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E-Learning Experiences and Stressors of Nursing Students during COVID-19 Pandemic: A Phenomenological Study

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Abstract

Objective: The COVID-19 pandemic caused an immediate and significant shift in how nursing education can be delivered. **Aim:** Exploring the experience of nursing college student with e-learning and its related stressors. **Design:** qualitative phenomenological research. **Sample:** A purposive sample of 20 nursing college students from grades 1 to 4. Data were collected through semi-structured interviews using WhatsApp mobile messaging and Zoom meeting applications. Semi-structured interviews included two parts: demographic characteristics of the students and six open-ended questions for exploring the experience of nursing college student with e-learning and its related stressors. **Setting:** The study was conducted at the Faculty of Nursing Cairo University. **Results:** The lived experience of e-learning and its related stressors among nursing college students in the current study is presented in seven major themes; living in uncertainty, psychological suffering, privileges of e-learning vs. traditional method, educational difficulties, challenges of e-learning, and stress management techniques used with e-learning. **Conclusion:** Nursing students generally view e-learning as a successful experience to some extent. However, they reported many challenges and stressors associated with e-learning, including unreliable internet, and perceived the faculty is unprepared to teach in this environment. Therefore, it is recommended to replicate the research on a large sample and in different settings to achieve more generalization. Also, to train teaching staff, students to deal with distance learning sites and programs and give oral and written assignments and directions.

Keywords: E-learning; COVID 19; Nursing college students; Stressors

Introduction

The present state of emergency caused by the COVID-19 epidemic has necessitated a shift in nursing students' education from traditional to distant learning (Ramos-Morcillo, Leal-Costa, Moral-García & Ruzafa-Martínez (2020). Since the main public health advice was to stay at home and keep you protected (Shafiei-Sarvestani, Mohammadi, Afshin, Raeisy & Sarvestani, 2019). Courses shifted from in-person to online learning, emphasizing information and communication technologies (ICT) (Standerford, et al., 2020; Diab, Elgahsh, 2020; Dwivedi, Kaur, Shukla, Gandhi & Tripathi, 2020).

The COVID-19 pandemic incited nursing programs to use alternative platforms such as learning management systems and web conferencing to deliver traditional didactic topics synchronously. Many nursing programs abruptly pulled students from hands-on clinical

experiences at healthcare institutions, replacing them with virtual and web-based simulation models due to worries about COVID-19 infection exposure and the need to conserve personal safety equipment (Ferdig, Baumgartner, Hartshorne, Rakowski, Mouza, 2020).

Virtual education introduces a new paradigm by allowing everyone to learn at their own pace at any time. Because of its extensive use in higher education, e-learning has given most individuals in the community access to resources at any time and from any location (Mishraa, Gupta and Shree, 2020). As such, Shafiei Sarvestani, Mohammadi, MAfshin, Raeisy, and Sarvestani (2019) reported that, flexibility, dissemination in each location, and openness are three characteristics of the e-learning system that are considered.

In contrast, the move from traditional to online education is not without difficulties. In

terms of interaction and clarification, previous studies have demonstrated that classroom learning is preferred over online learning (Duran, 2020). Students in the health professions frequently complain of learning difficulties resulting from virtual learning activities, resulting in poor academic performance. In the time of COVID-19, there are barriers caused by the rapid shift from traditional education to total online learning as inattentive planning and training on using virtual class teaching (Farouk, Rathore, & Mansoor, 2020).

These procedures were difficult to implement and caused numerous problems because a substantial percentage of the curriculum was employed that was not designed for online or remote learning in the first place (Elgahsh, 2020). Similarly, instructors were unprepared for online learning or the utilization of digital resources (Valverde, Garrido, Burgos and Morales, 2020; Valverde, Garrido, Burgos and Morales, 2020). Many students lacked the necessary gadgets, internet connection, or funding to study remotely (Standerford, et al., 2020). Furthermore, some students and teachers were unfamiliar with the digital platforms and online tools they had to use on such short notifications (Huber & Helm, 2020).

In this new pandemic condition, nursing students face many challenges such as writing assignments, attending clinical practice, preparing for oral and written quizzes, and end-of-semester tests. In addition, meeting deadlines for assignment submissions and employment and other social commitments necessitate a significant amount of effort to manage these many roles (Sundarasan, et al., 2020). In this respect, evidence revealed that nursing students are stressed by e-learning in one way or another, such as poor academic achievement, school dropout, addictions, and crimes (Dwivedi, Kaur, Shukla, Gandhi, and Tripathi, 2020).

