UpToDate database or on local/state/federal government websites (see Figure 2). Considering that the UpToDate database was frequently ac-

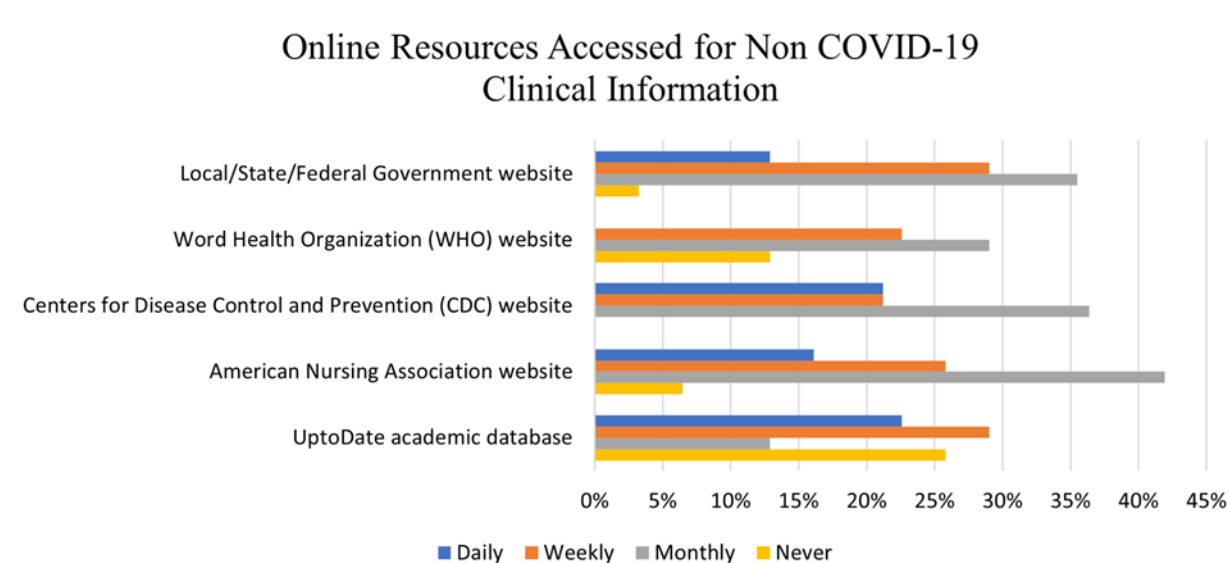


cessed on a daily and weekly basis, researchers found it particularly interesting that a significant number of respondents never access the *UpToDate* database for clinical and patient care information (see Figure 2). Other question responses shed light on this discrepancy and are discussed further in the conclusion.

**Figure 1:** Percentage of respondents who accessed provided online resources daily, weekly, monthly, or never for research.



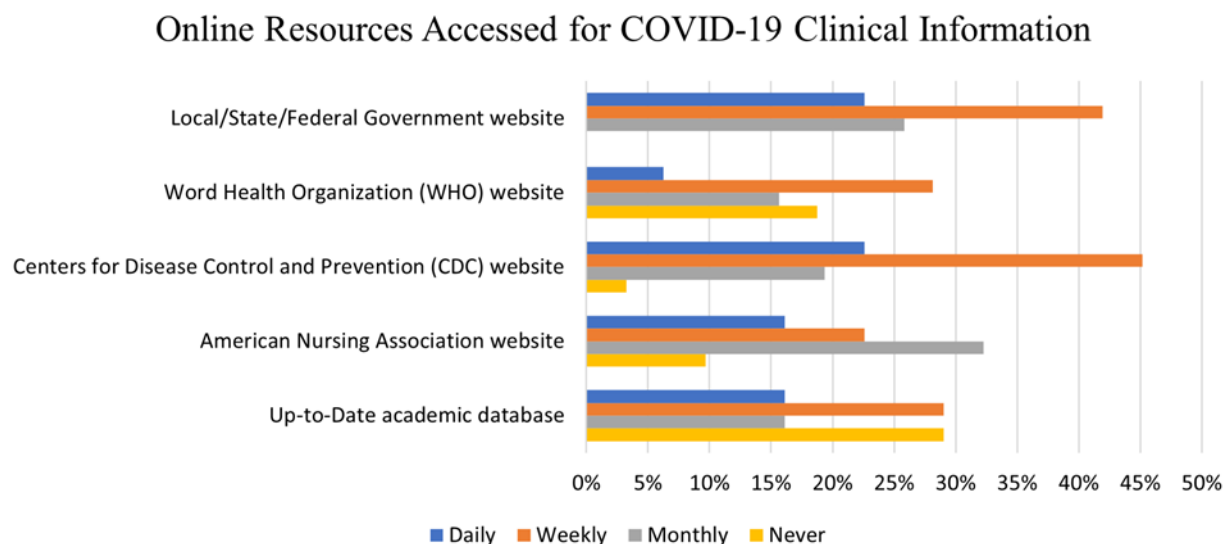
**Figure 2:** Percentage of respondents who accessed provided online resources daily, weekly, monthly, or never for non-COVID-19 clinical information.



