

# Faculty Perceived Benefits and Barriers of Online Teaching among Nursing Faculty in Tamil Nadu

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## Abstract

The Covid- 19 pandemic has forced the central and state governments to strictly adhere to complete lockdown in the country. In order to continue teaching and learning of Nursing students, Online learning was organized by Tamil Nadu Nurses and Midwives Council (TNNMC), in collaboration with nursing educational Institutions of Tamil Nadu. This study was undertaken to assess the Perceived Benefits and Barriers and of online learning, among Nursing faculty in Tamil Nadu.

**Method:** A cross sectional, descriptive correlational study was conducted among 2375 faculty, who were selected through consecutive sampling technique, in nursing colleges of Tamil Nadu. Google survey forms were used to collect the data (Rating Scales on Perceived Benefits and Barriers of online learning).

**Results:** Study findings revealed that, Mean scores of benefits of online learning is 80/100, (SD - 9.1)and barriers scores was 62/100 (SD-9.24).

**Conclusion:** Overall study findings revealed that overall faculty had positive perception on benefits of online learning even though they were also concerned about some barriers which can be managed by meticulous planning and implementation of the system. Therefore it can be effectively incorporated in future also along with traditional teaching method to facilitate effective teaching and learning process.

**Keywords:** *Benefits, Barriers, Online Learning, Nursing Students, Faculty.*

## Introduction

The Covid- 19 pandemic has sparked a global realization that our current way of life does not work. Coronavirus pandemic has significantly disrupted various sectors in India including education. It is a well known fact that due to corona virus pandemic, the state governments across the country temporarily started shutting down schools and colleges including nursing Colleges. As per the present situation, there is an uncertainty when schools and colleges will reopen. There are more than 200 nursing educational institutes,

which are facing challenges like any other educational institutions.

In the face of a crippling pandemic, technology has emerged as a major lifesaver. Communication is a major key to our interconnected existence and technology is the driving force that maintains our connections.<sup>1</sup>

In this crucial stage, technology plays an important role in the lockdown period like study from home and work from home. In current scenario, that is the only way as well as demand in the educational system to continue teaching and learning process. In view of this context, Registrar of Tamil Nadu Nurses and Midwives Council (TNNMC), Dr Ani Grace Kalaimathi, has taken initiation to develop the system of Online teaching and learning in collaboration with nursing educational Institutions to continue learning. In Tamil Nadu, there are 192 Nursing institutions which offers B.Sc. Nursing

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programme, with 42,000 students studying B.Sc. Nursing, maintaining students teachers ratio as 10: 1. Number of students studying in each college varied from 50 to 100 students. Among 192 Colleges, 56 Colleges offer PB B. Sc. (N) program (1284 students studying PB B.Sc. Nursing) and 61 Colleges offer M.Sc. (N) program (804 students studying M.Sc. Nursing).

In these entire Institutions uniform syllabus prescribed by Indian Nursing Council and approved by the TN Dr MGR Medical University, is followed and 60-80% of the syllabus of the current academic year had been completed before lock down period.

In this context, to continue teaching and learning, among 192 Colleges, 56 Nodal centres were formed by TNNMC, under which 4-5 colleges offering B. Sc. (N) program were clubbed depending upon the number of students studying in each College (200- 250 students for each nodal centre). Similarly three nodal centres for PB. B.Sc Nursing (clubbing 16 - 23 Colleges and 360 – 434 students) and six nodal centres for M.Sc Nursing (clubbing 13 - 29 Colleges and 100- 200 students) were formed.

Subject experts in each subject and Coordinators were identified and invited to develop content in the form of PPTs along with Videos and other AV Aids (wherever required), assignments and posttest using different tests. Content coverage and quality of the content were validated by the coordinators and subject experts in each subject. Time Table was prepared in advance and content were uploaded in the Google Class Room (GCR) by respective Nodal Centres on previous days of Scheduled dates. Students' requests and comments were taken into consideration and their doubts were clarified in Google Class Room platform. Online Quiz was also conducted using Kahoot App and winners were awarded. Students were encouraged and appreciated for their positive attitude and active participation by demonstrating enthusiastic learning. In addition to these activities, various online Courses and Skill based Courses were also provided by the TNNMC on free of cost to improve their clinical competency. All these activities were carried out immediately (after two days) once the Lock down is announced by the Government.