Psychological stress has been linked to dangerous substance use and lower empathy, which can influence nursing students' academic and clinical performance and their future work lives. According to reports, the frequency of depression among nursing students in Arab

countries is 28%, which is roughly six times higher than the overall population (Merino, Pardos, Raya, Bande, Casas, and Taraf, 2020). Correspondingly, students, as well as educational institutions, can employ a variety of approaches to manage stress-induced e-learning and to improve this style of learning, including; emotional support (such as receiving emotional support/advice from friends and family), instrumental support (such as receiving help and advice from lecturers or tutors), and positive reframing, (as seeing something positive in what is happening, and learning from experience) (Kwaah & Essilfie, 2017).

Significance of the study

In nursing education, clinical training is challenging during pandemic because it requires high fidelity simulation, to replace the usual clinical field training (Standerford et al., 2020). Nursing students' deficiency in information technology competencies were documented before and during the pandemic. An Egyptian study of obstacles faced nursing students while using E-learning during COVID-19 pandemic, furthermore, Elgahsh (2020) reported that, about 91% of students received either no or in-adequate training on e-learning before the pandemic.

With the rising usage of online methods as an alternative to the classroom during COVID-19, it is crucial to evaluate their success from the users' perspective. The purpose of the current study was to understand the nursing students' real-life experiences of e-learning. Previous research on this area were quantitative; therefore, the advantages, challenges, stressors, and recommendations to improve online learning were not fully explored. The best method to understand this experience was through a qualitative phenomenological study.

Aim of the study

The current study aimed to exploring the experience of nursing college student with e-learning and its related stressors during COVID-19 epidemic.

Research questions

- What is the experience of nursing college student with e-learning during COVID-19 epidemic?
- What are the stressors facing nursing college student with e-learning during COVID-19 epidemic?

Research design

The qualitative phenomenological research design was utilized to explore the nursing students' experience of e-learning challenges and their related stressors. According to Sloan, Art, Bowe & Brian (2014), phenomenology is the study that fits well to detect people's experience on a specific phenomenon and focuses on seeking the essence of experienced human phenomena through analyzing verbal explanation from the participant's viewpoint.

Participants

A purposive sample of 20 nursing college students from grades 1 to 4 was recruited for this study. Data was collected at the second term of the academic year 2019-2020 during the period from February to April 2020. The predetermination of the number of participants in qualitative studies is almost impossible as the sample size in qualitative design is not determined by the number of participants but rather by achieving data saturation. Saturation is evidenced when no new information was heard about the study phenomenon (Patton, 2015). Saturation and redundancy indicated completion of the data collection phase, which the researchers decided. The participants were identified based on the following inclusion criteria:

- 1- Students are enrolled at the university during the time of the study,
- 2- Have completed at least one online course, and
- 3- Have taken at least one traditional classroom course.

Setting

The study was conducted at the Faculty of Nursing Cairo University. The investigator used video-based interviews (via WhatsApp

and Zoom cloud meetings). Video-based interviewing also had benefits over face-to-face meetings and traditional telephone calls. Seeing the participant in their surrounding environment often provided additional insight that would have otherwise not been available.

Tool of data collection

One tool was used to collect the study data. Data were collected through semi-structured interviews using "WhatsApp" mobile messaging and the "Zoom" meeting applications. Semi-structured interviews included two parts: 1) demographic characteristics of the students and 2) open-ended questions for exploring the nursing students' experiences with e-learning, challenges, and its related stressors.

The *1st part* included demographic characteristics of the students related to age, sex, education, faculty, nationality, place of residence. While the *2nd part* was developed by the investigators, which included six open-ended questions to express the lived experience of nursing college students toward e-learning and its related stressors, such as:

- Describe your experience with online education?
- Describe your interactions with your instructor as compared to in-class courses?
- Describe the benefits that you experience with e-learning?
- What are the stressors you face with e-learning?
- Describe the stress management techniques you use from your experience?
- What are the recommendations from your experience to enhance e-learning and reduce its related stress?

Ethical considerations

Primary approval to conduct the study was obtained from the research ethics committee of the Faculty of Nursing, Cairo University. After that, the researchers introduced themselves to the students who met the inclusion criteria and informed them about the study's purpose and nature through Zoom meetings. All included students approved their acceptance to

participate in the study. All participants were informed that participation in the study was voluntary and that they could withdraw from the study at any time without any negative consequences. Anonymity and confidentiality related to the information of the identity of each student were kept in locked files. Also, recorded data were assured through coding of data and assuring that the personal data will not be used for another purpose without their permission. Finally, the recorded data via mobile were kept in a safe folder accessible only by the study investigators.