In question 4, participants were provided the same list of online resources as question 3 but were asked how often they searched them to find “COVID-19 related clinical and patient care information” (see Appendix A, Table A4). On a daily and weekly basis most participants turned to the CDC website or local/state/federal government websites for COVID-19 related clinical and patient care information (see Figure 3). A greater percentage of participants checked the ANA website on a monthly basis for COVID-19 clinical and patient care information (see Figure 3).

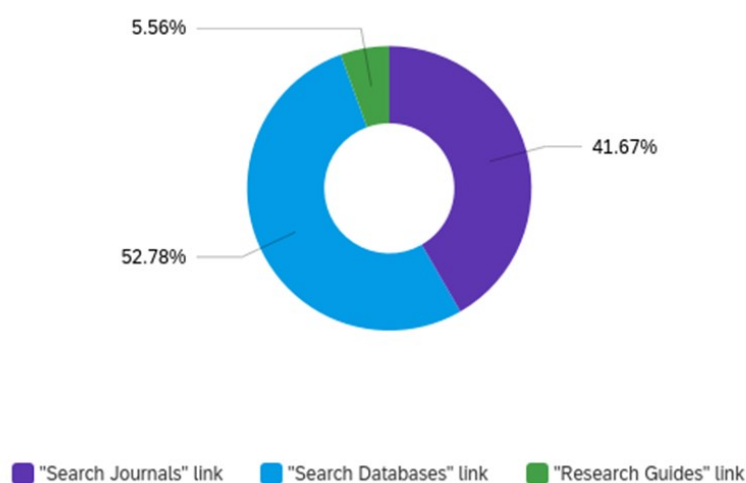


**Figure 3:** Percentage of respondents who accessed provided online resources daily, weekly, monthly, or never for COVID-19 clinical information.



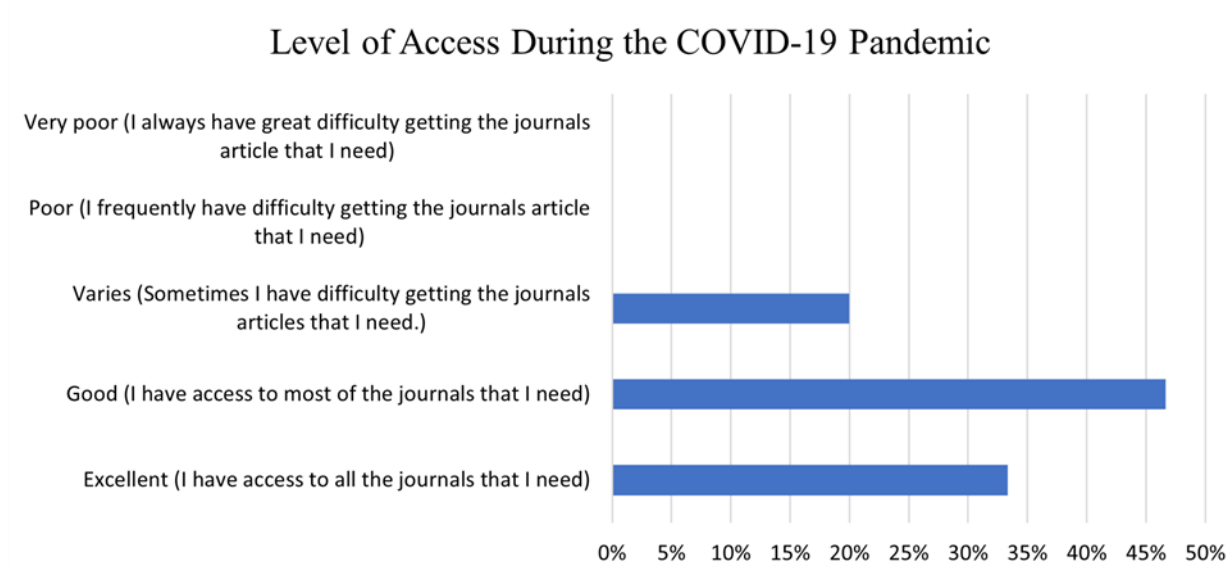
In question 5, participants were provided with choices of access points and were asked what their “primary location/access points” were to search for journal articles during the COVID-19 pandemic (see Appendix A, Table A5). Almost half of the participants (49.06%) used the library website as a primary access point for searching journal articles. Of specific library web pages provided, the least used as an access point was a library *Research Guides* link (see Figure 4). Participants also had the option to write in other preferences for access points. Researchers found it valuable information that one participant mentioned using apps and another accessed information through phone notifications.

