

A comparative study to assess the student nurses' perception regarding the effectiveness of traditional classroom teaching *versus* online teaching

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ABSTRACT

Introduction: Every method of education has its own requirements and limitations. Good teaching methods help the students to question their preconceptions and motivate them to learn. Traditional method of teaching in the classroom is most commonly preferred platform of education to meet the knowledge, psychomotor and affective component of education. During Covid -19 pandemic, online learning has become an integral part of education wherein the individuals can take a course within the comfort of home. Relevance and suitability of the mode of teaching is determined by the level of satisfaction of the learners and the learning outcome.

Objective: To compare the effectiveness of classroom teaching vs. online teaching among nursing student.

Methods: A quantitative survey was used to compare the student nurses' perception regarding the effectiveness of traditional classroom teaching versus online teaching at College of Nursing, AIIMS New Delhi. Purposive sampling was used to select 154 nursing students who have experienced both traditional classroom teaching and online teaching. The data were collected using 5-point rating scale through go-

-ogle form as Covid-19 restrictions were in force.

Results: The nursing students perceived that classroom room teaching was significantly effective ($P < 0.00001$) mode of teaching than online teaching. The B.Sc. Nursing Students perceived both classroom teaching ($P = 0.00003$) and online teaching more ($P = 0.011$) than M.Sc. Nursing students. The study reported that 87.01% students used Smartphone as an electronic device to attend online classes. More than two-third (80.52%) of the students, used phone data service for internet.

Conclusion: The classroom teaching was found to be a more effective mode of teaching among the students. Online teaching would be helpful in adverse situation but cannot replace the classroom teaching. Adaptation to the new technology is easy in early age and lower courses. Amalgamation of different mode of teaching would yield better results and satisfaction especially if it is implemented at earliest of the learning, to bring about the positive changes.

Key words: Student nurses; Perception; Effectiveness; Classroom teaching; Online teaching,

INTRODUCTION

Dynamism of the society has lead to enormous changes not only in the field of health care but in teaching learning process too. Lot has changed from ancient Gurukul method to the present online education. Every method of education has its own requirements and limitations. Good teaching method helps the students to question their preconceptions and motivates them to learn, by putting them in a situation in which they come to see themselves as the authors of answers, as the agents of responsibility for change.

Traditional method of teaching in the classroom is most commonly preferred platform of education. Traditional classroom teaching owes the merit of student discipline and satisfaction in various areas of instruction and course excellence. [1] It is in a way streamlined to meet the cognitive, psychomotor and affective component of education. It aids in maintaining a proper schedule and improves physical fitness too. There is a one to one interaction with the teacher to clarify doubts and students receive personal guidance too. With the threat of pandemic in situ, a lot of changes are forced to happen in the teaching learning methods in order to maintain social distancing.

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To keep alive the process of education online classes has become the life line of the present day. Research to highlight the optimal teaching learning method has a significant role to play. Online learning has become an integral part of education recently with the corona virus infection. The best thing about online learning is that individuals can take a course with the comfort of home. The students selecting a Web-based course format shows greater motivation and learning outcome.[2] the learner's age, previous experience, economic status of the family, availability of the gadget and internet connection are factors that may affect the learning outcome with online courses. In online classes, the learner is not directly interacting with the faculty. Participation of the students in online courses is less intimidating. The quality and quantity of interaction must be increased.[3] Online courses are considered more effective and less time consuming as compare to classroom teaching. [4] The question still exists regarding which mode of teaching is better as some studies reported no difference in either mode of instruction. Both the modes of teaching have certain merits and demerits. [5] Knowing the effective way of teaching is an essential prerequisite before switching from one mode of teaching to another one. Therefore, the present study was undertaken to compare nursing students' perception regarding the effectiveness of classroom teaching vs. online teaching.

METHODOLOGY

A quantitative survey was carried out to compare the student nurses' perception regarding the effectiveness of traditional classroom teaching versus online teaching at College of Nursing, AIIMS New Delhi. The purposive sampling was used to select 154 nursing students. The samples were drawn from those Nursing Students, who have experienced both traditional classroom teaching and online teaching and recently studying at College of Nursing, AIIMS, New Delhi. B.Sc.Nursing (Hons.) First year nursing students, enrolled in the academic year 2020 were excluded from the study as they would not have experienced traditional classroom teaching in college of nursing due to Covid-19 pandemic. Tool for the study included two sections. Section -I consisted of demographic profile of the students including age, family income, course and year of the study, availability of electronic device for classes and availability of internet service. Section-II included self developed rating scale to rate the perception of the students regarding effectiveness of online and traditional classroom teaching. It consisted of 21 statements for classroom teaching and 21 statements for online teaching. The statements were related to various attributes to determine preferred methods of teaching. The attributes included-flow of thought, stress on important points, better summarization, large number of facts can be given, problem solving better, clarity of words, clarity of concepts, note taking easier, copying diagram easier, promotes better understanding of the subject and method of choice for delivering the lecture.

To established validity, the tool was given to the experts, to judge content based on objective, relevance, adequacy of content, organization, clarity and understanding. Reliability of the tool was established at 0.86 cronbach alpha.

Ethical Considerations

Ethical approval was obtained from the institute ethical committee (IEC), AIIMS, New Delhi.

Data collection

The nursing students were provided with participant information sheet. The purpose of the study was explained and written informed consent was taken. Participants were ensured confidentiality and anonymity of the data throughout the study. Data were collected using the tool via Google form as Covid-19 restrictions were in force.

Statistics

The data were analyzed using IBM SPSS version 26. The data were presented in the tables using frequency, percentage, mean, and standard deviation. 't'-test was used to compare the means.