Data analysis for qualitative data

The data obtained from the interviews were analyzed using the thematic analysis method. Accordingly, students who had sufficient experience with e-learning were interviewed. In the next step, interview notes for each interview were carefully studied to identify all independent ideas in the form of basic themes; then, a dedicated code was assigned to each of them as a marker. Next, based on all the basic themes identified in the fundamental research, a more general categorization was defined, leading to the identification of themes, and eventually, these themes were categorized as inclusive themes.

In this study, the investigators transcribed the audiotape; the researcher went through the transcript line by line and word by word very closely, extracting significant statements and coding each of them. Then the codes merged into categories, clustered together into sub-themes, then major themes. Member checking was performed to validate the identified structure and nature of the phenomenon from the participants' descriptions. All written and recorded materials were transcribed and translated into English.

Rigors for qualitative data

Concerning the current study, the trustworthiness of the data analysis was assured through the following: (a) prolonged engagement with the participants to gain the participants' trust and obtain more in-depth data; (b) participants were interviewed to the point of data saturation; (c) participants feedback or member checking, in which the investigator went back to each participant and

asked if the interpretation of data accurately represent their actual experience ;(d) going through a description of the methodology and data analysis process ;(e) findings were compared with existing relevant literature and researches. Also, following verbatim transcription of each interview, the transcript was compared with audiotapes for accuracy, and finally, all interview materials, transcriptions, documents, findings, and recommendations were kept available for conducting audit reviews and trials.

Results

Demographic characteristics

The participants included fifteen female students and five male students. Only five participants are not Arabic students, which provided for diverse perspectives. Regarding educational level, 40% of the students were in the fourth grade, 30% were in the third grade, 20 % were in the second grade, and only 10% of students were in the first grade. The selected frequency data and participant demographics are depicted in *Table 1*.

The Main Themes

The nursing students' lived experience of e-learning challenges, and their related stressors in the current study were represented in six major parts: experience with online education, benefit, stressors, challenges, stress management techniques, and recommendations to enhance e-learning. Each part contained main themes and sub-themes as follows:

Experiences with online education

It comprises one main theme divided into nine sub-themes that emerged from data analysis: hopelessness, fear, low self-esteem, confusion, self-blame, anxiety, sadness, loss of interest, and frustration.

Most of the participants' view of the point was stationed around the dissatisfaction with the method of e-learning; they lived uncertainty and psychological sufferings, as they reported.

- " *It was not successful, not good due to difficulties in understanding content that have been learned, I usually have a feeling of hopelessness, and negligence*" (Case 2).

- *"I feel overwhelmed about downloading, hearing the recorded lectures". (Case 1 and Case 13).*
- *"I feel lack of interest and future without aim and usually feel stressed, the pressure of unknown, anxious and bored" (Case 5).*
- *"Feeling incompetent and the matter is out of control" (Case 8).*

While the remaining participants reported, to some extent, that the e-learning experience was successful.

- *"It was a good experience, but the internet availability and expenses were obstacles" (Case 10).*
- *"To some extent successful despite the presence of some faults and setbacks" (case 6).*
- *"I benefited from it while the study was suspended as complementary methods during COVID-19 widespread" (Case 3).*

Benefits of e-learning experience versus traditional methods

One theme was extracted from a participant's point of view as perceived positive privileges of e-learning versus traditional methods, which were divided into other six sub-themes that emerged from the data analysis, including being safe, feeling comfortable, more free independence, better understanding, competence, and satisfying intellectual curiosity.

- *"Oh I am not obligated to attend lectures, especially when there are barriers to attending" (Case 1).*
- *"Work on our peace, interesting methods of learning" (Case 5).*
- *"Satisfies intellectual curiosity through collaborative learning environment" (Case 7 and 13).*
- *"I can listen to content more than one time and also, can take notes like the traditional lectures I mean the recorded lecture" (Case 2, 9, and 17).*
- *"It develops self-dependency; self-learning and it is an easy method to get course-related information" (Case 11).*

The stressors with e-learning experience

One major theme was extracted, educational difficulties, divided into two sub-themes including un-unified, unprepared personnel, and system with less quantity and quality of interaction paralleled with traditional learning.

