Research Paper

ATTITUDE AND OBSTACLES FACED BY NURSING STUDENTS DURING E-LEARNING OF COVID-19 PANDEMIC

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Abstract

The implementation of e-learning in higher education has enabled a fundamental change in teaching and learning practice. The advancement in technology affects all the organization around the globe. The rapid advances in knowledge recently put the organizations towards the use of e- learning in every domain. The approach which facilitates and provide educational content from the teacher to learner with smooth interaction by the use of computer all over the world is called e-learning. This technological revolution gives maximum benefit to the organizations especially universities for the provision of better teaching environment for teacher and best learning for the students with the help of administrative staff. Therefore, this study aim is to investigate the attitude and obstacles faced by nursing students towards e-learning during COVID-19 pandemic. The study design was cross sectional descriptive in nature and the study conducted at school of nursing, Private Sector University**.** A stratified random sample technique was used for the selection of 30% from the students in each of the four academic years enrolled in the School of Nursing, Private Sector University during the academic year 2019-2020. The sample size was 120 student nurses. The findings of current study depicted that the overall attitude of nursing students about the use of e-learning was negative during COVID-19 pandemic. Moreover, the nursing students' responses about different dimension of obstacles of e-learning indicated that nursing students perceived the technical and management support 82%, infrastructure and technology 85%, and instructors' characteristics 80% dimensions were the most important obstacles of e learning faced during COVID-19 pandemic. While the least perceived obstacle dimension of e-learning were learners' characteristics 60% and curriculum content 70% by the nursing students.
Key words: Attitude, Obstacles, E-learning, Nurses, etc.

INTRODUCTION

The advancement in technology affects all the organization around the globe. The rapid advances in knowledge recently put the organizations towards the use of e- learning in every domain. The approach which facilitates and provide educational content from the teacher to learner with smooth interaction by the use of computer all over the world is called e-learning. This technological revolution give maximum benefit to the organizations especially universities for the provision of better teaching environment for teacher and best learning for the students with the help of administrative staff (Al Gamdi & Samarji, 2016; Arasaratnam-Smith & Northcote, 2017; Bahramnezhad, Asgari, Ghiyasvandian, Shiri, & Bahramnezhad, 2016).

A global emergency as declared by World Health Organization due to the COVID19 pandemic outbreak, majority government put restriction on the mobilization of people for the prevention of spread of COVID (Organization, 2005). During this pandemic period in all educational institutions of different countries, the teachers start to utilize the e-learning in delivering the educational content to the students for teaching and learning purposes. Universities strive to achieve excellence in the use of advance technology during this demanding era and use e-learning for the provision of conductive learning environment for better quality of content delivery from teacher to students (Diab & Elgahsh, 2020; Organization, 2005).

Moreover, the process in which communication and information technology facilitated the learning process and support in better learning of content is termed as e-learning. E-learning is the combination of both blended learning and entire online learning. It is the use of advance technology to support the teaching learning process. There are two form of electronic learning namely blended learning and online learning entirely. Where blended learning is the combination of both traditional and e-learning while other is just through online interaction where learning is an integral component to achieve (Rasmussen et al., 2014). E-learning play an important role in strengthening the teaching and learning process by changing the traditional way of delivering the teaching content and an effective tool in making the learning process interesting (Alfraih & Alanezi, 2016).

Moreover, e-learning promotes teamwork and sharing of ideas between the teachers and students to promote active learning in an interactive way (Alsabawy, Cater-Steel, & Soar, 2016). The nature of electronic learning is dynamic and substitute the traditional classroom learning into online learning. In e-learning, teachers and students enhanced their acquisition of knowledge by the use of different methods of advance technology for supporting the

teaching learning process. During online classes, video conferencing, audio discussions and online bilateral discussion are the advance technology methods used to make the teaching learning process effective (Odit-Dookhan, 2018). E-learning is an important and cost effective method for the facilitation of education among teachers and students in efficient way. The accessibility of e-learning at anytime and anywhere make the life of students and teachers easy and universities achieve their goals related to education in this pandemic period (Al-Samarraie, Teng, Alzahrani, & Alalwan, 2018; Asiry, 2017; George et al., 2014).