RESULTS

The mean age of the students was 22.23 ± 4.27 years. More than two-third (85.09%) of the students' were studying B.Sc. nursing course whereas 14.94% were doing M.Sc. Nursing. Majority (53.25%) of students' were studying in first year of the courses. Maximum students (87.01%) used Smartphone whereas (11.04%) used laptop and tablet (1.95%) as a device for online classes. More than two-third (80.52%) of the students used phone data service whereas 13.64% used Wi-Fi of their home and 4.55% used Wi-Fi of Hostel for internet service shows in Table 1.

Table 1
Frequencies distribution of demographic variables.

Variables	Frequency/percentage
Course	B.Sc. (Hons.) Nursing 131(85.06%)
	M.Sc. Nursing 23(14.94%)
Year	First year 82(53.25%) {M.Sc.-18, B.Sc.-64}
	Second year 34(22.08%) {M.Sc.-5, B.Sc.-29}
	Third year 8(5.19%) {B.Sc.-8}
	Fourth year 30(5.19%) {B.Sc.-30}
Device used	Laptop/computer 17(11.04%)
	Smartphone 134(87.01%)
	Tablet 3(1.95%)
Data connection	Dongle 3(1.3%)
	Home Wi-Fi 21(13.64%)
	Hostel Wi-Fi 7(4.55%)
	Phone data service 124(80.52%)
Age (years)	N=154
Mean, SD	22.23±4.27

Describes that the students perceived classroom room teaching, significantly effective ($P < 0.00001$) mode of teaching than online teaching with mean difference of 28.95 in Table 2.

Table 2 Effectiveness of classroom vs. online teaching among nursing students

Online teaching Mean, SD	SEM	Classroom teaching Mean, SD	SEM	Mean difference	"t" Value	df	P value
39.58 ± 7.08	0.57	68.53 ± 10.33	0.83	28.95	28.02	153	<0.00001*

N=154

SD-standard deviation, SEM- standard error of mean, df-degree of freedom.

*Statistically significant at 0.05 level of significance.

Describes that the level of perceived satisfaction of B.Sc. Nursing Students was significantly higher than M.Sc. Nursing students in both classroom teaching ($P=0.00003$) and online teaching ($P=0.011$) in Table 3.

Table 3. Effectiveness of classroom vs. online teaching between the students of B.Sc. Nursing and M.Sc. Nursing courses.

Variable	B.Sc. Nursing (n=131)		M.Sc. Nursing (n=23)		df	't' value	P
	Mean, SD	SEM	Mean, SD	SEM			
Online teaching	40.51 ± 6.83	0.59	34.26 ±6.21	1.29	152	4.099	0.00003*
Classroom teaching	69.32 ±10.13	0.88	64 ±10.53	2.19	152	2.31	0.011*

N=154

SD-standard deviation, SEM- standard error of mean, df-degree of freedom.

*Statistically significant at 0.05 level of significance.

DISCUSSION

The present study reported the mean age of the nursing student's 22.23 ± 4.27 years. Maximum number (87.01%) of the students used Smartphone as a device for online classes. More than two-third (80.52%) of the students, used phone data service for internet. Further the study found that the nursing students perceived the classroom room teaching more effective mode ($P<0.00001$) of teaching than online teaching. The level of satisfaction of undergraduate Nursing Students was significantly higher than postgraduate nursing students in both classroom ($P=0.00003$) and online teaching ($P=0.011$). The findings of the study are consistent with Summers JJ et al. (2005), that students enrolled in the traditional classroom course were significantly more satisfied with the course than the online course students. [6]. Buckley KM (2003) reported similar findings wherein Web-based course received the significantly lower mean course evaluation score than other instructional methods. [5] Hubble MW (2006) reported significantly lower score of online students than the on-campus students.[7] Similarly Hale et al. (2009) reported lower level of satisfaction with instructor rapport, course excellence, peer interaction, and self-perceived knowledge gains in the students of online course.[1] Kearns LE et al. (2004) reported that the students in the traditional course were more satisfied though the Students in the Web-based course scored significantly higher on both performance measures.[8] Therefore, majority of students preferred in-class lectures compared to online lectures [9]. These findings support the traditional classroom teaching as an effective mode of teaching where the students get deeper insight of learning and discipline. On the other hand, many studies reported online teaching as an effective way of teaching where the students who took online course, performed moderately better than a classroom course. [10] The students, who selected a Web-based course format, demonstrated greater motivation and learning success. [2] Erickson SR et al. (2003) reported the online technique tutorial was as effective as the standard lecture format. [11] Similarly, Euzent P et al. (2011) found that majority of the students' felts online teaching better than a traditional large lecture course taught face-to-face. [12] These studies showed the path to adopt online teaching as a good alternative to traditional classroom teaching. In contrast with above findings Ni Anna.

(2013) reported that both online and classroom modes of teaching were equally effective. [3] Similarly, no difference was reported by Porter et al (2014) in the student's performance of classroom and online teaching. [4] Padalino et al. (2007) found an equal efficacy of both methods classroom and online teaching. [13]

CONCLUSION

The classroom teaching was found to be more satisfactory and effective mode of teaching among the nursing students. Adaptation to the new technology is easy in early age and initial level of the courses. Blended mode of teaching would yield better results and satisfaction, if implemented at earliest, to bring about the positive changes, motivation and effective learning outcomes.

LIMITATION

The present study was a cross-sectional, confined to single setting with limited sample size.

RECOMMENDATION

Similar longitudinal, experimental study may be carried out among other students than nursing. Results may be applied to the present mode of teaching. Students may be provided with devices and internet services to provide uninterrupted services for effective learning.

AVAILABILITY OF THE DATA

The data are available on request.

AUTHOR'S CONTRIBUTION

SR wrote study proposal and collected the data. HR did data analysis and wrote the manuscripts. Both the author finalised the manuscripts.

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