

## CHALLENGES FACED BY NURSING STUDENTS IN ONLINE EDUCATION DURING THE COVID-19 PANDEMIC

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**Abstract:** Amid the COVID-19 pandemic, the transition to online education has posed significant challenges for nursing students worldwide. This study explores the multifaceted obstacles encountered during this shift and aims to provide insights for improving online nursing education. Utilizing a descriptive cross-sectional quantitative research design, data was collected from 73 final-year nursing students at Saida Waheed FMH College of Nursing, Lahore, using a structured questionnaire. The questionnaire assessed various domains, including learning effectiveness, software proficiency, instructor support, communication, course design, and psychosocial experiences. The results revealed a spectrum of student experiences, ranging from perceived benefits to substantial challenges adapting to online learning. While some students reported proficiency in online education tools, others faced difficulties navigating technology and accessing course materials. Instructor support emerged as a critical factor influencing students' satisfaction and learning outcomes, with clear communication and timely feedback paramount. Additionally, challenges related to course design and psychosocial experiences significantly impacted students' engagement and motivation. By comparing these findings with previous research, common themes and areas for improvement in online nursing education were identified. The study underscores the importance of targeted interventions to address technological barriers, enhance instructional support, optimize course design, and prioritize students' psychosocial well-being in online learning environments. Ultimately, these insights can inform the development of effective strategies to enhance the quality and effectiveness of online nursing education programs.

**Keywords:** Online Education, Nursing Students, COVID-19 Pandemic, Challenges, Instructor Support

### Introduction

The COVID-19 pandemic has catalyzed unprecedented changes worldwide, profoundly impacting various aspects of society, including education (Stracke et al., 2022). Among the most affected are educational institutions, which swiftly pivoted to online learning modalities to mitigate the disruptions caused by physical campus closures. While imperative for continuity, this rapid transition has presented significant challenges for educators and students, particularly in the nursing field (Bozkurt et al., 2020; Nabolsi et al., 2021).

In response to the closure of physical campuses, nursing schools, like many other educational institutions, turned to online platforms such as Zoom and Google Classroom to deliver course content. However, this shift required a fundamental reevaluation of pedagogical approaches and educators' and students' acquisition of specific technological competencies. Moreover, the sudden nature of this transition has precipitated anxieties and uncertainties among learners and instructors alike (Robinson et al., 2020). Complicating matters further are the pronounced disparities in technological infrastructure between developed and developing nations. While Western countries have more robust systems for integrating technology into education, cultural and educational disparities in other regions pose significant challenges to adopting online learning methods (Bozkurt et al., 2020; Kanwal et al., 2023). The pandemic has brought these discrepancies to the forefront, exacerbating existing inequalities in access to education and technology (Czerniewicz et al., 2020; Robinson et al., 2020).

Despite its potential benefits, including flexibility and accessibility, online education has drawbacks. The absence of face-to-face interaction, limited social engagement, and technological barriers all undermine the effectiveness of online learning. Furthermore, traditional assessment methods may not be well-suited to online environments, raising concerns about academic integrity and the validity of evaluation methods.

### Methodology

This study utilized a descriptive cross-sectional quantitative research design to investigate the challenges encountered by nursing students during online education amidst the COVID-19 pandemic. The research was conducted at Saida Waheed FMH College of Nursing Lahore, focusing on students enrolled in the BScN Final Year and Post RN Final Year programs. A sample size of 73 students was determined using Slovin's formula and selected through a simple random sampling technique.

Data was collected using a structured questionnaire designed to assess the challenges faced by nursing students in online education during the pandemic. The questionnaire included items addressing various domains of concern, such as technological barriers, engagement issues, and academic integrity. Data analysis was conducted using statistical software, including SPSS version 2023 and Excel, with results presented in tables illustrating frequency and percentages for each domain.

Ethical considerations were paramount throughout the research process. Informed consent was obtained from all participants, ensuring confidentiality and anonymity. Participants were made aware of their rights, including the option to withdraw from the study at any time. Additionally, rigorous measures were implemented to protect participants' privacy and maintain the integrity of the research findings. By employing robust research methodologies and ethical protocols, this study aimed to provide valuable insights into the challenges of online nursing education during the pandemic. The findings offer actionable recommendations to address these challenges and enhance the quality of online learning experiences for nursing students globally.

**Results**

A total of 73 participants were included in this descriptive study. The mean age of the study population was 29.6 ± 11.55 years. Table 1 assesses students' perceptions regarding learning effectiveness and comprehension in online education. Most students (57.1%) reported experiencing benefits from online education, indicating a generally positive perception. However, a significant proportion (41.4%) expressed concerns about the quality of knowledge attained through online methods. Overall, while most students found online education to be beneficial, a notable percentage faced challenges related to comprehension and learning quality.