Most participants explained that they were exposed to various stressors during the e-learning experience as they experienced educational difficulties and a lack of direct interaction with teachers.

- *"I feel overwhelmed to download and hear the recorded lecture" (Case 15).*
- *"Difficulties in understanding learned content; it needs more clarification and explanation" (Case 20).*
- *"Reluctance from some lecturers to record their lectures" (Case 17).*
- *"Difficulty communicating with the lecturer to ask questions, take feedback than the traditional lectures" (Case 2).*
- *"Lack of a good internet network and unavailability of frequent graded quizzes results in accumulation of lectures to be studied" (Case 18).*
- *"Silenceuneasy-to-deal with sites and technology I mean unfamiliarity with e-learning" (Case 10).*
- *"My great problem is the lack of a suitable place at home to chat and interact with the lecturer" (Case 6).*

Challenges of e-learning experience

It included two major themes: infrastructure challenges and financial pressure with e-learning, in the form of lacked, uneasy, expensive facilities, and less quantity and quality of interaction compared with traditional learning.

- *"I think in Egypt we did not have the infrastructure for internet connection and lack of good internet network" (Case1).*
- *"Lack of a suitable place at home to chat and interact with the lecturer" (Case 3).*
- *"Silence surely spending much money to get Internet" (Case 9).*

- "The internet service is expensive for me; what can I do I am a poor student" (Case 19).
- "Difficultly getting used to and practice this new style" (Case 17).
- "The great challenge I think cannot be solved such as the unavailability of organizational infrastructure for an internet network in our faculty" (Case 5).

Stress management techniques

This part consists of one major theme, divided into two major subthemes: manipulating facilities and relying on oneself & colleagues.

- "If I missed a lecture, I would download it and read or listen to it later" (Case2).
 - "Trying to understand the courses with my colleges" (Case 4).
 - "Hahaaaaaa Waiting for exam schedule to study hard" (Case 15).
 - "I relied on myself to get lessons and study hard" (Case 9).
 - "I was collecting more information about the content and searching for more explanation on the internet" (Case 11).
- These recommendations lie in two main sub-themes; personnel development & interaction enhancement and system restructure through providing Curriculum improvement and development, quality internet for students' sources, discs with recorded lectures, internet quality, and scheduling a fixed time for explaining each course.
- "I think before applying the new methods we must conduct training of teaching staff and students to deal with distance learning and its programs such as Blackboard" (Case 8).
 - "Using easy applications for sending lectures as WhatsApp, not difficult one like Zoom or Blackboard" (Case 17).
 - "Emphasize the collaboration between the ministry of communication and higher education" (Case 1).
 - "Providing internet sim-card and tablet to be available for students" (Case 12).
 - "Providing discs with the recorded lecture to overcome the cost of loading lecture from the Blackboard" (Case 3).
 - "Try to work in curriculum improvement and development to adapt with these new methods" (Case 20).
 - "Increase lecturers' communication time with students to allow more questions and explanation for difficult points" (Case 5).

Recommendations to enhance the e-learning experience

Table (1): Frequency distribution of participant's demographic characteristics (n=20)

| Variable | N | % |
|--------------------------|----|----|
| Gender | | |
| Male | 5 | 25 |
| Female | 15 | 75 |
| Nationality | | |
| Arabic student | 15 | 75 |
| Non-Arabic student | 5 | 5 |
| Educational level | | |
| First grade | 2 | 10 |
| Second grade | 4 | 20 |
| Third grade | 6 | 30 |
| Fourth grade | 8 | 40 |

Table (2): Inclusive themes, sub-themes, participant responses, and evidence of qualitative data of the research