We live in an era where technology is enabling us to gain knowledge at a speed formerly inaccessible.<sup>2-4</sup> With the, digital skills of teachers and students, internet

connectivity it is necessary to explore online learning, to achieve our goal without interruptions. Online teaching typically refers to courses that are delivered completely online, without physical or on-campus class sessions, which are not possible in current scenario. It is also often referred as eLearning.

The most obvious benefit of online learning is the ability to learn from anywhere which provide the convenience of time and space since students and teachers do not have to physically be in space.<sup>5-7</sup> Online education can be flexible, accessible and convenient for students; they have more freedom to work at their own pace and on their own schedule.

At the same time we cannot ignore the fact that that, the effectiveness of online learning does not depend on technology itself, but on the instructors' preparation and their attitude, mind set including perceived benefits, barriers and needs. In addition, despite the obvious advantages to online learning, there are some problems or barriers that need to be considered and strategies to be employed to improve the system to bring the best desirable results.

*Perceived benefits* refer to the *perception* of the positive consequences that are caused by an online learning for students and teachers. These are also strong motives of performing an online teaching effectively and efficiently by faculty to achieve the goal. Perceived barriers refer to a faculty's perception of the obstacles of effective online learning. Assessment of Perceived Benefits and Barriers are essential to plan for the strategies to strengthen the program and minimize the obstacles. Therefore this study was undertaken by the researchers to assess the perceived benefits and barriers of online learning, among nursing faculty in Tamil Nadu.

**Statement of the problem:** A study to assess the Faculty Perceived Benefits and Barriers of online learning, among Nursing faculty in Tamil Nadu.

## Research Methodology

A cross sectional, descriptive correlational study was conducted at nursing colleges in Tamil Nadu. All the faculty who are working in 192 nursing Colleges of Tamil Nadu, and also continuing online learning Process organized by Tamil Nadu Nursing Council (in the wake of entire lockdown in the Country due to Corona Virus Pandemic), were invited to participate in the study. Among them 2375 faculty have responded (Self-

administration). Informed consent was obtained and participation in the study was purely voluntary. Google survey forms were used to collect the data.

The following predetermined and validated tools were used for data collection.

**A. Proforma to collect Baseline Variables of the Faculty:** It was used to collect informations on background characteristics such as gender, age, Experience etc and characteristics related to computer skills and online teaching & learning.

**B. Rating Scale on Perceived Benefits,** of teaching nursing students through online learning, among nursing faculty.

It is a 20-items, 5-point Likert scale (5-Strongly agree, 4-Agree, 3- Not sure, 2-Disagree, 1-Strongly Disagree), under three sub components such as Benefits for Students, Teachers and Both. The

obtainable score was 20-100. Higher scores indicated positive perception and vice versa.

**C. Rating Scale on Perceived Barriers,** of teaching nursing students through online learning, among Nursing.

It is also a 20-items, 5-point Likert scale (1- Not a barrier, 2- Somewhat a barrier, 3-Not sure, 4-Barrier, 5- Significant Barrier)under three sub components such as Interpersonal barriers, Training and technology barriers and Institutional policy/System barriers. The obtainable score was 20-100. Higher scores indicated more barriers and vice versa.

## Results

Collected data was analyzed using appropriate descriptive and inferential statistics in SPSS-20.

**Table 1: Frequency and Percentage distribution of Baseline Variables of the Faculty (N=2375)**

Baseline Variables	f	%
<b>Gender</b>		
Female	2245	94.5
Male	130	5.5
<b>Age in years</b>		
Below 30	914	38.5
31-40	969	40.8
40-50	400	16.8
Above 50	92	3.9
<b>Qualification</b>		
B.Sc. (N)	853	35.9
M.Sc. (N)	1364	57.4
Ph.D.	158	6.7
<b>Current Designation</b>		
Asst Lecturer/Tutor	966	40.7
Lecturer	213	9.0
Asst Professor	423	17.8
Associate Professor/Reader	358	15.1
Professor	277	11.7
Professor cum principal/Dean	138	5.8
<b>Total years of experience in teaching</b>		
Below 5	1052	44.3
5-10	605	25.5
11-20	606	25.5
Above 20	112	4.7
<b>Perceived confidence in working with computers</b>		
Good	1612	67.9
Average	715	30.1
Not confident	48	2.0