**Figure 4:** Percentage of library primary access points used to find journal articles.



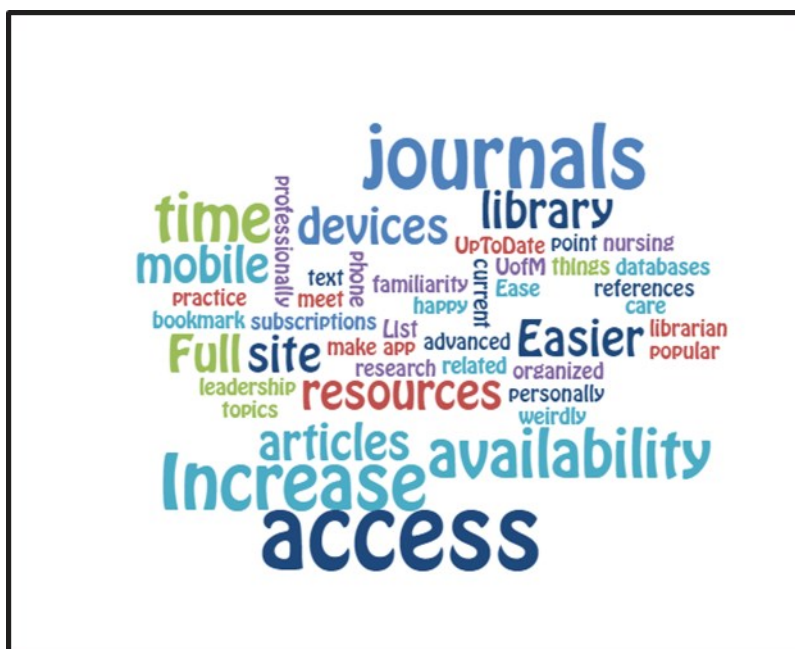
In question 6, participants were asked to rate their level of access to research articles during the COVID-19 pandemic (see Appendix A, Table A6). The results were at the desired level with most participants expressing that they have good access (46.7%) or excellent access (33.3%) (see Figure 5). For 20% of the faculty members’ access varies. None of the participants expressed having poor or very poor access.



**Figure 5:** Level of access to research articles during the COVID-19 pandemic.

In question 7, participants were asked “what has caused you the most problems in finding research articles during the COVID-19 pandemic” (see Appendix A, Table A7). Given the results of question 6, it is not surprising that only 9 out of the 31 participants (29%) noted problems with finding research articles during the COVID-19 pandemic. Some of the problems mentioned by the faculty are ease of access, time restraints, and lack of availability on mobile devices.

In question 8, participants were asked what would help them “better utilize library resources” (see Appendix A, Table A8). While some participants responded that they did not need further help utilizing library resources, others responded with helpful suggestions. Words from responses were used to create the word cloud below. As the size of each word indicates, easier access on mobile devices, full text access, and the increased availability of journals are top requests (see Figure 6).

**Figure 6:** Word cloud using open-ended responses from question 6. The size of the word directly corresponds to the number of times used in all responses.



