*Original Article*

# Educational challenges and positive aspects of e-learning during the COVID-19 Pandemic: Insights of male Saudi nursing students

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## ABSTRACT

**Background:** Due to the coronavirus disease 2019, universities worldwide have been closed and locked down, resorting to online education to continue learning, which at some point made teachers and students glad that they can still attain education. No studies have been conducted on male nursing students' e-learning experience and its impacts on their education during a pandemic crisis.

**Aim:** The study intends to comprehend male nursing students' experiences with e-learning during the coronavirus disease 2019 (COVID-19) pandemic.

**Method:** This research was a descriptive phenomenological study using a purposive-convenience sample of 15 volunteer participants who were nursing students. Semi-structured one-on-one interviews were conducted, and data were transcribed and analyzed for themes using the Collizi method.

**Results:** Results were divided into conceptual themes that fell into two themes positive and negative aspects affecting the student's academic performances. Positive aspects were a sense of responsibility, becoming self-directed learners, an optimistic view, and increased satisfaction. Negative aspects were technical difficulties, unrealistic deadlines, deficient practical skills, and compromised mental health.

**Keywords:** Nursing students, e-learning, COVID-19, Saudi Arabia

## INTRODUCTION

The COVID-19 pandemic, caused by a novel virus, has spread to nearly every locale in the world since its outbreak. On February 16, 2021, this virus's worldwide incidence has 2.7 million recorded cases, with 81,000 deaths.[1] A short period later, COVID-19 spread worldwide, severely affecting the economies of several countries. Within a month, changes were implemented to operating conditions globally due to the virus outbreak. With the coronavirus pandemic having no boundaries, its effects continue to be

significantly adverse. In just a year of its outbreak, it has tremendously changed every individual's lifestyle globally. Left with no choice, people were required to stay at home even for work and learning to observe self-isolation and other protocols simultaneously. The pandemic affected everyone's freedom to move freely with other people, prohibiting them from normally associating because of the contagious virus. The world was indeed in distress due to the threat of the pandemic. It has had a significant effect on all, especially on workers who had been laid out and remained jobless due to business establishments' closures.

In response to the growing coronavirus outbreak, basic to higher education schools were forced to close. According to Iesalc[2] this has affected more than 1.57 million students in 191 countries; thus, disrupting the education system. This has led to a paradigm shift in the delivery of quality education by mentors through distance learning with the help of various online platforms. According to the study of Aborode, Anifowoshe[3], lockdowns around the world are why universities resorted to E-learning options. The situation posed many challenges for both learners and educators, leaving them with this option. The unprecedented pandemic has given them an entirely different experience with the little or lack of alternatives available.

Furthermore, as an emergency measure, the Ministry of Education of Saudi Arabia has issued an order to close educational institutions and continue the process of learning in a safer and more secure environment for both teachers and students. E-learning is technology-based learning that covers extensive use of websites, video conferencing, learning portals, mobile applications, and thousands more types of free blended learning tools available online. E-learning is a new strategy that uses the internet, Learning Management System[4], and other tools to improve and develop learning.[5] Like artificial intelligence, technologies transformed traditional education into modern understanding.[6] Despite resorting to E-learning, students' knowledge is still being enhanced, as well as the skills of academic staff and professionals in using the internet.[7]

However, the pandemic crisis and this new strategy in learning have challenges, and the mere presence of technology does not guarantee its effective implementation. It posed several limitations and shortfalls to both the learner and the educator. They are faced with difficulties caused by the unexpected traditional to online shift in learning.[8] Consequently, attention is vital to be given to the student's issues and improve their learning process[9], especially during this pandemic where E-learning is the only option left. In addition, records on E-learning problems continue to rise, especially internet connectivity and some internet glitches that students and teachers cannot prevent, negatively affecting their learning process.

In Saudi Arabia, there have been enough studies on E-learning and its impact on the educational system on both the learners and educators. Nonetheless, there isn't any study yet on nursing students' E-learning experience specifically of male nursing students in the country. The nursing profession in Saudi is dominated by women and as a result, has made men second-class citizens in the profession. This current study therefore is on its perfect timing since quality education will likewise be compromised with E-learning. Given this, it is essential to know its impacts on their education at the time of the pandemic crisis. It is a must that at this time of pandemic, it is the government's responsibility to keep abreast of E-learning's impacts on the students and the teachers to address its problems. Lastly, the study's result will be essential in the male nursing students' academic journey and for implementing present and future management in Saudi Arabia's nursing education.

