



Study on Satisfaction of Students Regarding Online Classes in a Selected College of Nursing, Mangalore

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Abstract

Background of the Study The coronavirus disease 2019 pandemic affected India in March 2020. The Government of India's enforced country-wide lockdown has been extended several times. Because schools and colleges are crowded places where infection can easily spread from person to person, our country's respective states mandated online classes out of concern for their academic studies as well as the continuation of the medical and nursing care systems. Medical and nursing students use applications such as Impartus, Zoom, and Google Meet to supplement formal classroom learning. Preventive measures become the best way to prevent infection and are important in saving one from being infected by the virus. Thus, students had experience of online classes in the first wave of the pandemic. Though there was a reopening of institutions for a short period of time and offline classes were resumed toward the end of the year, due to the second wave, institutions were again forced to get back to online classes.

Methods A descriptive design was used in this study. The sample size of 387 nursing students was selected by an online random sampling technique to identify the level of satisfaction of students regarding online classes. Data were gathered using a rating scale and analyzed with descriptive and inferential statistics. The result shows that 49.35% of students were moderately dissatisfied, 38% were moderately satisfied, 6.20% were highly satisfied, and 6.45% were highly dissatisfied with regard to the online classes.

Results and Conclusion Online learning is an important means of education when there are constraints like physical, geographical, and other health-related problems. Yet it is vitally important to know the response of the learners, at least in the initial stage of introducing them into an institution. The results of the present assessment show that 49.35% of students were moderately dissatisfied. It proved that students are not really happy with online classes due to the underlining factors like network issues, lack of interaction between the students and lecturers, lack of course organization, and time factors.

Keywords

- ▶ COVID-19
- ▶ education
- ▶ medical
- ▶ nursing
- ▶ online classes
- ▶ pandemic
- ▶ students

Introduction and Need for the Study

The coronavirus disease 2019 (COVID-19) pandemic has brought the whole world to a standstill since March 2020. This has been particularly true in India. The only solution to prevent the spread of this deadly disease was social distancing, and this resulted in lockdowns. Since schools and colleges are crowded areas where the virus could easily be transmitted, all educational institutions had to close their doors, and students remained at home for extended periods of time. These institutions had to devise new and alternative systems of teaching and learning. With technological advancement, it is now possible to organize online courses, making use of Zoom and Google.¹ Medical and nursing students use applications such as Impartus, Zoom, and Google Meet to supplement formal classroom learning. Preventive measures become the best way to prevent infection and are important in saving one from being infected by the virus. Thus, students had experience of online classes in the first wave of the pandemic.²

The transition from formal classroom learning to online learning was a major challenge for medical and nursing educators as well as students, because medical studies are essentially practice-based studies, unlike purely academic college studies. Teachers and students were ill prepared for the impact the pandemic was going to have on education.³ As a result, they had to innovate and were forced to use online learning for a longer period of time. Students' satisfaction can be evaluated on two levels: one, the short-term attitude of each individual, resulting from educational experience, services, and facilities; and two, an emotional psychological response, depending on the students' expectations regarding their academic reality.⁴

The ability of nurses to deal with the absence of face-to-face training was likely to impact their studies. Therefore, an in-depth study into how knowledge is transmitted and absorbed had to be undertaken. In this context, learner satisfaction is an essential element in enabling students to acquire the level of knowledge they will need to provide proper care for patients.

In a world with an ever-expanding workforce, online learning has become one of the most cost-effective ways to educate. In this modern era, it plays an important role in imparting knowledge. Traditional teaching delivery systems are evolving from the classroom setting, where a professor lectures and students listen. Advanced modern technology is now providing simple and flexible educational alternatives for those who are unable to attend traditional classrooms. Through online classes, it becomes easy for students to learn the bulk of the subject matter and fill in the gaps in several areas.⁵

Due to the COVID-19 pandemic, India announced the total shutdown of schools and colleges in early 2020. Under these circumstances, the Education Department of India promoted the use of online classes for academic studies. Medical and nursing colleges too have adopted this new way of learning through online classes. As this is a new method of both teaching and learning, it is important to be able to gauge the level of satisfaction of students with online classes.