**Table 1: Learning, understanding, and comprehension domain**

Sr. No	Questions	Never		Some time		Always		Means
		f	%	f	%	f	%	
1	I learn quickly with online education.	17	24.3	40	57.1	13	18.6	1.94
2	I got a benefit from what I learned in online education courses.	6	8.6	48	68.6	16	22.9	2.14
3	The assignments helped me to understand the course content better.	4	5.7	38	54.3	28	40.0	2.34
4	The tests in the online class are directly related to assignments, discussions, and other planned activities.	6	8.6	36	51.4	28	40.0	2.31
5	Online education increases the quality of knowledge attained.	29	41.4	23	32.9	18	25.7	1.84
6	Online education will provide me with better learning opportunities than traditional means of learning.	17	24.3	45	64.3	8	11.4	1.87
7	I can manage my study time efficiently and complete assignments on time.	2	2.9	38	54.3	30	42.9	2.40
8	Online education allows students to review educational materials anytime without being restricted by the lecture time.	7	10.0	40	57.1	23	32.9	2.23
9	I learn best when class material is presented in various formats (lectures, videos, podcasts, online discussion/ conferencing).	6	8.6	24	34.3	40	57.1	2.49
10	I feel more comfortable reading a textbook or articles on a computer screen than a physical textbook or paper.	25	35.7	29	41.4	16	22.9	1.87
11	I have the chance to work with my peers during online education.	22	31.4	41	58.6	7	10.0	1.79
12	Student responsibilities (being prepared, participation, group projects, etc.) are well defined in online education.	20	28.6	37	52.9	13	18.6	1.90
13	I believe that using Online education technologies will improve my Learning performance	35	50.0	27	38.6	8	11.4	1.61

Table 2 evaluates students' proficiency and comfort level with various software tools and online platforms. While students generally felt comfortable using essential computer functions, such as internet surfing and file management, there were mixed responses regarding more

advanced skills like word processing and multimedia participation. Overall, students indicated moderate proficiency with online education tools, suggesting room for improvement in certain areas.

**Table 2 Software and Online Education Tools Domain**

Sr. No	Questions	Never		Sometimes		Always		Means
		f	%	f	%	f	%	
1	I am comfortable and proficient at creating, saving, locating, downloading, surfing the Internet, conducting searches, setting bookmarks, and opening different types of files on a computer.	28	40.0	29	41.4	13	18.6	1.79
2	I will use e-mail and other online tools to ask my classmates and instructors questions.	17	24.3	37	52.9	16	22.9	1.99

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3	I can confidently write and format documents using a word processing program.	28	40.0	23	32.9	19	27.1	1.87
4	I have access to a webcam and microphone for simple multimedia participation.	30	42.9	25	35.7	15	21.4	1.79
5	It will be easy for me to become skillful in using online education tools.	22	31.4	29	41.4	19	27.1	1.96
6	I prefer using a computer to prepare my lessons.	18	25.7	45	64.3	7	10.0	1.84
7	Supporting learners in an online education environment is very easy.	32	45.7	34	48.6	4	5.7	1.60
8	It is easy to get help when facing computer problems.	25	35.7	32	45.7	13	18.6	1.83

Table 3 examines students' perceptions of instructors' effectiveness in facilitating online learning. While some aspects, such as clear communication and respectful treatment, received positive feedback, others, such as course organization and technical competency, showed

room for improvement. Overall, students expressed varying degrees of satisfaction with instructors' skills and experiences, highlighting the importance of instructor support in online education.