**Background of the Study**

The implementation of E-learning in universities worldwide due to the pandemic crisis has caused mixed emotions to both learners and educators the former, feel glad for not having to be forced to stop and

continue learning, and anxiety to the latter fear that they might not be able to deliver the quality education that students deserve. As such, online learning platforms like Schoology, Moodle, and some available applications like Zoom, Google Meet, Google Classroom, and others are being explored by faculty and staff about their usages and purposes. Unfortunately, E-learning has raised many concerns about education quality[10]; worries about the delivery of quality education arose with the shift to E-learning. Previous studies have also warned about the threat to the students' performances in online classes' suffering.

Support by Saudi Arabia's government for the implementation of E-learning in the higher education system has been present since April 2006.[11] The gradual shift from a physical classroom setting into a computer-based system is observed in the higher education system of Saudi. However, the implementation of this new learning system still lacks development. With this, to improve the university curriculum's efficiency and effectiveness, evidence-based E-learning tools can be inculcated.[12] The pandemic thus gave way for them to revisit their computer-based system. The coronavirus outbreak is a phenomenon that has made drastic changes across Saudi Arabia's schools and universities, with most of the schools canceling face-to-face classes and transforming to online-only or E-learning as a medium of instruction. It had distracted nearly every aspect of students' lives from their admission to their enrolment, actual classes, and up to graduation exercises. Within the health field, nursing schools are bracing for unique challenges, and nursing students are facing needs and concerns during this COVID-19 pandemic.[13]

According to the Saudi Commission for Health Specialties' data, currently enrolled female nursing students are 13,001 while male nursing students are 4,084; 80% of nurses working in Saudi Arabia in 2018 were female.[14] Moreover, Aljohani[15] stressed the evident gender-related issues in Saudi nursing education in terms of students' academic preparation and the estimated needs of healthcare organizations for nursing graduates. Improvement in the image of the Bachelor of Science in Nursing as a course is needed to recruit more Saudi nurses while addressing issues in the education and work environment.[16] Meanwhile, there have been calls to encourage more men to enter the profession to provide more gender-balanced[14] and gender-diverse nursing workers, which will benefit the profession as a whole.[17] Nursing should continue to be a viable career choice for both female and male students. Efforts to retain male students in the nursing field should be maintained by nursing educators and administrators by decreasing challenges and supporting positive aspects.[18] It is on the above-said issues that this study is based as it is intended to understand the experiences of male nursing students in E-learning during the COVID-19 pandemic. This study aims to produce new-found knowledge explain male nursing students' insights on E-Learning and determine the impacts of the COVID-19 pandemic on their learning.

**Significance of the Study**

This study was a significant starting point for further understanding and interpretation of male nursing students' experiences in online classes. Highlighting students' significant concerns suffered during the pandemic will also guide professors in facilitating online courses better. The introduction of new-found knowledge from students' firsthand experiences and explanations of E-Learning courses is vital in the education sector. In the research field, this current study aims to expand the findings and utilize them in the creation of a guide for practice, policymaking, and information dissemination about E-learning. This study also expects a new understanding of how male nursing students perform and adapt as they experience E-learning classes and determine their struggles. The study has the potential to benefit universities in conducting E-learning as this study will also be helpful for them in the creation of policies and guidelines in educational management. This study will also serve as an addition of credence to their

efforts to provide proper education to nursing students. And lastly, to the participants, this study will be helpful for them in the expression of their feelings and struggles in taking E-learning classes. This study will eventually improve and solve E-learning problems, resulting in a better class experience.

## METHODS

### Design

The descriptive phenomenological method was utilized using the Colaizzi method.[19] A qualitative approach, particularly descriptive phenomenology, allows for an in-depth exploration of the lived experiences of male Saudi nursing students navigating e-learning during the pandemic. Using Colaizzi's method, you can rigorously analyze and interpret their experiences to uncover the essence of this phenomenon.