In 2003, Wang developed information and communications technology and he has brought about a significant

evolution in the systems for delivering information in education. This study was conducted to evaluate whether the students had a full level of satisfaction with online teaching and learning programs.⁶ The main need and focus for conducting this study was to determine the factors that directly or indirectly affect the students' level of satisfaction.⁷

Therefore, this study will:

1. Assist in determining how well students cope with online instruction and how motivated they are to adapt to this new way of learning.
2. Investigate methods and means of compensating for a lack of practical experience.
3. Investigate how the virtual presence of the lecturer improves students' attention and concentration.
4. Attempt to identify and assist in the resolution of problems encountered while taking online classes.
5. Prepare lecturers and students to face similar challenges in the future.

Objectives of the Study

- To identify the level of satisfaction of students regarding online classes.
- To find an association between demographic variables and the level of satisfaction score of students regarding online classes.

Hypothesis

Hypothesis was tested at 0.05 level of significance.

H₁: There will be significant association between level of satisfaction score and selected demographic variables.

Materials and Methods

Methodology

Research Design

A descriptive research design was selected for the study.

Population

The study population includes the students who attended the online classes during the COVID-19 pandemic in a selected college of nursing, Mangalore.

Setting of the Study

This study was conducted at a selected college of nursing in Mangalore.

Sample Size and Sampling Technique

In the present study, the sample comprised of 387 students from Bachelor of Science (BSc) Nursing and Post Basic BSc (PBBSc) Nursing from a selected college of nursing, Mangalore, which was selected through a computer-based online random sampling technique. A proportional random sampling method was used to select the number of samples from each batch of students. Samples were collected based on the inclusion and exclusion criteria.

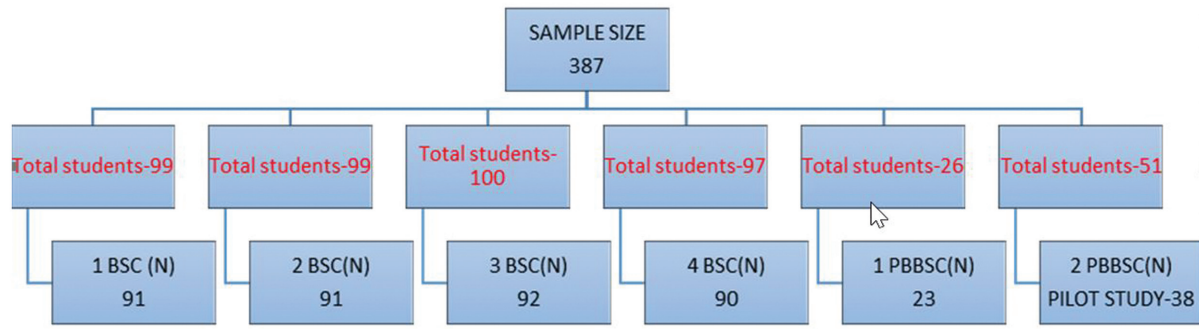


Fig. 1 Sample and sampling. BSc(N), Bachelor of Science Nursing; PBBSc(N), Post Basic Bachelor of Science Nursing.

Samples were selected in equal proportion from respective batches using the formula: **(sample size/population size) × stratum size**. (As shown in ►Fig. 1, sample size = 387, population size = 472, stratum size = as mentioned in the ►Fig. 1).

Sample size calculation formula:

$$n = \frac{z^2 \times p(1-p)}{e^2}$$

Following values can be used for estimating the sample size ($p = 0.579$).²

$$n_0 = \frac{(1.96)^2 \times 0.579(1-0.579)}{(0.05)^2} = 369$$

Total sample size = 387 (5% of attrition rate is considered).

Sample Criteria

Inclusion Criteria

- Nursing students who attended real online classes during COVID-19 pandemic (samples were selected from first, second, third, and fourth year BSc (N), and first and second year PBBSc (N) batch, respectively).
- Students who were in the age group of 18 to 40 years.

Exclusion Criteria

- Students who made use of offline virtual contents during COVID-19 pandemic.

Instruments

Tool 1: Description of demographic variables consisted of six items to obtain information regarding age in years, gender, education (year of study), Internet accessibility at home and hostel, participation in online classes through, and hours spent online per day for education.

