The Satisfaction, Perception, Attitude, and Impact of Virtual Learning among Nursing Students

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Abstract

Background: Virtual learning is a learning experience that is enhanced through utilizing computers and the internet facilities in the educational organization. The COVID-19 pandemic significantly disrupted every aspect of life including the educational system. Many colleges and universities started virtual education methods to cope with the educational loss due to pandemic situation and lockdown.

Aim: This study sought to examine the satisfaction, perception, attitude, and impact of virtual learning among nursing students.

Materials and Methods: A cross-sectional descriptive study was conducted among 148 nursing students using enumerative sampling method. Self-administered structured virtual questionnaire was used through Google Forms. Descriptive statistics such as frequency and percentage and inferential statistics like Chi-square test were used to analyze the data.

Results: The majority of the nursing students 57.4% were satisfied with the virtual learning, 39.2% of the nursing students have positive perception with the virtual learning, 43.2% of the nursing students have positive attitude toward the virtual learning, and 42.6% of nursing students have good impact on the virtual learning.

Conclusion: The study concluded that the nursing students have good satisfaction, positive perception, good attitude, and adequate impact toward virtual learning. Despite its limitations, the nursing students expressed that their confidence in the virtual learning which was significantly improved with practice.

Keywords: Attitude, impact, perception, satisfaction, virtual learning

INTRODUCTION

During this quarantine time, information technology is serving the solution for the ongoing learning process through innovative and learning management systems.[1,2] Fortunately, the current technology enabled electronic learning (virtual learning) to be the core method of teaching the curriculum during the COVID-19 pandemic. To minimize the impact of lockdown, nursing colleges had to find another approach to teach nursing students. Virtual distance learning platforms are the only available way of learning and teaching during unprecedented events such as the outbreak of COVID-19.[3,4]

The significance and efficacy of the implementation of virtual learning have been investigated by previous studies. They report several reasons for its overall acceptability including its ease of use, flexibility, and better control over the environment. However, regardless of its rewards, there are quite a few limitations in virtual learning such as social isolation, lack of student-teacher interaction, and technical and connectivity problems.[5] In a study conducted in Iraq, lack of technical support was identified as one of the barriers to virtual learning.[6]

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For both practical and theory-oriented classes, virtual mediums were used to ensure the continuity of classes. Likewise, virtual education prevailed even in the medical field where learning is traditionally hands-on. Although the concept of virtual learning is well established in developed countries, it is still novel in developing countries like India. The success of virtual learning depends on many factors, including accessibility, usage of appropriate methods, course content, and assessment criteria. Virtual learning, like any method of teaching, has its advantages and disadvantages for both students and teachers.[7,8]

It is essential for the educators to find out students' perception, attitude, and impact of virtual learning that ensures their readiness to learn in this new environment. Hence, this study was done to find out the level of satisfaction perception, attitude, and impact of virtual learning among the nursing students.

Materials and Methods

A cross-sectional descriptive study was conducted among 148 nursing students using enumerative sampling method. Prior permission was obtained from the ethical committee and college management. The nursing students were explained about the purpose of the study to involve in this study. Self-administered structured virtual questionnaire was used by the researcher to collect the data through Google Forms. Descriptive statistics were used to analyze the frequency and percentage of various variables, and inferential statistics includes Chi-square analysis.

Results

Table 1 reveals the percentage and frequency distribution of the demographic variables. The majority of the nursing students belong to the age group of 18–24 years (93.2%) and majority of the nursing students were female (74.3%). The majority of the nursing students (93.2%) were doing under graduation course. In terms of year of study, 37.2% were in the 3rd year of under graduation and another 25.7% were in the 2nd year. With regard to type of device used for virtual learning, the majority of nursing students 96% were using smartphones for virtual learning. All the nursing students 100% did not have any previous experience to virtual learning. In terms of preference of virtual learning in nursing, 39.2% of the nursing students preferred and same 39.2% did not prefer while 21.6% of the nursing students neither preferred nor not preferred virtual learning in nursing. About 49.3% of the nursing students said that it is interesting while 26.3% of the nursing students said that it is boring.

Table 2 shows the domain-wise responses of nursing students regarding virtual learning. The majority of the nursing students 57.4% were satisfied with the virtual learning. The majority of the nursing students 39.2% have positive perception to virtual learning. About 43.2% of the nursing students had good attitude about the virtual learning. The impact of the virtual learning made on the nursing students was good with 42.6%.

Table 1: Frequency and percentage distribution of demographic variables, *n*=148

S. No.	Demographic variables	Frequency	Percentage
1	Age (years)		
	17–24	138	93.2
	25–35	10	6.8
2	Gender		
	Male	38	25.7
	Female	110	74.3
3	Course		
	UG	138	93.2
	PG	10	6.8
4	Year of study		
	1st year	34	23
	2nd year	38	25.7
	3rd year	55	37.2
	4th year	21	14.1
5	Device used for virtual learning		
	Laptop/desktop	6	4.0
	Smartphone	142	96.0
6	Previous experience on virtual learning		
	Yes	0	0
	No	148	100
7	Do you prefer virtual learning in nursing		
	Yes	58	39.2
	No	58	39.2
	May Be	32	21.6
8	What do you feel about virtual learning		
	Interesting	73	49.3
	Boring	39	26.3
	Not interested	36	24.4