### Setting & participants

The study was conducted at Shaqra University, Dawadmi male campus. The collection of data started in March 2021, and its completion was in June 2021. The study considered the following participants based on the inclusion criteria: a) male; b) ages range from 19- 25 years old; c) from the different levels in the nursing program and; d) utilizing e-learning class.

### Sampling

The researchers made use of purposive-convenience sampling for the achievement of this study's objectives.

### Data gathering tools

The researchers utilized the online-based interview to gain data aided online with audio recorders with the participants' consent. Semi-structured interviews were employed to achieve a balance between structure and flexibility. Open-ended questions were crafted to encourage participants to reflect on and describe their experiences with e-learning during the pandemic. The questions focused on eliciting detailed narratives and exploring the meaning they attached to their experiences. For example, Participants were inquired about their experiences with the challenges associated with e-learning during the pandemic. Pilot interviews were conducted to refine the interview guide and ensure the questions elicited the desired information.

### Data gathering procedure

The researchers have given adequate information and an explanation to the participants within their understanding level. There was an explanation of the study's purpose and how the research would take place. The derivation of the study's possible benefits may elicit the participants' active participation in the study.  Before the study's conduct, an agreement between the researchers and the participants was made stating their right to refuse to answer; thus, they can withdraw anytime they wish to. The informed consent is secured before the interview's conduct. Individual interviews for approximately 40 minutes to 1 hour using the Zoom Application were the primary data gathering tool used for the study. For the transcription of data, the researchers used audio recording and note-taking. Data saturation was reached when no new information or themes emerged from the interview.

### Analysis of data

Colaizzi's descriptive phenomenological method was employed to understand the lived experiences of male Saudi nursing students with e-learning during the COVID-19 pandemic. This rigorous, iterative process involved seven key steps. Initially, transcripts were read and re-read to gain a comprehensive understanding, facilitating the identification of significant statements directly related to the phenomenon. These statements were then analyzed to discern their underlying meanings within each participant's narrative context. Subsequently, the formulated meanings were clustered into themes

representing common patterns and shared experiences. Based on these themes, an exhaustive description of the e-learning experience was developed, encompassing both challenges and positive aspects. This description was further analyzed to distill the fundamental structure of the phenomenon, capturing its essence. Finally, the basic structure was presented to the participants for validation, ensuring it accurately reflected their experiences and perspectives.[19]

**Limitations**

The study involved only one branch of the university. More participants are expected to engage if there is no data saturation during data gathering. Hence, limitations on the result of the findings are present. However, the study predicts that the participants may have offered another starting point for extra investigation of male nursing students' experiences in e-learning.

**Ethical consideration**

Shaqra University's Ethical Review Committee approved the study with reference number ERC_SU_2021011. The rights and privileges of the participants were protected before, during, and after the study. With this, the research ensures the application of ethical considerations. Informed consent from the participants was obtained first by the researchers. Here, a simple explanation of the study was included, along with the procedures or tasks to be undertaken. The consent form was in English and Arabic transcribed, and participants must sign it before proceeding. Participants should join the study of their own free will without force; the right the refuse to participate is present. Before the proper conduct of the interview, recording permission through audio was asked by the researchers to the participants. For confidentiality and prevention of any external factors that could affect the data's credibility to its transcription, codenames have been assigned to participants. The study obtained its credibility by immediately transcribing the data right after the interview. The participants pursued validation of the findings to compare their answers with the descriptive results of the researchers. Participants of the study have the chance to verbalize their experiences and their concerns. To prevent distortion in eliciting the male students' experiences, monetary incentive was not provided to the participants of this study. Moreover, to safeguard the collected data, one group member was assigned to be responsible for storing the information in a secured location. Necessary assistance for the study was also given by the research promoters.

