

Research Paper

Acceptability, attitude, and satisfaction of online learning among nursing students during COVID-19 lockdown: a cross sectional study

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ABSTRACT

Introduction: Due to the current Novel Corona Virus (COVID-19) pandemic related lockdown in India, regular classes are suspended to maintain social distancing. Educational institutions are now opting for online learning to facilitate and continue with the academic schedule of students. **Aim:** To evaluate the acceptability, attitude, and satisfaction of online learning among nursing students during COVID-19 lockdown. **Settings and design:** A cross-sectional study was conducted with 193 nursing students of a nursing college attached to private medical college and hospital, through online Google Forms questionnaires. **Materials:** Semi-structured proforma for socio-demographic details, Social Presence Scale (SPS), and related Satisfaction Scale (SS) were used for evaluation. **Statistical analysis:** Sociodemographic details were mainly descriptive and categories compared using Pearson's correlation test and ordinal variables using Spearman's Rho correlation. **Results:** The mean age of 20.01 years (Standard Deviation (SD) = 1.42), the mean score of SPS was 44.75 (SD=5.89) and that of SS was 31.12 (SD=7.59). SPS and SS scores correlated significantly ($P<.000$), with a strong positive correlation coefficient of .602. Positive attitude towards online learning was found in 61.7% of students, and 62.7% opined their experience to be satisfactory. **Conclusion:** This study shows that nursing students show adequate acceptability, positive attitudes, and higher satisfaction levels related to online learning, as determined by Social Presence Theory, during COVID-19 lockdown in India.

Keywords: COVID-19, Online learning, Satisfaction, Social Presence Theory

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The world is currently facing the pandemic of the Novel Corona Virus (COVID-19), which probably started from about December 2019. To respond to COVID-19, many countries restricted international and domestic traveling to prevent the spread of infection. Taking the seriousness of the pandemic into account, the Government of India declared a nation-wide strict lockdown from 24th March 2020. Public health experts and government officials took several measures to strengthen the health care system and to reduce its burden by social distancing like the closure of movie theatres, educational institutes, places with large gatherings, and promoting work from home (Bedford et al., 2020; Lancet, 2020).

In light of rising concern about the COVID-19 pandemic, a growing number of universities across the world have either postponed or canceled all campus events such as regular classes, clinical workshops, and conferences. However, with government recommendation, Universities and Colleges are shifting from face to face learning to online learning (Gewin, 2020). This includes video conferencing, Webinars, and giving students PowerPoint presentations of the topics online. As the current conditions are not suitable to reopen classrooms for a more traditional face to face teaching, online education seems to be the way to follow for now, until the pandemic is controlled (*COVID-19*, 2020).

Successful learning depends on many factors such as time, duration of the class, environment, medium of learning, communication skills of the teacher, and receptive ability of the students. The interest of students towards learning is a major factor as it leads to adequate student engagement. Interest and engagement are often affected by contextual factors, like what is being taught, who is teaching, and how it is being taught (Mazer, 2013). A successful outcome thus depends on how attentively and interestedly a student participated in the learning activity. This understanding comes from the Social Presence Theory of telecommunication. Social Presence can make teaching more valuable and effective. Therefore, it is one of the most significant factors in distance learning (Tu & McIsaac, 2002). It addresses the required social and psychological engagement through constructs of intimacy and immediacy. When evaluated with the context of online learning, this theory suggests that successful learning depends on how close the online teaching platform comes to “real” teaching methods. This implies that facial expression in video conferencing and non-verbal cues are important to make the student interested and engaged. Thus, online teaching and learning are not similar to the traditional face to face way of teaching practiced in India, where the students come to a classroom and engage with the physically present teacher, who may or may not use audio-visual aids blackboard or PowerPoint presentations (Cobb, 2009; Gunawardena, 1995; Gunawardena & Zittle, 1997).

When 199 students were asked about their views regarding online Web-based learning, teaching a valuable course with good communication and adaptive skills, along with motivation, encouragement, giving appropriate and meaningful examples, and being concerned regarding their learning were the most important factors leading to successful learning (Young, 2006). When 284 Nigerian medical students were evaluated regarding their attitudes towards e-learning, it was overall positive and the students were optimistic. However, one should be accustomed to basic technical issues and browsing (Obi et al., 2018). Students were measured on satisfaction and perception of social presence, as well as assignments and examination and it was found that students with higher levels of social presence did better on written examination (Picciano, 2019). There is also a need to study a

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possible relationship between social presence and learning outcomes (Biocca et al., 2003; Garrison & Arbaugh, 2007; Oh et al., 2018).

Because of the current pandemic, online learning seems to be a feasible option. However, most of the students are not used to this type of teaching. This is also applicable to teachers, as most of them have taught in classrooms, being physically present in front of the students, and interacting with them. This new model of learning, while beneficial and adequate, may require changes and adaptations from both the students and teachers, to ensure successful learning and participation, without being physically present in the classroom. Thus, we aimed to evaluate the acceptability, attitude, and satisfaction of online learning among nursing students, who are facing a new challenging situation due to the current lockdown.