Table 1 reveals that majority of the faculty were females (94.5%), with M.Sc. (N) Qualification (57.4). With regard to other variables, 40.8% of them were aged between 31-40 years, 40.7% of them worked as Asst Lecturers with less than 5 years of 44.3%. Majority of

them had good confidence in working with computer (67.9%) and did not have additional qualification (83.7%). Fig 2 depicts that 49.5% of the faculty used Google class room software/Apps for teaching and learning (Fig 1).

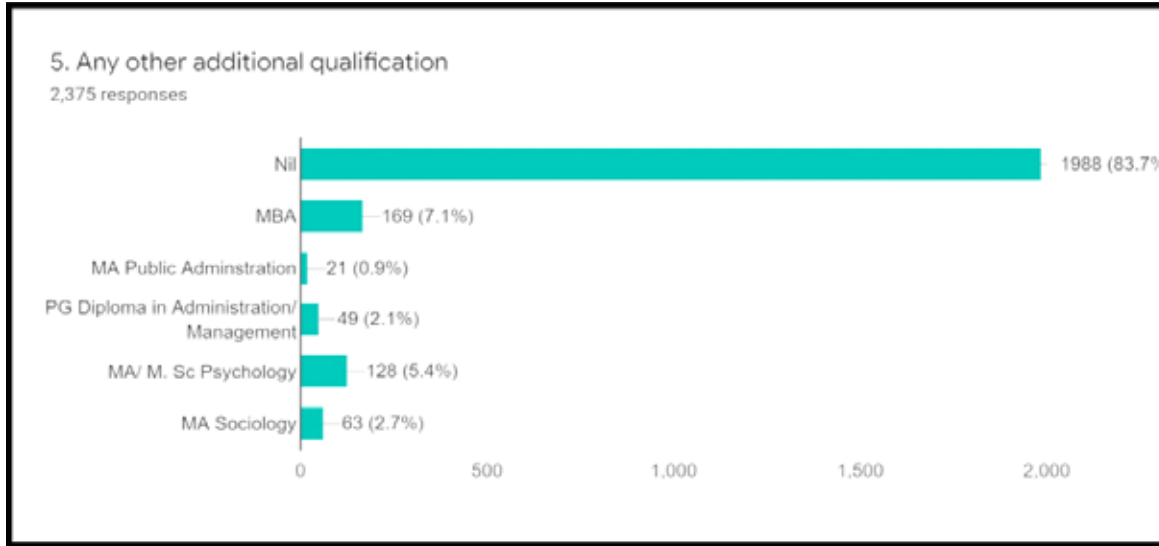


Fig 1: Frequency and % of Faculty with other Additional qualification

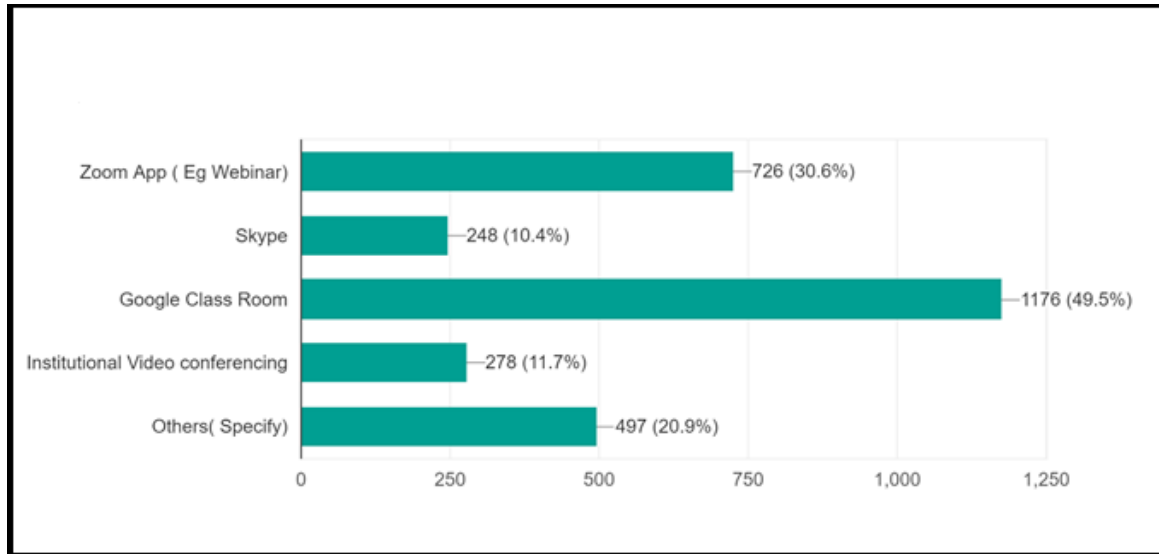


Fig 2: Frequency and % of Software used by faculty for online Teaching and Learning and Learning

Table 2: Mean and SD of Perceived Benefits and Barriers of Online Teaching among the Faculty (N=2375)

	Obtainable Score	Mean (%)	SD
<b>Benefits</b>			
Benefits for Students	4-20	16.06(80.3)	2.22
Benefits for Teachers	2-10	7.95(79.5)	1.29
Benefits for both (Students and Teachers)	14-70	55.99(79.98)	6.41
Global Benefits Score	20-100	80 (80)	9.1

	Obtainable Score	Mean (%)	SD
<b>Barriers</b>			
Interpersonal barriers	8-40	24.47(61.18)	4.07
Training and technology barriers	5-25	16.26(65)	3.56
Institutional policy/System barriers	7-35	21.18(60.5)	3.35
Global Barriers Score	20-100	61.92(61.92)	9.24

Table 2 indicates that, global perceived Benefits scores (Mean %) and its subcomponents was 80% with varied SD. Global perceived barrier score was 61.91(SD 9.24).Regarding barriers, Interpersonal barriers score was 24, 47(61.8%, SD 4.07), Training and technology related barriers scores was 16.26 (65%, SD 3.56), Barriers related to Institutional policy or System was 21.18 (60.5%, SD 3.35).