**Establishing rigor and trustworthiness**

By acknowledging and addressing potential interviewer bias and external factors, the study aimed to enhance the credibility and trustworthiness of the findings, providing a more accurate and nuanced understanding of the lived experiences of male Saudi nursing students with e-learning during the COVID-19 pandemic. The following measures were taken to recognize the potential impact of external factors on participants' experiences and responses: (1) Interviews were conducted privately to ensure participant comfort and confidentiality, and (2) Efforts were made to create a neutral and non-judgmental environment during the interviews. This involved establishing rapport with participants, assuring them of confidentiality, and encouraging them to share their experiences openly and honestly. To ensure the reliability of the data gathered, the researchers have utilized several techniques to improve the study's credibility, accuracy, transferability, and validity. Additionally, checking was done with the participants by giving them the transcripts and research reports to express whether they agreed or disagreed with the findings. The prolonged engagement of text through transcribing, translating, reading more than three times, and observing during the data collection was necessary to build credibility. Furthermore, to achieve transferability, a detailed report compares the study's settings and the findings' applicability to other settings. Moreover, for the external scrutiny of promoters and experts, a trial of the

audits was conducted, containing the decisions and methods of the research. Finally, to validate the collected data, researchers used triangulation through cross-verification.[20]

**Researcher's characteristics and reflexivity**

The study included three (3) assistant professors and one (1) nursing student. In general, the researchers were aware of their strengths and weaknesses. To address the researchers' lack of expertise, the researchers had undergone training on data management analysis such as peer debriefing, transferability, and data triangulation. Furthermore, all of the researchers are capable of speaking and understanding the English language.

**RESULTS**

In analyzing the male nursing students' experience of E-learning during the pandemic crisis, several aspects of the phenomenon emerged from guided interviews. Results were divided into conceptual themes that fell into two themes: (1) positive and (2) negative aspects affecting the students' academic performances. The positive aspect categories were: a sense of responsibility, becoming self-directed learners, an optimistic view, and increased satisfaction. Negative aspect categories were:  technical difficulties, unrealistic deadlines, deficient practical skills, and compromised mental health. From the point of view of the male students' experiences, themes illustrating E-learning's nature during the pandemic were obtained and reviewed:

**1] The positive aspect**

The COVID-19 has elicited many consequences for the students in Saudi Arabia. Fortunately, the positive aspects signify the students' awareness, understanding, and acceptance of the new normal way of studying. It also meant students' acceptance of the current situation and their willingness to learn.

**a) Sense of responsibility**

Education cannot be imposed upon or given outright to students. It must be something that they have to work hard and earn for. During the study's conduct, the student's responses manifested that they understood their learning responsibility even though knowledge is obtained differently. The students during online classes are active participants; they realize the importance of every learning experience despite the pandemic. One participant reported having received a failing grade in a major subject in the past, acknowledging the mistake and emphasizing the importance of studying diligently despite the challenges posed by the pandemic. The participant highlighted the need to understand the situation, attend all classes, complete assignments, and review for quizzes and examinations. An awareness of the actual situation connotes the students' social and personal responsibility. The importance of earning a degree remained the students' top priority while understanding the COVID-19 phenomenon. Another participant emphasized that there are no excuses for not learning. After online classes, the participant noted the necessity of watching supplementary videos and consulting online resources and books when there is no opportunity to ask questions during class. The participant expressed the belief that this self-directed approach is beneficial. The participants also realized that meeting teachers online and listening to them articulate does not mean the end of learning.  The participants also have a share in the learning process. One participant reported that they are consistently involved in assisting their mother with the family business. Despite this responsibility, the participant managed to allocate time for attending Zoom classes and actively listening to the instructor. Although the participants acknowledged the difficulty of balancing these demands, they emphasized the importance of responsibility and the goal of successfully passing all subjects. This statement means the participants have learned to manage their time well while juggling their work responsibilities and studies a critical attitude of a learner who will soon be battling in the real world after graduation.

**b) Becoming self-directed learners**

One of the most affected courses in the world involves skills such as Nursing and medicine-related courses, technical and vocational courses, and those requiring hands-on training. With the outbreak, the skills that should have been taught inside the classroom and should have been done physically by the students cannot happen. Thus, the student's role as a learner has become more outstanding. For their learning process, students should still take charge, although teachers are virtually available. They decide what and how they will learn aside from those that they get from the teachers. Assigning students self-directed learning allows students to bring out their interests and strengths.

One participant described taking the initiative to enhance their understanding of vital sign measurement and interpretation, as discussed by the instructor in the laboratory class. The participant explored online resources to compare the differences in vital signs between children and adults, as well as the factors that influence these readings. Additionally, the participant gathered vital signs from their younger brother and grandfather for practical application. This statement pointed out the participant initiative of self-directed learning. Another participant reported regularly seeking additional information online related to the topics discussed in class. For instance, during the discussion on infection control, the participant researched and compared the differences between MERS-CoV and COVID-19. This also signified the participant's drive to learn and expand his knowledge on a related topic.