METHODOLOGY

Participants:

This study was done among nursing students of Bachelor of Science degree, at a private medical college attached to a tertiary care private hospital. As per the Government regulations regarding the COVID 19 pandemic, they were confined to their homes. Their academic schedule was continued by online learning, which included PowerPoint presentations and online video conferencing. This has been ongoing from about the past three weeks. Previously the classes were held in the traditional face to face classroom interaction method.

Tools:

- i. **Semi-Structured Proforma** was used to collect socio-demographic details and prior experience with online courses or learning.
- ii. **Social Presence Scale (SPS)** - This scale was originally prepared by Gunawardena to evaluate online learning. It is a fourteen item self-reported scale with a 5-point Likert scale, scored as 1 = strongly disagree, 2=disagree, 3=uncertain, 4-agree, and 5=strongly agree. The scale was prepared on the concept of Social Presence Theory. It has high reliability of Cronbach's Alpha as .88. We modified the scale by replacing the word "Global Ed" with "online nursing course" or "course" to suit our study sample (Cobb, 2009; Gunawardena, 1995; Gunawardena & Zittle, 1997).
- iii. **The Satisfaction Scale (SS)** – This was also developed by Gunawardena, to reflect the subjective satisfaction related to online learning. This is a ten-item self-reported 5-point Likert scale, scored as 1 = strongly disagree, 2=disagree, 3=uncertain, 4-agree, and 5=strongly agree. It showed high reliability of .87 as Cronbach's Alpha. For this study, one item on the initial scale was deleted that was specific to the Global Ed Conference ("Projects like Global Ed enhance face-to-face on-campus courses") and not relative to the Web-based nursing courses in this study. We also replaced the word "Global Ed" with "online" or "online nursing course" (Cobb, 2009; Gunawardena, 1995; Gunawardena & Zittle, 1997; iSALT Team, 2014).

Procedure:

After obtaining the Institutional Ethics Committee before the study, the semi-structured proforma and scales were converted into Google Forms. This was done due to prohibition against physical gathering or handing out hard copies. Each of the nursing class had a Class Representative (CR), who was explained regarding the study and its need over the phone by the Principal Investigator (PI) and all doubts were clarified. The Google Forms were then sent to the CR's mobile from the PI's mobile through WhatsApp. The CR further forwarded

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the forms to the students, who were allowed to ask for any clarification regarding the study to their respective CRs. If further clarification was required, the CR could contact the PI for the same. The students remained anonymous and were included only if they consented. The Informed Consent Form was uploaded along with the Google Forms. Their responses were directly received to the PI's account and remained confidential and anonymous. We evaluated 193 students in total.

Statistical analysis:

The data was compiled in Google Forms and analysed using Statistical Package for the Social Sciences (SPSS) version 20. Along with the descriptive analysis, Spearman's correlation was used for correlation between the Likert scale as ordinal data, and Pearson's correlation was used for categorical data.

RESULTS

The socio-demographic descriptive details are given in **Table 1**. The mean age of the sample (N=193) was 20.01 years (Standard Deviation (SD) = 1.42). Out of our sample, 56.5% of students had previous experience of some kind of online learning. We used Pearson's test to correlate between socio-demographic data, SPS and SS. We found a significant positive correlation ($P=.008$) between religion and SPS and between education and SS ($P=.003$)

The mean score of SPS was 44.75 (SD=5.89), ranging from 29 to 59. The maximum score possible was 70, which indicates that for most, learning was adequate. We combined responses of "Agree" and Strongly Agree" in the normal scoring item and "Disagree and "Strongly Disagree" for reverse coded items (Item 1, 9, 10, 11) on the scale as a positive outcome. We found that majority gave a positive response, as shown in **Table 2**. Keeping an arbitrary cut-off score of equal to or less than 42 (if all 14 items are score "Uncertain") for a negative attitude towards online learning, and scores above 42 to be positive, we find that 61.7% had a positive attitude.

Regarding satisfaction, as measured by SS, the mean score was 31.12 (SD=7.59), scores ranging from 9 to 45, with higher scores showing higher satisfaction. We combined the responses of "Agree" and Strongly Agree" in the scale as positive. Item wise details are given in **Table 3**. Keeping an arbitrary cut-off score of equal to or less than 27 (if all 9 items are score "Uncertain") for not satisfactory and scores above 27 as satisfactory, we find that 62.7% opined their experience to be satisfactory. Correlating SPS and SS with each other using Spearman's Rho as both are ordinal variables, we get a significant ($P<.000$), with a strong positive correlation coefficient of .602.