Tool 2: Rating scale on the level of satisfaction of students regarding online classes: The tool consisted of 25 items. It was on a 4-point rating scale with an option of “Highly satisfied” (score 4), “Moderately satisfied” (score 3), “Moderately dissatisfied” (score 2), and “Highly dissatisfied” (score 1).

Interpretation of the Scores

Interpretation	Score
Highly dissatisfied	25–50
Moderately dissatisfied	51–75
Moderately satisfied	76–100
Highly satisfied	>100

Domains

Sl. no.	Domains	Number of items
1	Learner’s perspective	9
2	Instructor’s dimension	5
3	Technology dimension	6
4	Course organization	5

Validity and Reliability and Scoring of Instruments

Validity

The tool was validated by six experts from the nursing profession. All the validators agreed with the tool with some modifications and with the suggestion of adding some more items. The tool was finalized with the suggestions of the experts and guide.

Reliability

The investigators collected data from (30 students) second year PBBSc Nursing students through an online Google Form. Karl’s Pearson correlation was used to assess the internal reliability. The reliability was 0.8, which was considered to be reliable.⁶

Data Collection Procedure

Formal written permission was obtained from the concerned authorities of the selected college of nursing, Mangalore. Ethical clearance was obtained from Father Muller Institutional Ethics Committee. The investigators collected the data through an online method using Google Form. The objectives

of the study were clearly stated and consent was obtained from the participants. Their willingness to participate in the study was ascertained and they were assured of the anonymity and confidentiality of the information provided. The data collection was performed in-college according to the set criteria. Students from first, second, third, and fourth year BSc Nursing, and first year PBBSc Nursing (second year PBBSc Nursing students were selected for pilot study only) participated in the study. Overall, 387 students who fulfilled the inclusion criteria were selected for the study by computer online random sampling. The demographic variables and rating scale on the level of satisfaction of students regarding online classes were administered to the nursing students by a checklist. The average time taken was 15 to 20 minutes.

Data Analysis Method Including Statistical Tests

Descriptive statistics (frequency, percent, mean, standard deviation [SD], and mean percent) and inferential statistics (chi-square test to find out the association data) were used for the data analysis.

Results

Section 1: Description of Demographic Variables

This section deals with the description of demographic variables of 387 nursing students (►Table 1).

- Among the 387 students, the majority of the students (47.2%) were in the age group of 20 to 21 years, 23.5% of the students were of 18 to 19 years, 23.3% of the students were of 22 to 23 years, and 6% of the students were in the age group of 24 and above.
- Further, 96.1% of students were females, and 3.9% were males.
- Moreover, 23.5% were from the first and second years, 23.8% from the third year, 23.3% from the fourth year BSc, and 6% from the first year PBBSc.
- Also, 100% of students had Internet access at home or in their hostel.
- Out of the total, 77% of students were participating in online classes through data packages, and 23% of students were using WiFi.
- Overall, 78.6% of students were spending 5 to 8 hours online per day for education; 17.1% of students were spending less than 5 hours online, and 16.6% of students were spending more than 8 hours online.

Section II: Rating Scale on the Level of Satisfaction of Students Regarding Online Classes (►Tables 2 and 3)

Area-wise mean, mean percent, and SD of the level of satisfaction was computed. The highest percent score was obtained in the learner's perspective (63.70%).

Section III: Association between Levels of Satisfaction of Students Regarding Online Classes with the Selected Demographic Variables

This section deals with the findings of the association between the levels of satisfaction of students regarding online classes with the selected demographic variables.

H₁: There is significant association between the level of satisfaction score and selected demographic variables (►Table 4).

A chi-squared test was computed to find out the association between level of satisfaction and demographic variables. As it was discovered, the *p*-values of age in years, gender, education, participation in online classes, and hours spent online per day for education were 0.650, 0.290, 0.280, 0.474, and 0.863, respectively, which were less than the 0.05 level of significance. Null hypothesis (H_{01}) was accepted and the research hypothesis was rejected. Hence, there is no significant association between the level of satisfaction score regarding online classes and the demographical variables.