**c) Optimistic view**

During a pandemic crisis, the students built an attitude reflecting a hope that the situation and their learning process will be positive, favorable, and desirable. One participant emphasized the importance of maintaining focus during online classes, expressing trust in the university and instructors for their continued efforts to support students despite the global challenges. This statement displays confidence in both the teachers and the school in charge of their education during this pandemic. This manifestation of a positive attitude can also build assurance of great support in the university's actions to better the students. Another participant expressed the belief that online classes could be as effective as face-to-face instruction, noting that the instructors effectively facilitated learning despite the lack of direct, in-person interaction. This is a manifestation that students demonstrate a strong belief in the teachers' ability to deliver quality education, notwithstanding the lack of face-to-face interactions.

Participants also acknowledged the role of the government in controlling the spread of the virus, with one participant noting the importance of adhering to the Saudi government's protocols for preventing transmission, even while attending online classes at home. This clearly shows how they willingly followed the regulations of the government. One participant expressed optimism that the pandemic would soon come to an end, stating confidence in the efforts of both the Saudi government and the university to support students' learning, such as through the implementation of online classes. This claim portrays positivism and trust towards the school and the government. Another participant expressed a positive outlook, noting that, from the onset of the pandemic, adequate preparations were made. The participant highlighted the accessibility of testing centers and the availability of vaccines, expressing hope for a return to normalcy by 2021.

**d) Increased satisfaction**

E-learning as a new normal in Saudi Arabia education showed some advantages like increased student satisfaction in learning. One participant reported an improvement in communication with instructors, noting that they were able to message and ask questions at any time. The participant mentioned that if they felt hesitant to ask questions during online classes, they would reach out to instructors for clarification, emphasizing that the teachers were consistently accessible. For the students, E-learning has given them better chances to reach and be more open to teachers. Unlike in traditional face-to-face

classes, some students, especially the introverted ones, are ashamed or sometimes afraid to approach teachers to clarify matters.

One participant highlighted the usefulness of the university's Learning Management System (LMS), noting that it provided easy access to course materials, facilitated the completion of examinations, and streamlined the submission of assignments. The participant emphasized the system's user-friendly design and its consistent use since the beginning of the academic term. Indeed, the university had been very much prepared to deliver E-learning and made learning more accessible.

Another participant also showed the convenience of E-learning by particularizing the savings in the cost-of-living allowance of students living from far places in Saudi Arabia. One participant noted the benefits of online classes, particularly for those living in remote areas. The participant reported significant cost savings, including the elimination of expenses related to commuting, such as gasoline and accommodation near the university. Additionally, the participant highlighted the convenience of studying from home, allowing for more time with family. A participant also mentioned the ease of E-learning within the comforts of their home. One participant emphasized the convenience of online classes, noting the ability to record lectures on their iPad and review the content as needed when preparing for examinations.

**2] The negative aspect**

The study was also able to come up with the undesirable outcomes of E-learning. While it is true that there are some enumerated positive effects of E-learning to the students in Saudi Arabia, it cannot also be denied that there are adverse effects of E-learning that the school must be aware of to know what to improve.

**a) Technical difficulties**

In online classes, internet connectivity remains to be a major challenge. In small and far places, a dependable internet connection with a good speed is a problem. Thus, there can be a deficiency of continuity in studying for the student. One participant expressed concern about the challenges faced by classmates from remote areas, noting that while their generation is comfortable with technology and does not encounter issues with the Learning Management System (LMS), some classmates struggle with weak internet connections in distant locations. Another participant reported occasional absences from online classes due to the inability to access a reliable internet connection, highlighting a significant challenge faced by students without dependable internet access for e-learning. One participant indicated that unstable internet connectivity had negatively impacted their learning outcomes, resulting in lower grades during the previous semester. However, the participant expressed optimism, noting that their family had recently acquired a reliable internet connection, which they hoped would improve their academic performance this semester.