| Themes & Subthemes | Student's Responses |
|--|--|
| Theme I: Living in uncertainty & Psychological suffering. Subthemes: <i>Hopelessness, fear, low self-esteem, confusion, self-blame, anxiety, sadness, loss of interest & frustration.</i> | 1. I feel lost 2. I feel hopeless 3. I feel overwhelmed about downloading, hearing the recorded lectures. 4. Fear of not understanding the curriculum. 5. Feeling incompetent and the matter is out of control 6. Feeling that you did not do your homework, lessons, and study. 7. Stressed, pressure of unknown, anxious, and bored. 8. I feel a lack of interest and future without aim |
| Theme II Successful experiences to some extent | 1. It was a good experience, but the internet availability and expenses were obstacles 2. To some extent successful despite the presence of some faults and setbacks. |
| Theme II: Privileges of e-learning vs. the traditional method Subthemes: <i>Being safe, feeling comfort, more free independence, better understanding, competence, satisfies intellectual curiosity, save time and energy.</i> | 1. Prevents infection transmission 2. Follow-up and continuation of the study under emergency circumstances. 3. Calmness from the riots of students 4. Save time to come and go from college. 5. Comfort and lack of fatigue. 6. Easy to get the course-related information 7. Develops self-dependency, self-learning. 8. Ability to listen to content more than one time. 9. Not obligated to attend lectures, especially when there are barriers to attending. 10. I can take notes like the traditional lectures. 11. Work on our peace, interesting methods of learning. 12. Satisfies intellectual curiosity through a collaborative learning environment |
| Theme III: Infrastructure challenges & Financial pressure with e-learning Sub-themes: <i>Lacked, uneasy, expensive facilities &</i> | 1. Lack of Internet availability and good internet network 2. Unavailability of organizational infrastructure for internet network 3. Lack of a suitable place at home to chat and interact with the lecturer 4. Spending much money to get Internet access. 5. The internet service is expensive. 6. Successful to some extent; needs more capabilities. |
| Theme IV: Educational Difficulties & challenges of e-learning. Subthemes: a) <i>Un-unified, unprepared personnel & system.</i> b) <i>Less quantity and quality of interaction vs. traditional learning.</i> | 1. Uneasy-to-deal with sites & technology. 2. Unfamiliarity with E-learning 3. Difficulties in understanding learned content; it needs more clarification and explanation 4. Reluctance from some lecturers to record their lectures 5. Lack of settled schedule for lectures 6. The unavailability of frequent graded quizzes results in an accumulation of lectures to be studied. 7. lack of a good internet network 1. Difficult to communicate with the lecturer to ask questions and take feedback than traditional lectures. 2. To some extent, there are communicative teachers |

| Themes & Subthemes | Student's Responses |
|---|--|
| Theme V: Stress management techniques used with e-learning Subthemes : <i>a) Manipulating facilities</i> | 1. Telling myself that "If I missed a lecture, I would download it and read or listen to it later". |
| | 2. Spending more money on the internet |
| | 3. I tried to organize my time. |
| <i>b) Relying on one's self & colleagues.</i> | 1. I relied on myself to take lessons and study. |
| | 2. Listen to course lectures from the recoded lecturer explanation. |
| | 3. Collecting more information about the content and searching for more explanations from the internet. |
| | 4. Trying to understand the mystery information, questions with my colleagues. |
| Theme VI: Recommendations to enhance e-learning outcomes Sub-themes: <i>a) Personnel development & interaction enhancement.</i> | 1. Training teaching staff and students to deal with distance learning sites and programs. |
| | 2. Training students by performing electronic exams. |
| | 3. Increase lecturers' communication time with students to allow more questions. |
| <i>b) System restructure & providing facilities</i> | 1. Curriculum improvement and development. |
| | 2. Providing internet sim- card and tablet available for students. |
| | 3. Providing discs with recorded lectures. |
| | 4. Internet quality improvement |
| | 5. Determine a fixed time for explaining each course. |
| | 6. Using easy applications for sending lectures as what's app, not difficult one like blackboard or zoom |

Discussion

The worldwide health crisis caused by the COVID-19 outbreak has affected every element of human life, including education (Standerford et al., 2020). Many studies that looked into higher education institutions' first-wave responses to the COVID-19 epidemic found a wide range of responses, from none to rapid curriculum reform for online contributions (Crawford, Joseph; Butler-Henderson, Kerry, Jurgen, Rudolph; Malkawi, Bashar; Glowatz, Matt; Burton, Robert & Magni, Paola & Lam, Sophia, 2020).

Theme I:

In the light of the current study, nursing students lived experiences regarding e-learning; the majority (18 out of 20) responses showed dissatisfaction with the method of e-learning. They experienced uncertainty and psychological suffering like feeling hopelessness, loss of control, frustration, and difficulty in managing their study courses. This was due to their overwhelming concern about how to deal with the new method of learning and evaluation, based on

using technology suddenly and without preparation. As such, the study of stress and coping strategies among distance education students (Merino, Pardos, Raya, Bande, Casas, and Taraf, 2020) indicated that students had raised a variety of concerns about their academic performance, including doubts about whether they were grasping the subject through online portals and skepticism about the effectiveness of educational methodologies and evaluation procedures.