Study findings (Table 3) reveals that, there is a positive correlation (r=.034) between age and barriers, experience and benefits (r=.093), experience and barriers (.052). There is a weak negative correlation between

age and benefits (r=-0.017) which was not significant (p>0.05).

**Table 3 : Correlation between Age vs Benefits & Barriers and Experience vs Benefits & Barriers of Online Learning, among Nursing Faculty (N=2375)**

Variables	r value	P value
Age vs Benefits	-0.017	0.421 (NS)
Age vs Barriers	.034	0.034 (S)
Experience Vs Benefits	.093	0.000 (S)
Experience Vs Barriers	.052	0.012 (S)

NS- Not significant S- Significant

**Table 4 : Association between Selected Variables and Perceived Benefits & Barriers of Online Teaching among Nursing Faculty (N=2375)**

Variables	n	Benefits			Barriers		
		Mean	SD	Test Value (t/ANOVA-F) & p value	Mean	SD	Test Value (t/ANOVA-F) & p value
<b>Gender</b>							
Female	2245	77.51	10.77	3.21 (t value) 0.001	61.86	9.20	3.21 (t value) 0.001
Male	130	80.14	8.97		62.80	9.81	
<b>Qualification</b>							
B.Sc. (N)	853	79.05	8.39	11.26 (F value) 0.000	61.30	8.61	6.6 (F value) 0.001
M.Sc. (N)	1364	80.29	9.40		62.04	9.36	
Ph. D	158	82.46	9.43		64.13	11.01	
<b>Current Designation</b>							
AsstLecturer/Tutor	966	79.27	8.47	5.98 (Fvalue) 0.000	61.22	8.60	3.15 (F value) 0.008
Lecturer	213	79.18	9.35		61.78	9.7	
Asst Professor	423	80.89	9.40		62.13	9.07184	
Associate Professor/Reader	358	79.47	9.23		62.14	9.36	
Professor	277	81.10	9.75		63.62	10.52	
Professor cum principal/Dean	138	82.71	9.44		62.36	9.87	
<b>Perceived confidence in working with computer</b>							
Good	1602	80.04	9.10	0.58 (F value) 0.944	61.79	9.08	2.51 (F value) 0.081
Average	723	79.89	9.21		62.37	9.58	
Not Confident	50	80.06	7.13		59.66	9.10	