**b) Unrealistic deadlines**

With E-learning, quizzes and examinations are done online. The instructor set a required time for the student to finish the required task. They have deadlines to beat, praying for their capacity to complete the requirements on time and the excellent internet connectivity. One participant expressed dissatisfaction with a quiz administered last semester, which was limited to only 20 minutes. The participant argued that this duration was insufficient, particularly for students aiming for perfect scores, as it did not allow enough time to ensure accuracy in their responses.

One participant expressed concern about the heavy workload, noting that some instructors frequently assigned numerous assignments and case studies. The participant highlighted the difficulty of managing these tasks, particularly given the need to focus on other subjects as well. A desperate participant also

uttered that he is hopeful of the university's possible action of giving a quiz for a limited time to give them more time to think and answer. One participant noted that quizzes are currently limited to only 30 minutes, expressing a desire for the university to address this issue to better accommodate students' needs.

### c) Dificient practical skills

Ideally, nursing students learn skills in the laboratory and apply them in the hospital area after learning the techniques and procedures of those laboratory skills.

A participant stressed the problem of E-learning, particularly on the hospital skills. Their confidence is affected, especially when the time comes that they will be exposed to an internship where their skills will be required of them. One participant expressed concern about potential challenges during hospital internships, citing a lack of confidence in certain skills due to limited hands-on experience with actual patients. One participant expressed dissatisfaction with the limited practical experience during the pandemic, as students were unable to attend hospital and health center duties. The participant acknowledged the lack of hands-on practice in certain skills but expressed an understanding of the situation, emphasizing the importance of return demonstrations and video-based learning as alternatives.

### d) Compromised mental health

The effects of COVID-19 on students' mental health during the learning process are also an utmost concern. The mental health of college students has been compromised by the distress the pandemic has caused them. Kecojevic et al. (2020) found that students' academic success and social interactions are significantly hindered by mental health issues, which, in turn, affect their personal opportunities and future career prospects.

One participant described the initial challenges of accepting the pandemic's impact, noting that at the beginning of the lockdown, they struggled with low motivation to attend online classes, leading to periods of inactivity at home. One participant expressed significant anxiety regarding the possibility of contracting the virus, noting that even mild symptoms, such as a cough, led to concerns about being infected. The participant also highlighted that this nervousness negatively impacted their performance in online classes. One participant reported experiencing difficulty with eating and sleeping during the early stages of the pandemic, which significantly impacted their ability to attend online classes. This reflects the broader mental health challenges, including stress, anxiety, and depression, that many students faced during this period.

## DISCUSSION

The study explored the male Saudi nursing students' educational challenges and positive aspects of E-learning during pandemic crises. The findings indicated that the implementation of E-learning has positive and negative effects on students. The concept of E-learning positively affects the student's learning through the development of their sense of responsibility. In the research of Khan, Nabi[21] and Thapa et al. (2021), positive attitudes regarding E-learning have been shown by students during the pandemic. Students believe that online learning is a self-directed activity, and it is a learner-centered approach, which enables them to develop autonomy and independence in their study habits. Also, the study of Bankar[22] showed that E-learning activity influences self-directed learning readiness among students. In terms of gender, it was found in the study of Algahtani, Shirah[12] that male students' colleagues attended more E-learning courses while female students' perception of cheating and fraud during E-learning is higher with a declined perception in the quest for knowledge efforts. In this study, the optimistic views of some students during the pandemic crisis were seen. The nursing students were

certain that the Saudi government and the Ministry of Health helped the whole nation respond to the situation.[23] The nursing students in the study of Rana, and Garbuja[24] provided positive perceptions on E-learning.