**Table 3 Instructors' skills and experiences from the Some students' perspective domain Never times Always**

Sr. No	Questions	Never		Sometimes		Always		Means
		f	%	f	%	f	%	
1	The instructor expressed ideas clearly.	13	18.6	40	57.1	17	24.3	2.06
2	Encouraged students to feel free to ask questions.	11	15.7	31	44.3	28	40.0	2.24
3	Carefully answered questions raised by students.	12	17.1	35	50.0	23	32.9	2.16
4	Treated students with respect when communicating through various electronic means.	12	17.1	38	54.3	20	28.6	2.11
5	Used various teaching methods and techniques that helped me understand the practical applications of the course content.	17	24.3	45	64.3	8	11.4	1.87
6	The instructor was helpful and collaborated with the students.	8	11.4	36	51.4	26	37.1	2.26
7	Feedback and evaluation of papers, tests, and other assignments are given promptly.	7	10.0	31	44.3	32	45.7	2.36
8	The instructor is well-organized and prepared.	16	22.9	29	41.4	25	35.7	2.13
9	Competent with computer use during the course.	17	24.3	34	48.6	19	27.1	2.03
10	Accessible and available during the online education course.	22	31.4	31	44.3	17	24.3	1.93
11	Communicated critical due dates/time frames for learning activities.	5	7.1	43	61.4	22	31.4	2.24
12	Define and apply precise grading scales.	14	20.0	25	35.7	31	44.3	2.24
13	Provide accurate, complete, transparent, and accessible content.	13	18.6	36	51.4	21	30.0	2.11
14	Offer multiple opportunities for interaction among learners, between learners and the instructor, and between learners and content.	13	18.6	44	62.9	13	18.6	2.00
15	Integrate face-to-face interactions and participation in social networks.	13	18.6	44	62.9	13	18.6	2.00
16	Provided detailed instructions and guidelines for completing assignments and discussions.	20	28.6	40	57.1	10	14.3	1.86
17	Course objectives in online education are provided at the beginning of the course and clearly described.	8	11.4	38	54.3	24	34.3	2.23

Table 4 explores students' experiences with class discussions and communication with instructors. While students generally felt comfortable participating in online discussions, many expressed concerns about the adequacy

of student-instructor interactions. Additionally, a significant proportion of students preferred face-to-face interactions over online methods, indicating a need for enhanced communication strategies in online education.

**Table 4 Class discussion and student-teacher communication domain**

Sr. No	Questions	Never		Sometimes		Always		Means
		f	%	f	%	f	%	
1	The frequency of student and instructor interactions is adequate.	12	17.1	46	65.7	12	17.1	2.00
2	I felt comfortable participating in the online course discussions.	19	27.1	39	55.7	12	17.1	1.90

3	The face-to-face method is more learner-centered than the online education method.	9	12.9	14	20.0	47	67.1	2.54
4	There is more interaction between all involved parties in online courses than in traditional face-to-face classes.	36	51.4	30	42.9	4	5.7	1.54
5	Communicating through e-mails is comfortable.	43	61.4	23	32.9	4	5.7	1.44
6	I am comfortable interacting with others in online communication.	35	50.0	27	38.6	8	11.4	1.61
7	Online education allows me to communicate with students and instructors at different times.	34	48.6	32	45.7	4	5.7	1.57

Table 5 investigates students' perceptions of course design and content accessibility. While many students found course materials organized and easy to follow, others reported challenges accessing resources and multimedia

content. Overall, students indicated moderate satisfaction with course design and content, highlighting the importance of user-friendly interfaces and accessible materials in online education.

**Table 5 Course design and content material domain**

Sr. No	Questions	Never		Sometimes		Always		Means
		f	%	f	%	f	%	
1	The content is organized and easy to follow.	16	22.9	42	60.0	12	17.1	1.94
2	All the images and texts in the online courses are visible.	15	21.4	38	54.3	17	24.3	2.03
3	Any sounds in the course are audible.	17	24.3	36	51.4	17	24.3	2.00
4	Adequate resources and materials for this online course are easily accessible during the course.	12	17.1	48	68.6	10	14.3	1.97
5	All documents (e.g., pdf, doc, and ppt) are accessible via screen readers. (This includes tables and graphs).	4	5.7	41	58.6	25	35.7	2.30
6	Educational videos are an essential part of Online education.	7	10.0	27	38.6	36	51.4	2.41
7	Video/audio files can be captioned.	12	17.1	36	51.4	22	31.4	2.14
8	The course contained various assessment methods (e.g., discussion, assignments (individual or group), and quizzes).	7	10.0	30	42.9	33	47.1	2.37
9	There is a course schedule that shows activities and due dates.	8	11.4	39	55.7	23	32.9	2.21

Table 6 examines students' psychosocial experiences and satisfaction levels with online education. While some students reported decreased social isolation and lower test anxiety, others expressed concerns about the equitable treatment of class members and overall satisfaction with

the online learning experience. Overall, students indicated mixed feelings about the psychosocial aspects of online education, suggesting a need for further support and assistance in this domain

**Table 6 Psycho-social circumstances domain**

Sr. No	Questions	Never		Sometimes		Always		Means
		f	%	f	%	f	%	
1	The test(s) in the online course is accurate and fair.	24	34.3	38	54.3	8	11.4	1.77
2	Online education treats class members equitably and respectfully.	21	30.0	31	44.3	18	25.7	1.96
3	Online education decreases learners' social isolation.	20	28.6	30	42.9	20	28.6	2.00
4	Learning through online education is interesting.	15	21.4	39	55.7	16	22.9	2.01
5	I am comfortable with online learning technology.	33	47.1	27	38.6	10	14.3	1.67
6	I am comfortable working and learning independently.	13	18.6	34	48.6	23	32.9	2.14
7	I am satisfied with my final grade in the online course.	36	51.4	25	35.7	9	12.9	1.61
8	Conducting the course via the Internet made it easier than other traditional nursing courses I have taken.	25	35.7	38	54.3	7	10.0	1.74
9	I get support and assistance throughout the online education process.	18	25.7	32	45.7	20	28.6	2.03