Tab 4 reveals that there is significant Association between Selected Variables such as gender, Qualification, Designation, and Perceived Barriers of Online Teaching among Nursing Faculty ( $p < 0.001$ ).

Results also revealed that (Tab 4), there is significant association between Selected Variables such as gender, Qualification, Designation, and Perceived barriers of Online Teaching among Nursing Faculty ( $p < 0.01$ ).

## Discussion

This study was conducted to assess the perceived benefits and barriers of online learning of students, among nursing faculty in Tamil Nadu. Online Teaching and Learning for nursing students was organized by TNNMC, in the wake of Corona Virus Pandemic and lockdown in the Country, because of which traditional class room teaching was not possible to conduct. Study findings on perceived benefits of Online Teaching revealed that, majority of the faculties reported positive perception on Benefits of Online learning (Mean Score was 80/100, SD 9.1) (Global as well as sub Components such as benefits for students, Teachers and both). These findings are consistent with study conducted by Yanti et All<sup>8</sup>. The findings of their study indicated that the teachers perceived that e-learning is a useful and also easy to use technology. It was also found that the teachers are satisfied with advantages of the use of this new technology.

Study findings on perceived barriers of Online Teaching revealed that, Mean barriers score was 61.92/100 (SD 9.24), for sub components Mean % score was, Interpersonal barriers - 61.18, Training and technology barriers -65, Institutional policy/System barriers - 60.5. Similar findings are also reported in study conducted by Srichanyachon, who reported that the barriers of online learners in general were moderate<sup>3</sup>.

In the current study, moderate scores in perceived barriers may be due to the fact that, Online Teaching in Tamil Nadu especially on large scale was first of its kind in the state in Nursing Institutions. Therefore the teachers may be more anxious even though it was realized that, it was the only option which is available and feasible to continue learning to achieve the best outcome among the students. It is interesting to note that perceived benefits was correlated with experience ( $r = .034$ ,  $p = 0.034$ ). Years of experience was also significantly correlated with the perceived benefits ( $r = .093$ ,  $p = 0.000$ ) and barriers ( $r = 0.052$ ,  $p = 0.012$ ). It indicates that as the age and

experience which are interrelated factors, increased their perceived benefits as well as barriers also was increased which may be due to critical analysis of the current situation by the senior faculty.

Study findings also revealed that, there is significant association between selected variables such as gender, Qualification, Designation and Perceived Barriers of Online Teaching among Nursing Faculty ( $p < 0.001$ ). i.e Female Faculties with higher level qualification and designation, had better positive perception on benefits of online learning than their counterparts.

Similarly study findings also indicated that, there is significant association between Selected Variables such as gender, Qualification, Designation, and Perceived barriers of Online Teaching among Nursing Faculty ( $p < 0.01$ ). Faculty who were males, with only B.Sc. (N) qualification and lower level of designation reported high level of barriers than their counterparts. Overall study findings are encouraging and faculty were given opportunity to express their views on online learning which is need of the hour. Online learning allow for the combination of hands-on training as well as self-directed, knowledge-based learning.

## Conclusion

Overall study findings revealed that faculty has responded positively on online learning and its benefits even though they were also concerned about some barriers, which can be managed by meticulous planning and implementation of the system. Therefore, it can be incorporated in future also along with traditional teaching method to facilitate effective teaching and learning process. However, we must be cautious that, the successful delivery of educational outcomes using this medium relies on its successful integration with pedagogy and knowledge of content.

**Conflict of Interest:** Nil

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**Ethical Clearance:** The ethical approval was obtained from IEC of Apollo College of nursing, Chennai.

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