These participants were very satisfied that their teaching-learning activities were carried out amidst COVID-19. E-learning has many advantages: more convenient and flexible than regular classes. With this, students believe in having more time to learn, do other activities, save time, and provide self-study opportunities.[25] The study of Elzainy, and El Sadik[26], said that the use of E-learning coupled with online assessment is a strategy that is promising with great educational potentials during the COVID-19 pandemic. Student and staff satisfaction, achievement, and improvement of technological academic skills in their study were also observed. Both genders from the study of Shahzad, Hassan[8] in Malaysian Universities, show satisfaction with E-leaning but its portal usage is more towards female students. Furthermore, college of sciences students and other health professionals believe that easy access to the tools and requirements for E-learning saves time.[12] Contradictory to this, the study of Mahyoob[27] shows the dissatisfaction of most learners with continuing online learning because language learning performance's expected progress is hard to fulfill. Rana, and Garbuja[24] also supported this by finding out that nursing students strongly agreed that face-to-face learning was more effective than E-learning. The researcher also identified some negative aspects of taking online classes during the pandemic. The poor connections will hinder the students from attending online classes and downloading documents. Technical difficulties experienced by students have been highlighted due to poor internet connection or trouble in resolving technical issues.[28,29] Moreover, during the pandemic crisis, students could not have clinical duties in hospitals and health centers. The students foresee this as a problem. Overall, E-learning education allows students to be independent and flexible in studying and developing technical skills, critical thinking, and cognitive skills. However, E-learning in nursing is more effective when it is combined with direct contact of student and teacher/tutor.[30] In Jamshidi, Molazam's [31] study, nursing students' ascertainment to be theoretically and practically ready is essential for the board examinations application of these skills in actual settings. In the study of Balsicas, Padohinog[32] students' concerns were the deadlines for submitting requirements and the requirements needed to pass for the subject. Students also cited in this study the three most important activities that need to be enhanced in making online classes successful and enjoyable: Flexible learning usage of interactive videos and consideration or leniency.

Furthermore, the study revealed that student's mental health during a pandemic is affected. Health-related concerns like changes in eating and sleeping habits are significant concerns.[33] Student's learning and overall psychological health can be adversely affected by substantial psychological stress created by outbreaks. According to Asaad, and El-Sokkary[34] studies prove that post-outbreak stress may not reflect the actual stress subjects felt during the event itself. It was concluded in the study conducted by Fawaz, and Samaha[35] on Lebanon university students that the sudden change that occurred during the pandemic has impeded students from learning. It was also said that stressful workloads were caused by this which led to anxiety and depressive symptoms. In the study of Wang, Hegde[36] most students have an increased level of anxiety and stress during the pandemic. Nursing students from the study of García-González, Ruqiong[37] stated that both genders felt the emotional affection at high state-trait anxiety levels during COVID-19 confinement. Still, an increased anxiety level is present in males than in females.

**Implication for nursing**
COVID-19 has resulted in positive and negative effects on male nursing students in their education. The findings indicate the need to support male nursing students and universities in the implementation of E-learning. An online social group for students and programs of the university to support E-learning should be readily available to address the concerns and challenges of male nursing students. The university policymakers, designers, and developers in these universities can benefit from the findings in this study, which provide an accurate picture of the current E-learning system and could be taken as a guideline to improve the usage of E-learning systems among students.

**CONCLUSION**
The rapid shift to e-learning prompted by the COVID-19 pandemic created opportunities and challenges for education. While it provided the potential for skill development and flexible learning, it also introduced distinct obstacles, particularly for male nursing students. This study examines the primary challenges this group faced while navigating online learning during the pandemic in the context of Saudi Arabian universities, where e-learning has been widely adopted. Although e-learning offers advantages, it presents both positive and negative consequences. Therefore, ongoing monitoring and evaluating its effectiveness are crucial, especially during a pandemic. This research aims to identify these challenges and inform strategies to support male nursing students and enhance their learning experiences. Given the significant impact of e-learning on this specific student population, universities must proactively address the concerns affecting their education process.

**Recommendations**
This study worked as a starting point to further understand and interpret male nursing student's experiences in E-learning during a pandemic crisis. 1) For the universities catering to E-learning, it is encouraged that there should be a regular assessment and evaluation of different courses' requirements, quizzes, and examinations to see that these are within the student's level of competency. 2) Male nursing students' academic performance and mental health status may be assessed regularly by the university. Students who are not performing well must be given proper guidance with their academics. A wellness break shall also be offered to the university at least once every semester to provide students with time for mental relaxation. 3) Family members may provide moral, financial, and psychological support to the students to thrive in the flexible learning mode. 4) The university personnel must support the students' learning during this pandemic by conducting webinars that will uplift their emotions to overcome their challenges. 5) A modular learning mode shall be offered for those with no internet connection, and a pre-recorded video presentation for those with a weak internet connection. 6) Skills enhancement shall be offered to the students once the face-to-face learning resumes improve their clinical performance.

**Conflicts of interest**
The authors declare no conflict of interest relevant to this article.

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