## DISCUSSION

### **RQ1. What are the informational source preferences, access points, and access point barriers of nursing faculty?**

The results of this study indicate that information access points utilized by nursing faculty during the COVID-19 pandemic was highly dependent upon how quickly the information is needed. For day-to-day information, nursing faculty, like the public (Vogels et al, 2020), rely heavily upon convenient search engines such as *Google* and readily available public-facing websites such as the CDC to access information. On a less frequent basis, nursing faculty access academic databases and professional websites such as the *American Nursing Association COVID-19 Resource Center*.

Most respondents did not report having issues accessing information resources, but notable challenges and information needs were expressed including time constraints, full-text barriers, and a lack of mobile access points. Authors interpret these challenges as opportunities to improve library services, marketing, and instruction.

### **RQ2. Are there differences in those preferences, access points, and barriers during a mostly online environment like the COVID-19 pandemic?**

While many nursing faculty relied upon the Google search engine for quick, daily research during the pandemic, most continued to rely upon databases such as the *Cumulative Index of Nursing and Allied Health Literature (CINAHL)*, *PubMed*, and *UpToDate* for more periodic searches of academic articles, and the results showed that their satisfaction rate with their current level of access to research articles was high. However, authors noted that preferred databases have been more frequently promoted and demonstrated in library instruction than less popular databases. One such database, *StatRef*, for example, was infrequently accessed by nursing faculty even though it offers a mix of health sciences academic articles, current new items and evidence alerts which were all found to be important to faculty and would generally seem to be helpful for COVID-19 research. During special circumstances such as the pandemic, this study shows that it is especially important to consider promoting databases that offer a unique mix of daily updates, academic research, and user-friendly apps.

### **RQ3. How do nursing faculty investigate clinical and patient care during this real-time health crisis?**

Many nursing faculty used the database *UpToDate* to investigate clinical and patient care information, to investigate clinical and patient care during the COVID-19 pandemic, but a significant number of nursing faculty reportedly never use it. *UpToDate* includes readily available patient care information that may be accessed from a mobile application which, according to responses, seems to be preferred (see Appendix A, Table A5). Further investigation may need to take place to understand this discrepancy, but one particular response of “*UpToDate... and now it’s gone*” sheds light on the potential perception that the University Libraries no longer carries a subscription to it.

### **RQ4. How might library professionals better support nursing faculty in their online information-seeking activities?**

Using the information provided from this study, authors aim to strengthen personalized services and outreach to better support nursing faculty information-seeking activities. A key take away from this study is the importance of mobile access especially during times when information is rapidly being updated. Authors plan to further investigate and promote mobile access options for health sciences subscribed databases and journals including applications available and the mobile notification capabilities.

Increasing the awareness of subscribed databases, journal options, and library services is important for improved support. For example, authors noted that at least one participant requested more access to journals in nursing leadership. The University Libraries currently holds subscriptions to highly regarded nursing leadership journals such as *Nurse Leader*, *Journal of Nursing Administration*, and *Nursing Management*. Authors hope to increase awareness of these journal subscriptions and find out if there are other titles that need to be considered. In addition, some participants requested more access



to ‘full-text’ begging the question of whether they are aware of the interlibrary loan program which is a free service for the University’s community and supports full-text access. Educating nursing faculty on the availability of these types of resources and services provided by the University Libraries that address online access barriers will be a goal for improved outreach.

### CONCLUSION

Authors value the connections they have with faculty and recognize that they are “entitled to the library services and resources including direct communication with the library personnel, regardless of where they are physically located” (ACRL, 2021). At their respective campuses, both authors plan to develop instructional and marketing initiatives to promote University Libraries’ health sciences mobile information access points. In doing so, authors have learned not to rely too heavily on any single point of contact to share library resources with faculty. For example, at the beginning of the pandemic, the health sciences librarian spent a significant amount of time developing a COVID-19 research guide. Disappointingly, the results of this study indicate that the guide was not accessed very often by nursing faculty. Perhaps this was due to a lack of awareness; perhaps not. Regardless, this understanding shows that continuing communication with nursing faculty even at a distance is critical.

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### Appendix A Survey Question Results

**Table A1:** How often have you searched the following online resources to find articles for research purposes during the COVID-19 pandemic?