Another study of stress and coping strategies among distance education students at the University of Cape Coast, Ghana, Kwaah & Essilfie (2017) found that the majority of students felt alone, missed study groups, and were unable to ask peers questions. Also, Standerford, et al., (2020) in their study were investigating undergraduate nursing students' experiences during their first uses of online learning in Jordan indicated that all students agreed that theory could be acquired online but not clinical courses. They also stated that learning skills online is not viable,

which would have a detrimental impact on their clinical competence at graduation.

The current study highlighted the prior fear of not understanding parts of the recorded lectures and how they would interact with their lecturer to ask for clarifications. Also, they were worried about unfamiliar online evaluation methods. Besides, a study of experiences of nursing students during the abrupt change from face-to-face to e-learning education (Morcillo, Leal-Costa, Moral-García and Martínez, 2020) urged some students to worry about when to ask questions and how to approach their professor during remote learning. Similarly, Kwaah & Essilfie (2017) studied students' perspectives of e-learning problems and revealed that successful participation in online classes would be hampered if there is a conflict between working and online classes. During working hours, it is impossible to study and work simultaneously.

Theme II:

The present study conveyed general satisfaction with the quality of the e-learning experience despite some obstacles. Successful experiences to some extent as e-learning enable them to accomplish a degree that was otherwise non-attainable. Students perceived the positive privileges of e-learning vs. traditional methods as safe, comfortable, independent, better understanding, competent, and satisfying intellectual curiosity, saving time and energy. Similarly, in the study of the perception of a focus group of 18 students regarding the usage of internet resources for research and learning in three selected universities in Nigeria, it was found that the use of the internet aided undergraduate students in three Nigerian universities in conducting research ahead of time, completing multiple homework assignments, broadening the scope of reading and learning, promoting self-learning, encouraging and enhancing peer learning, and improving exam preparation (Apuke & Iyendo, 2018). In the same line, Kwaah & Essilfie (2017) reported that e-learning improved the opportunity to listen to recorded lectures and shorter, more direct courses again.

Theme III:

In the present study, students indicated infrastructure challenges & financial pressure with e-learning as lacking, uneasy, expensive

facilities, less quantity, and quality of interaction vs. traditional learning. These results agreed with Kwaah & Essilfie (2017) who detected that low bandwidth led to incomplete sessions and lessons, as well as a lack of advanced equipment, software, and hardware limitations that are not well-suited for virtual medical education, and students have complained about inadequate internet speeds and a lack of physical locations in e-learning.

In addition, Morcillo, Leal-Costa, Moral-García & Martínez (2020) reported inadequate internet coverage, loss of connectivity, particularly in rural regions, lack of an acceptable way of communicating on the internet, and disruptions in student's study environment were also problems. These findings suggest that support services for university education are being delivered ineffectively and need more improvements.

Theme IV:

Concerning educational difficulties & challenges of e-learning, students highlighted the unfamiliarity with e-learning and the lack of training for both faculty members and students on using virtual class learning as a problem that was relieved with time and practice. Likewise, Apuke & Iyendo (2018) reported that students perceived that faculty were unfamiliar with the delivery of online teaching pedagogies, and this lack of familiarity is one barrier to learning. In the same direction, outlined some organizational issues such as a deficit of specialized teachers in the virtual education systems, lack of attention to the students' age range, and insufficient attention to their efforts to acquire points (Morcillo, Leal-Costa, Moral-García and Martínez, 2020). Moreover, Khalil et al., (2020) added that one of the obstacles at the onset of the shift to online learning was a lack of expertise in using software platforms and training on using virtual class learning.

Another critical point reported in the current study is that nursing students reported difficulties understanding learned content through remote learning; it needs more clarification and explanation, produced by the lower quantity and quality of interaction than traditional learning. In this realm, Kwaah & Essilfie (2017) pointed out that the academic timetable was extremely tight, and students were more overloaded with

requirements than when they physically attended the university. In addition, Apuke & Iyendo (2018) explained this as, during remote learning, students were concerned about when and how to ask questions and approach their lecturer.