Discussion

In the present study, the results showed that the majority of the students were in the age group of 20 to 21 years (40.7%) and the maximum number of students were females (91.4%). These findings are supported by a study conducted on "Online Learning in the Face of the COVID-19 Pandemic: Assessment of Students' Satisfaction at Chitwan Medical College, Nepal." This study revealed that the mean age of the students was 21.8 years (range: 17–39 years). The majority of students belonged to the female category (77.6%).⁷

In this study, 49.35% of students were moderately dissatisfied, 38% were moderately satisfied, 6.45% were highly satisfied, and 6.20% were highly dissatisfied with regard to online classes. These findings are supported by the study conducted on "Online Learning in the Face of the COVID-19 Pandemic: Assessment of Students' Satisfaction at Chitwan Medical College, Nepal." In the study, 53% of students were satisfied. Only 16.8% were dissatisfied with online classes.⁷

Limitations of the Study

1. The study was limited to the students who attended online classes during COVID-19 pandemic.
2. The study confined to the students of a selected college of nursing in Mangalore.
3. This study was limited for selected batches in a selected college of nursing, Mangalore.

Conclusion

The study was undertaken on the "satisfaction of students regarding online classes" and it was found that 38% of the students were moderately satisfied with the online classes. It was also noted that 49.35% of the students were moderately dissatisfied with the online classes. This study clearly shows that online teaching is not highly effective for students. As far as the current situation is concerned, a hybrid teaching model could make it effective for students' learning as it is highly flexible based on the students' skills requirements.

Table 1 Description of demographic variables ($n = 387$)

Sl no.	Demographic variable	Frequency	Percent
1	Age in years		
	18–19	91	23.5
	20–21	183	47.2
	22–23	90	23.3
	24 and above	23	6
2	Gender		
	Male	15	3.9
	Female	372	96.1
3	Education and year of study		
	First year BSc (N)	91	23.5
	Second year BSc (N)	91	23.5
	Third year BSc (N)	92	23.8
	Fourth year BSc (N)	90	23.2
	First year PBBSc (N)	23	6
4	Internet accessibility at home or hostel		
	Yes	387	100
	No	–	–
5	Participation in online classes through		
	WiFi	89	23
	Data package	298	77
6	Hours spent online per day for education		
	Less than 5 hours	66	17.1
	5–8 hours	304	78.6
	More than 8 hours	17	16.6

Abbreviations: BSc, Bachelor of Science; N, nursing; PBBSc, Post Basic Bachelor of Science.

Table 2 Level of satisfaction of students regarding online classes ($n = 387$)

Grading	Range of scores	Frequency	Percent
Highly dissatisfied	25–44	24	6.20
Moderately dissatisfied	45–63	191	49.35
Moderately satisfied	64–82	147	38
Highly satisfied	83–100	25	6.45

Note: Among 387 students, 49.35% were moderately dissatisfied and 38% were moderately satisfied; 6.20% of students were highly satisfied and 6.45% of students were highly dissatisfied. Hence, it is inferred that students were moderately dissatisfied regarding online classes.

Table 3 Area-wise distribution of mean, standard deviation (SD), and mean percent

Areas	Minimum	Maximum	Mean \pm SD	Mean percent
Learner's perspective	9	44	28.03 \pm 6.11	63.70
Instructor's dimension	5	25	15.49 \pm 3.35	61.96
Technology dimension	6	30	17.72 \pm 4.29	59.06
Course organization	5	25	15.64 \pm 3.35	62.56

Table 4 Association between levels of satisfaction of students regarding online classes with selected demographic variables ($n = 387$)

Demographical variables	Median 75		Df	p-Value
	≤75	>75		
Age in years				
18–19	52	47	3	0.650
20–21	90	68		
22–23	62	51		
24 and above	11	6		
Gender				
Male	6	9	1	0.290
Female	210	162		
Education and year of study				
First year BSc (N)	51	40	4	0.280
Second year BSc (N)	50	41		
Third year BSc (N)	51	42		
Fourth year BSc (N)	50	40		
First year PBBSc (N)	20	3		
Participation in online classes through				
WiFi	51	38	1	0.474
Data package	174	124		
Hours spent online per day for education				
Less than 5 hours	33	33	2	0.863
5–8 hours	173	131		
More than 8 hours	15	2		

Abbreviations: BSc, Bachelor of Science; N, nursing; PBBSc, Post Basic Bachelor of Science.
 $p < 0.05$.

Conflict of Interest

None declared.

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