Online Resource	Daily	Weekly	Monthly	Couple times a year	Never	Total
<i>CINAHL</i>	0.00%	45.16%	29.03%	12.90%	12.90%	31
<i>Google</i>	40.00%	36.67%	6.67%	6.67%	10.00%	30
<i>Google Scholar</i>	6.25%	37.50%	28.13%	12.50%	15.63%	32
<i>Health Reference Center Academic</i>	0.00%	19.35%	9.68%	9.68%	61.29%	31
<i>Health &amp; Wellness Resource Center</i>	0.00%	6.67%	6.67%	16.67%	70.00%	30
<i>Medline (EBSCO, Ovid or Pubmed)</i>	10.00%	36.67%	36.67%	6.67%	10.00%	30
<i>Nursing OVID</i>	6.67%	20.00%	30.00%	20.00%	23.33%	30
<i>Primal Pictures</i>	0.00%	3.45%	3.45%	6.90%	86.21%	29
<i>StatRef</i>	6.67%	6.67%	3.33%	3.33%	80.00%	30
<i>UpToDate</i>	16.13%	35.48%	9.68%	6.45%	32.26%	31
Other:	0.00%	44.44%	11.11%	0.00%	44.44%	9



**Table A2:** What has been your most frequently used database during the pandemic and why did you use it? Open-ended responses:

Open-ended responses:
<i>Google</i> as it brings up the most information possible including news sources; however, for research purposes, <i>CDC</i> and <i>PubMed</i> as I was research COVID-19 specifically with <i>PubMed</i> the most searched
<i>CINAHL</i> - used to it and provides specific to nursing info
<i>UpToDate</i> because it was easier and quicker to access from my mobile device
<i>Medline</i> : it has articles that are written easy to understand on many topics that I teach
<i>CINAHL</i> -this is the one that I am most comfortable using.
Most frequently I have been following research provided by <i>ANA SmartBrief</i> , <i>Medscape</i> , and <i>PracticeUpdate</i> .
<i>UpToDate</i> ... and now it's gone
<i>UpToDate</i> , <i>Epocrates</i> ... These resources keep me abreast of current evidence and are at my fingertips. These resources help guide my clinical decision making.
I search ANA website, <i>JONA journal</i> , AONL website for leadership research.
<i>Google</i> , due to convenience
<i>UpToDate</i> , current information, clinical information
<i>CINAHL</i> - Graduate research for school
<i>MedScape</i> - easy to understand with explanations that I can help students understand
<i>Medline</i> , <i>EBSCO</i> , <i>Google</i> , and <i>CINAHL</i>
CDC, Tennessee Dept of Health. To get most up to date scientific data and instructions on how to proceed in hospital.
<i>Google</i> - convenient
<i>CINAHL</i> ; easy to use
<i>UpToDate</i> - for current guidelines related to many health conditions - COVID and non-COVID. Also ensuring diseases taught are based on most current evidence.
<i>CINAHL</i> -Nursing DB
<i>CINAHL</i> - Very easy to use and found relevant articles.
I search for business,admin and leadership articles and OVID is best for those.
<i>CINAHL</i> - working on my DNP and conduct regular literature searches
<i>UpToDate</i> contains most updated information.
<i>CINAHL</i> and <i>PubMed</i> . Had the information I needed.
CDC websites AANP/AAP - local chapter TNAAP for local and statewide information on cases, testing and vaccine recommendations
<i>Google</i> - Various reasons- information for my dissertation- COVID information- information required for course requirements- health care related education for employees and patients
<i>Google scholar</i> for a quick search
<i>PubMed</i> -Free access and related content



**Table A3:** How often have you searched the following online resources for non COVID-19 related clinical and patient care information?

Patient Care Online Resources	Daily	Weekly	Monthly	Couple times a year	Never	Total Responses
<i>UpToDate</i> academic database	22.58%	29.03%	12.90%	9.68%	25.81%	31
American Nursing Association website	16.13%	25.81%	41.94%	9.68%	6.45%	31
Centers for Disease Control and Prevention (CDC) website	21.21%	21.21%	36.36%	21.21%	0.00%	33
World Health Organization (WHO) website	0.00%	22.58%	29.03%	35.48%	12.90%	31
Local/State/Federal Government website	12.90%	29.03%	35.48%	19.35%	3.23%	31
Other:	40.00%	0.00%	20.00%	0.00%	40.00%	5

**Table A4:** How often have you searched the following online resources for COVID-19 related clinical and patient care information?