Theme V:

It is clear from the study results that stress management techniques used with e-learning as conveyed by students were relying on themselves and their colleagues, manipulating facilities as the coping strategies. Also, Merino, Pardos, Raya, Bande, Casas, & Taraf (2020) revealed that students used active-oriented coping methods because they recognized their predicament and tried to cope with it rather than giving up. Some students also reported using negative coping practices such as smoking to cope with stress. While, Mukhtar, Javed, Arooj & Sethi (2020) reported that the study participants who used students' forums viewed them as readily available and approachable, they also mentioned that the other students' self-disclosures were a source of encouragement and support, reassuring them and putting them on an even keel. As such, the use of such forums contributes to developing a sense of student community.

Theme VI

Recommendations for Action:

The final theme that emerged themes is the nursing students' recommendations to enhance e-learning outcomes. These recommendations lie in two main sub-themes. Personnel development & interaction enhancement and system restructure through providing Curriculum improvement and development, availability of quality internet for students' sources, availability of discs with recorded lectures, internet quality, scheduling a fixed time for explaining each course. These findings are in line with the themes emerged by Khalil et al., (2020) whose recommendations were training, teaching, assessment, and quality monitoring. Other recommendations were offered by students and faculty members to improve the students' learning experience, such as building up online learning instructions that included attendance, interaction, and assessment tools. This view was also supported by Bradbury (2016) who mentioned that training and orientation events are highly suggested to increase faculty members' and students' online learning skills and

tools. Also, another important recommendation stated that using a desk computer instead of a phone allows pupils to focus better and be less distracted by incoming calls (Al-Fraihat, Joy, Mas' deh, and Sinclair, 2020).

Conclusion:

Nursing Students generally view the use of e-learning as a successful experience to some extent. However, they experienced some challenges and stressors associated with this new method, such as unreliable internet, unqualified teaching staff and an unprepared environment. Furthermore, to overcome those challenges, some recommendations were reported by them.

Recommendations by participants:

Participants' voices as they made recommendations for online learning were captured and consolidated. *The following list represents the numerous recommendations:*

- 1- Make the syllabus available before the beginning of class and be available to discuss it.
- 2- Assignments and directions should be given orally and written.
- 3- Training teaching staff and students to deal with distance learning sites and programs.
- 4- Training students by doing electronic exams.
- 5- Internet quality improvement
- 6- Provide study guides and study questions, as well as review sessions to aid in preparing for an exam.

Also, from study results, some strategies are recommended like implementing students' standard assessment tools to ensure high-quality online learning, following- up students' attendance, conducting oral discussion, and scheduling reviewing classes for core content with an emphasis on psychomotor competencies to implement strict safety precautions in the different clinical areas, especially in the current pandemic. All help to ensure an effective learning process and successful e-learning.