Table 2: Domain-wise responses of students regarding virtual learning, *n*=148

S. No.	Variables	Frequency	Percentage
	Satisfaction		
1.	Very dissatisfied	15	10.1
	Dissatisfied	35	23.6
	Satisfied	85	57.4
	Very satisfied	13	8.9
	Perception		
2.	Strongly disagree	12	8.1
	Disagree	24	16.2
	Neutral	48	32.4
	Agree	58	39.2
	Strongly agree	6	4.1
	Attitude		
3.	Strongly disagree	12	8.1
	Disagree	21	14.2
	Neutral	45	30.4
	Agree	64	43.2
	Strongly agree	6	4.1
	Impact		
4.	Strongly disagree	7	4.7
	Disagree	18	12.1
	Neutral	39	26.4
	Agree	63	42.6
	Strongly agree	21	14.2

Table 3 explains the association of domains with the demographic variables. The demographic variables such as the age ($\chi^2 = 7.99$), course ($\chi^2 = 17.36$), year of study ($\chi^2 = 36.5$), device ($\chi^2 = 9.54$),

preference ($\chi^2 = 24.16$), and interest ($\chi^2 = 15.78$) are significant at the level of 0.05 with the level of satisfaction. The age ($\chi^2 = 11.04$), course ($\chi^2 = 12.69$), year of study ($\chi^2 = 25.83$), and interest ($\chi^2 = 17.45$) are significant at the level of 0.05 with perception level. The age ($\chi^2 = 11.59$), gender (45.97), year of study ($\chi^2 = 20.55$), and preference ($\chi^2 = 32.15$) are highly significant at the level of 0.05 with attitude level. The age ($\chi^2 = 11.18$), course ($\chi^2 = 19.24$), year of study ($\chi^2 = 24.24$), preference ($\chi^2 = 21.06$), and interest ($\chi^2 = 22.34$ are significant at the level of 0.05 with impact level.

DISCUSSION

The mounting advancement of information technology has changed the scenario of education. With the emergence of the current COVID-19 situation, it has undoubtedly provided a solution to most of our educational needs when all educational institutions remained closed due to the pandemic. The present study was done to find out the level of satisfaction perception, attitude, and impact of virtual learning among the nursing students.[2,3]

Table 3: Association of domains with the demographic variables, *n*=148

S. No.	Variable	χ^2	*P*-value	Significance
1.	Level of satisfaction			
	Age	7.99	0.046	S
	Gender	4.11	0.24	NS
	Course	17.36	0.00	S
	Year of study	36.5	0.00	S
	Device	9.54	0.02	S
	Preferring virtual learning in nursing	24.16	0.01	S
	Feeling about virtual learning	15.78	0.01	S
2.	Level of perception			
	Age	11.04	0.02	S
	Gender	3.04	0.55	NS
	Course	12.69	0.01	S
	Year of study	25.83	0.01	S
	Device	5.43	0.24	NS
	Preferring virtual learning in nursing	14.48	0.27	NS
	Feeling about virtual learning	17.45	0.02	S
3.	Attitude level			
	Age	11.59	0.02	S
	Gender	45.97	0.00	S
	Course	6.12	0.18	NS
	Year of study	20.55	0.05	S
	Device	3.39	0.49	NS
	Preferring virtual learning in nursing	32.15	0.00	S
	Feeling about virtual learning	11.69	0.16	NS
4.	Impact level			
	Age	11.18	0.02	S
	Gender	3.92	0.41	NS
	Course	19.24	0.00	S
	Year of study	24.24	0.01	S
	Device	5.42	0.24	NS
	Preferring virtual learning in nursing	21.06	0.04	S
	Feeling about virtual learning	22.34	0.00	S

In the present study, the majority of the nursing students belong to the age group of 17–24 years, they do undergraduation course and they belong to the 3rd year course which was supported by the various other studies in view of frequency and percentage distribution of demographic variables.[2,9] In the present study, the majority of the nursing students are female. This percentage is the same in all the studies done among nursing students.[2,5,8,10]

The majority of the nursing students use mobile phones as the device for virtual learning and they do not have any previous experience with the virtual learning. Many other studies also show that the same findings were students depending on the mobile phones for their virtual learning.[5,8,10] A desk computer rather than mobile phones helps the students to pay more attention and less distracted by incoming calls. These actions were documented in the literature.[11]

The nursing students preferred virtual learning in nursing. The majority of the nursing students are interested in virtual learning; the same findings were noted in other studies done in India.[12,13] Virtual teaching strategies during this pandemic served to provide a high-quality alternative too, considering its numerous advantages. This crisis created a new motivation to adapt to this valuable teaching strategy. Taking actions to prepare institutions and the workforce and students for virtual learning, and well-established infrastructure, are an important for future implementation.[7,12,13]

Li *et al*. reported that nursing students' learning attitude significantly affects their virtual learning outcomes. The present study also shows that the student's attitude toward virtual learning is good.[14] Davis also reported that students preferred the virtual environment, which provided them with greater satisfaction.[15] Moreover, the students in Julien and Dookwah[12,16] described the virtual environment as convenient, cost effective, and flexible, and claimed that it gave them the opportunity to plan study time. The level of satisfaction and perceptive is positive among the nursing students in the present study.

Utama *et al*.[10] reported that medical students have described their experience and performance of distance virtual learning as positive. Virtual classes also have limitations, including problems with internet access, poor internet connection quality, and insufficient digital skills of the samples.[16] Despite its limitations, the nursing students expressed that their confidence in the satisfaction, perception, attitude, and impact of virtual learning. Therefore, the virtual learning method could be more fully implemented in nursing education. More studies are recommended in this regard that include using simulation laboratories, teacher's motivation, technology acceptance, and infrastructure readiness.

CONCLUSION

This COVID-19 pandemic significantly disrupted every aspect of human life including the educational system. The study

concluded that the nursing students have good satisfaction, positive perception, good attitude, and adequate impact toward virtual learning. The virtual learning programs with proper strategies need to be developed to enhance the nursing students' clinical skills and knowledge.

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CONFLICTS OF INTEREST

Nil.

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