Patient Care Online Resources	Daily	Weekly	Monthly	Couple times a year	Never	Total Responses
<i>UpToDate</i> academic database	16.13%	29.03%	16.13%	9.68%	29.03%	31
American Nursing Association website	16.13%	22.58%	32.26%	19.35%	9.68%	31
Centers for Disease Control and Prevention (CDC) website	22.58%	45.16%	19.35%	9.68%	3.23%	31
World Health Organization (WHO) website	6.25%	28.13%	15.63%	31.25%	18.75%	32
Local/State/Federal Government website	22.58%	41.94%	25.81%	9.68%	0.00%	31
Other:	33.33%	0.00%	0.00%	0.00%	66.67%	3



**Table A5:** During the COVID-19 pandemic, what have been the primary location/access points you have used to search for journal articles?

Answer	%	Count
Search box on University Libraries website	17.05%	15
Search journals on University Libraries website ("Search Journals" link)	17.05%	15
Search databases on University Libraries website ("Search Databases" link)	21.59%	19
Search research guides on University Libraries website ("Research Guides" link)	2.27%	2
Search in a search engine (e.g. <i>Google, Bing, Yahoo</i> )	15.91%	14
Through personal journals subscriptions	9.09%	8
Using bookmarks in my web browser	14.77%	13
Other (please mention)	2.27%	2
<b>Other:</b>		
<i>Browzine</i> app. <i>UpToDate</i> app. <i>Medscape</i> app. <i>VisualDx</i> app.		
Alert notices on iPhone		

**Table A6:** How would you describe your current level of access to research articles during the COVID-19 pandemic?

Answer	%	Count
Excellent (I have access to all the journals that I need)	33.3%	10
Good (I have access to most of the journals that I need)	46.7%	14
Varies (Sometimes I have difficulty getting the journal articles that I need.)	20.00%	6
Poor (I frequently have difficulty getting the journals article that I need)	0.00%	0
Very poor (I always have great difficulty getting the journals article that I need)	0.00%	0
Total	100%	30



**Table A7:** What has caused you the most problems in finding research articles during the COVID-19 pandemic?

Open-ended responses:
Lack of access
Haven't experienced problems. ILIAD may have taken a bit longer than usual
Timely access. Access to online journals not easy process
Time constraints
None
No problems
Limited library journal articles
None
Nothing
No real problems
No problems
Availability and ease of access
No issues
Students having problems which I don't have time to help with. I reached out to Dr. Singarella, and this has made all the difference in the world.
Fewer full text articles available
Not having library subscriptions to some journals
Access on mobile devices
None that I encountered



**Table A8:** What would help you to better utilize library resources?

<b>Open-ended responses:</b>
Full access to some of the journals
More time - professionally and personally. Hard to make time to meet w librarian. Increase familiarity with data-bases, etc.
Having an app to journals or being able to access journals just like UpToDate
List of most current articles related to popular topics
None
I have to bookmark things because the library site (like all of the UofM sites) are weirdly organized
Increased access to nursing advanced practice, leadership, and research journals
None
Better able to access using mobile devices (iPad, phone)
Easier access to resources
Cannot think of anything at this time
Ease of access, more point of care references
Very happy with library resources
Increasing full text availability
More subscriptions to journals
Easier access for mobile devices
Sometimes access or availability for the article I think I need
Increase availability



## Appendix B Participants

**Table B1:** Faculty Rank

7 (22.6 %)	Adjunct faculty members
7 (22.6%)	Clinical Assistant Professors
5 (16.1%)	Associate Professor
4 (12.9%)	Clinical Associate Professor
3(9.7%)	Clinical Professor
3 (9.7%)	Assistant Professors
1(3.2%)	Professor
1(3.2%)	Clinical Coordinator

**Table B2:** Years at the University

1 (3.2 %)	16-20 years
7 (22.6%)	11-15 years
7 (22.6%)	6-10 years
9 (29%)	3-5 years
7 (22.6%)	2 or less