References

- Al-Fraihat D., Joy, M., Masa'deh, R., and Sinclair J. (2020). Evaluating E-learning Systems Success: An empirical study. *Computers in Human Behavior*, vol. 102, 67–86. <https://doi:10.1016/j.chb.2019.08.004>.
- Apuke, O. D., & Iyendo, T. O. (2018). University students' usage of the internet resources for research and learning: forms of access and perceptions of utility. *Heliyon*, 4(12), e01052. <https://doi.org/10.1016/j.heliyon.2018.e01052>.
- Bradbury, N.A. Attention span during lectures: 8 seconds, 10 minutes, or more? (2016). *Adv Physiol Educ.*; 40(4):509-513. doi: 10.1152/advan.00109
- Crawford, Joseph & Butler-Henderson, Kerryn & Jurgen, Rudolph & Malkawi, Bashar H. & Glowatz, Matt & Burton, Robert & Magni, Paola & Lam, Sophia. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*. 3. 10.37074/jalt.2020.3.1.7.
- Diab, G., & Elgahsh, N. F. (2020). E-learning during COVID-19 pandemic: Obstacles faced nursing students and its effect on their attitudes while applying it. *American Journal of Nursing*, 9(4), 300-314.
- Duran, L. (2020). Distance learners' experiences of silence online: A phenomenological inquiry. *International Review of Research in Open and Distance Learning*, 21(1), 61–81. <https://doi.org/10.19173/irrodl.v20i5.4462>.
- Dwivedi, D., Kaur, N., Shukla, S., Gandhi, A., & Tripathi, S. (2020). Perception of stress among medical undergraduate during coronavirus disease-19 pandemic on exposure to online teaching. *National Journal of Physiology, Pharmacy and Pharmacology*, 10(8), 1. <https://doi.org/10.5455/njppp.2020.10.05107202009052020>
- Farouk, F., Rathore, F. A., & Mansoor, S. N. (2020). Challenges of online medical education in pakistan during COVID-19 Pandemic. *Journal of the College of Physicians and Surgeons?Pakistan: JCPSP*, 30(6), 67–69. doi:10.29271/jcpsp.2020.Supp1.S67.
- Ferdig, R.E., Baumgartner, E., Hartshorne, R., Rakowski, R.K., Mouza, C. (2020). Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: INTERACTIVE an online conference. Published by AACE-Association for the Advancement of Computing in Education. Available at : site.aace.org/online.
- Gagne, J. C. De, Walters, K. J., Coordinator, S., & Program, E. D. (2010). *JOLT - Journal of Online Learning and Teaching The Lived Experience of Online Educators: Hermeneutic JOLT - Journal of Online Learning and Teaching*. 6(April), 1–11.
- Huber, S. G., & Helm, C. (2020). COVID-19 and schooling: Evaluation, assessment and accountability in times of crises—reacting quickly to explore key issues for policy, practice and research with the school barometer. *Educational Assessment, Evaluation and Accountability*, 32(2), 237–270. <https://doi.org/10.1007/s11092-020-09322-y>.
- Khalil,R., Mansour, A.E., Fadda, W. A., Almisnid, K., Aldamegh,M., Al-Nafeesah,A., Alkhalifah,A., & Al-Wutayd, O. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: a qualitative study exploring medical students' perspectives. *BMC Medical Education* Available at: <https://doi.org/10.1186/s12909-020-02208-z>.
- Kwaah, C. Y., & Essilfie, G. (2017). Stress and coping strategies among distance education students at the University of Cape Coast, Ghana. *Turkish Online Journal of Distance Education*, 18(3), 120–134. <https://doi.org/10.17718/tojde.328942>
- Merino, U.R., Pardos,B.H., Raya, L.M., Bande,D., Casas,I., & Taraf, M.F.(2020). Psychological impact of the COVID-19 pandemic on nursing students in the first wave: A cross-sectional survey. *Nursing open* . DOI: 10.1002/nop2.1207.
-

- Mishraa, L., r Gupta ,T., & , Shree , (2020). A. (Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*. Available at: <https://doi.org/10.1016/j.ijedro.2020.100012>.
- Morcillo , A. R , Leal-Costa ,C., Moral-García ,J.E., & -Martínez, M.R.(2020). Experiences of Nursing Students during the Abrupt Change from Face-to-Face to e-Learning Education during the First Month of Confinement Due to COVID-19 in Spain. *International journal of environment research. Public Health* 2020, 17, 5519; doi: 10.3390/ijerph17155519.
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, limitations and recommendations for online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36(COVID19-S4). doi:10.12669/pjms.36.COVID19-S4.2785.
- Ramos-Morcillo, A. J., Leal-Costa, C., Moral-García, J. E., & Ruzafa-Martínez, M. (2020). Experiences of nursing students during the abrupt change from face-to-face to e-learning education during the first month of confinement due to COVID-19 in Spain. *International Journal of Environmental Research and Public Health*, 17(15), 1–15. <https://doi.org/10.3390/ijerph17155519>.
- Shafei Sarvestani, M., Mohammadi, M., Afshin, J., Raeisy, L., & Sarvestani, S. M. (2019). Students' Experiences of E-Learning Challenges; a Phenomenological Study. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 10(3), 1–10.
- Sloan, Art & Bowe, Brian. (2014). Phenomenology and hermeneutic phenomenology: The philosophy, the methodologies, and using hermeneutic phenomenology to investigate lecturers' experiences of curriculum design. *Quality & Quantity*. 48. 10.1007/s11135-013-9835-3.
- Standerford, A., C ., Katherine Menard., K , Edge, C., Bergh, B., Shayter, A., Kristen Smith,K., & VandenAvond, L.(2020). The Phenomenon of Moving to Online/Distance Delivery as a Result of COVID-19: Exploring Initial Perceptions of Higher Education Faculty at a Rural Midwestern University. *Frontiers in education*. Available at: <https://doi.org/10.3389/educ.2020.583881>.
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., Hossain, S. F. A., & Sukayt, A. (2020). Psychological impact of covid-19 and lockdown among university students in malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, 17(17), 1–13. <https://doi.org/10.3390/ijerph17176206>.
- Valverde V. J., Garrido C. M., Burgos C. and Morales B. M., (2020). Trends in Educational Research about e-Learning: A Systematic Literature Review (2009–2018), MDPI, 5153 (12).