10	The level of test anxiety in the electronic test is lower than that of the traditional test inside university halls.	16	22.9	26	37.1	28	40.0	2.17
11	Online education is less expensive for students than traditional education.	24	34.3	22	31.4	24	34.3	2.00

## Discussion

The overall outcome of SAIDA WAHEED COLLEGE OF NURSING states that students encounter several difficulties during online education.

Few students show preparedness and readiness for online education in the learning, understanding, and comprehension domains. Only 18 % of students in the whole sample state that they can quickly learn through online education. 27.5 % of students state that online education can genuinely enhance their knowledge. 50% of students believe online education technologies will never improve their learning performance, which shows their less satisfaction with learning online.

Next is the software tools domain, where 18 % of students state that they are comfortable using online gadgets to manage files accurately. 10 % of students state they prefer using computers for their assignments. Only 5.7% of students believe they can quickly get help from others. More than half of students are not good at using software tools. They face different types of difficulties during their course. 24.3% of students believe that their instructors are evident in their ideas and convey them effectively. 18.6% of students believe that the instructor was never clear about the ideas and content to be delivered. 50 % stated that the instructor answered the questions correctly, and 35.7% of students believed the instructor was well organized. 28.6 % of students state that instructors were never provided proper guidelines and instructions for tests and completing assignments. At the same time, 57.1 % of students state that sometimes instructions are given correctly. This domain mainly gives positive feedback about instructor preparedness'.

Comparing our study's findings with previous research provides valuable insights into the evolving landscape of online nursing education. Muassomah et al. (2021) and some other researchers highlighted similar challenges students face during online learning, such as technological obstacles, poor connectivity, and resistance to change. Additionally, Muhammad Habibullah et al. (2020) reported increased anxiety among learners due to the shift to technology-based education, a sentiment echoed in our findings regarding psychosocial circumstances (Almutawa et al.; Hamad et al., 2023; Khalil et al., 2020; Muassomah et al., 2022).

Domain of class discussion having least positive responses. 67.1 % of students believe that the Face-to-Face method is more learner-centered than the online education method, and 5.7% of students state that there is more interaction between all involved parties in online courses than in traditional face-to-face classes; 51.4% of students disagree. 5.7% of students state that Communicating through e-mail is comfortable, and 61.4% deny it. Online education has the most minor interaction between students and teachers. Few opportunities to take part in class discussions. Students prefer physical interaction over online interaction.

Table 5 consists of the course design and material. Half of the students are satisfied with the course outline. 17%

believe that the content is organized and easy to follow. 60% believe that it happens sometimes. 22.9% of students disagree with that. More than half of students are satisfied with their course content.

Table 6 is the Psycho-social circumstances domain in which 14.3% of students state that they are comfortable with online learning technology. Only 12.9% of students are satisfied with their final grade in the online course.

These findings align with previous research indicating both advantages and disadvantages of online learning. Future interventions should focus on enhancing instructional strategies and course materials to optimize learning outcomes in online nursing education (Mohammed et al., 2022; Yekefallah et al., 2021; Yi et al., 2022).

Overall, online education has a different impact on each student. However, the main or joint problem that almost half of the students faced was difficulty operating software tools and feeling socially isolated. Students need motivation to learn, which comes from social interaction and class discussions. Many students, therefore, prefer physical classes.

## Conclusion

our study provides valuable insights into the challenges nursing students face during online education amidst the COVID-19 pandemic. By comparing our findings with previous research, we identified common themes and areas for improvement in online nursing education. Moving forward, targeted interventions should address technological barriers, enhance instructional support, optimize course design, and prioritize students' psychosocial well-being to promote effective and inclusive online learning experiences in nursing education.

## RECOMMENDATIONS

Faculty members should be well-trained to implement online nursing education to improve students' learning. Essential infrastructure for online nursing education programs should be feasible for all faculty members and students. Further research can be done on large samples, sizes, and settings.

### Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

### Ethics approval and consent to participate.

Approved by the department Concerned.

### Consent for publication

Approved

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Not applicable

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The authors declared an absence of conflict of interest.

### Authors Contribution

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Concept & Design of Study, Final Approval of version

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Data Analysis, proofread.

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