Table 1: Sociodemographic details and their correlation SPS and SS

Sociodemographic variables	N (%)	<i>P value with SPS</i>	<i>P value with SS</i>
Gender:			
Males	06 (3.1)	.193	.093
Females	187 (96.9)		
Religion:			
Hindu	80 (41.5)	.008*	.035
Muslim	04 (2.1)		
Christian	109 (56.5)		
Education:			

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Table 1: Sociodemographic details and their correlation SPS and SS			
Sociodemographic variables	N (%)	P value with SPS	P value with SS
First year	54 (28)	.120	.003*
Second year	33 (17.1)		
Third year	37 (19.2)		
Fourth year	69 (35.8)		
Residence:		.087	.057
Rural	109 (56.5)		
Urban	84 (43.5)		
* P value significant			

Table 2. Item scores of SPS		
Item	Positive (%)	Uncertain (%)
1. Messages were impersonal	42.4	39.9
2. Excellent medium for social interaction	47.1	31.1
3. Comfortable conversing through this text based medium	43	35.2
4. Comfortable introducing yourself	39.9	34.7
5. Introductions enabled form a sense of online community	39.9	42.5
6. Comfortable participating in discussion	52.1	33.7
7. Teacher created a feeling of an online community	46.7	38.9
8. Teacher facilitated discussions	49.7	35.8
9. More impersonal than face-to-face discussion	35.2	39.9
10. More impersonal than audio teleconference discussion	33.7	43.5
11. More impersonal than video teleconference discussion	33.1	45.6
12. Comfortable interacting with other participants	42.5	34.2
13. Your point of view was acknowledged	36.8	43
14. Form distinct individual impressions of some course participants	35.8	51.8

Table 3. Item scores of SS		
Item	Positive (%)	Uncertain (%)
1. Learning through the text medium	44.5	39.4
2. Learning from online discussions	53.4	29.5
3. Stimulated to do additional reading on the topic	45.1	35.2
4. Learned to value other points of view	54.4	31.6
5. Like to participate in another online course	40.4	36.8
6. Useful learning experience	49.7	35.2
7. Made acquaintances electronically in other parts of the country/world.	37.8	43
8. Diversity of topics prompted in discussion participation	39.3	40.9
9. Put in a great deal of effort to learn the online system to participate in course	46.1	40.4

DISCUSSION

This study evaluated the acceptability, attitude, and satisfaction of online learning among nursing students during the COVID-19 lockdown. We found overall a positive attitude towards online learning and higher satisfaction related to it.

Similar to a previous study, we found domains of motivation, facilitation, adaptation, the usefulness of the courses and effective communication to be important and adequately dealt

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with (Young, 2006). The role of the teacher in online learning is important, and the students found it to be overall positive, as rated in items 7 and 8 of SPS (Table 2). However, most of them were uncertain regarding the material to be personal or impersonal. We found education status to be correlating with SS but not SPS. A similar correlation between successful e-learning and education class was found in a study in Nigeria (Obi et al., 2018). As seen in this study, students in our study were also comfortable with online learning technology. Social presence was related to better participation in online teaching in a previous study. A higher score on items 6 and 12 of SPS (Table 2) in our study also shows the same, that the students could participate in online learning adequately, as they felt to be in a community and their views to be acknowledged sufficiently (Table 2, Item 4,5 and 13).

Regarding the satisfaction of online learning, we found that most students could learn from text material, online discussion, with participation in the discussion. They found it to be stimulating and useful. However, the diversity of the discussion and knowing other participants online were relatively low, as most students were uncertain about these aspects. Quality of service of e-learning was found to be most important for a successful outcome in a previous study, followed by the quality of teachers and course material (Pham et al., 2019). Our study shows higher positive responses in domains related to service quality as measured by SS (Table 3, Item 1, 2, 3, and 6). This also called as “learner–content interaction” has been seen to predict better learning (Alqurashi, 2019). We also find that majority wanted to participate in further online courses, drawing from the current experience (Table 3, Item 5 and 6). Taking these two items into account, we also opine that online learning was accepted satisfactorily by the students, as also seen in other studies (George et al., 2014; Mohammad Imran, 2011).

We find Social Presence Theory to be useful in predicting the attitude and satisfaction towards online learning. Domains of intimacy, which included distance, non-verbal skills, and topics of personal significance and immediacy, which includes the perceived psychological proximity between learners and teachers. In our study, items related to both constructs were reported positively, immediacy more than intimacy.

This study is one of the first to evaluate attitudes and satisfaction related to online teaching and learning during lockdown due to the COVID-19 pandemic. Limitations include less sample size and lack of a more detailed evaluation regarding the students’ perspectives and experiences about previous online learning and the differences with the current schedule. Also, the study is limited only to nursing students and not others in healthcare service.

CONCLUSION

We found that nursing students show adequate acceptability, positive attitudes, and higher satisfaction levels related to online learning, as determined by Social Presence Theory, during COVID-19 lockdown in India. Future studies should elaborate on past and current learning experiences and modules, such as synchronous and asynchronous learning, among students from various domains of healthcare.

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Conflict of Interest

The author declared no conflict of interest.

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