Advance technologies in the form of internet and telecommunication bring changes in teaching learning environment by minimizing the space, distance and time barriers and make learning process effective by creating free time between learners and instructors (Aparicio, Bacao, & Oliveira, 2016). The propagation of online learning methods is changing the way teachers view and engage with learning worldwide because of increased online education opportunities (Palvia et al., 2018). Therefore, e-learning is an opportunity to learn without restrictions due to geographical or temporal constraints. So, e-learning is a good option for lifelong learning through enhanced access to education (Arasaratnam-Smith & Northcote, 2017). Technology produces sustainable prospects for the educational and professional development of people and their role as contributors and receivers of institutional and social activities (Schmitt, 2016).

There are multiple benefits of e-learning for the students, teachers and educational institution as well. From technological point of view, different universities use advanced software for learning purposes which are learner friendly and comfortable for both learners and teachers. Teachers are comfortable and easy in virtual learning environment because they have freedom to deliver lectures form home. While students attend classes from home without traveling to campus which save their money and time. Students are not bound to attend the classroom lectures in e-learning (Bower, Dalgarno, Kennedy, Lee, & Kenney, 2015). There are many benefits of e-learning for the educational institutions in term of time and money.

However, there are multiple obstacles and challenges that hinder the effective utilization of electronic learning. The difficulties faced during the integration of electronic learning into teaching process is called obstacles. This integration process is very complex and demand expertise and efforts (Mahlangu, 2018). There are 3 types of obstacles and challenges faced during the utilization of e-learning. The factors related to behaviors, features, habits and personality traits are the personal challenges faced by the users during e-learning. The second obstacle is related to the attitude of users that denies the benefits of e-

learning. The attitude of inhibitors is the negative perspectives of user towards the use of e learning n teaching learning process. The third challenge is the contextual inhibitors which is the external variable regarding the lack of information and communication technology skills and support of the organization regarding the utilization of advance technologies of learning (Zamani, Esfijani, & Damaneh, 2016).

Higher training establishments everywhere in the world face numerous demanding situations associated with the implementation, preservation and improvement of on line programs. Challenges affecting on line studying with inside the Middle East encompass low net penetration, low public appreciation for on line studying, and a loss of on line instructional repositories (Kentnor, 2015). Furthermore, demanding situations result in failure of on line training are institutional elements along with loss of information of on line training, styles of on line studying, loss of control help for on line training, range of college students enrolled, and college qualifications (Kentnor, 2015).

The finding of the study showed that there are various factors that affect student's acceptance regarding e-learning in achieving their educational goals in universities. Moreover, the study findings projected a novel model that studied the influence of novelty, excellence, belief, and knowledge as key factors that enhance the acceptance of e-learning (Salloum, Al-Emran, Shaalan, & Tarhini, 2019). According to a study conducted by Naveed et al, the barriers that effect the application of e-learning were categorized into different dimensions namely teachers infrastructure, technology issues, learners infrastructure and management of institution (Naveed, Muhammed, Sanober, Qureshi, & Shah, 2017). The COVID-19 pandemic had affected faculties, students, and teachers and the Ministry of Higher Education in Egypt has recognized the needs of implementation E-Learning in public universities to maintain the teaching and learning process. The Universities have implemented e-learning although the universities had little or no experience in e-learning and not prepared for e-resources for the teaching and learning process faced difficulties and obstacles especially when teachers and students do not understand how to use online applications (Zaharah, Kirilova, & Windarti, 2020).

AIM OF THE STUDY: The aim of this study is to investigate the attitude and obstacles faced by nursing students towards e-learning during COVID-19 pandemic.

OBJECTIVES

- To assess the attitude of nursing students towards the use e-learning during COVID-19 pandemic.
- To determine the obstacles faced by nursing students towards the use of e-learning during COVID-19 pandemic.

OPERATIONAL DEFINITIONS

Attitude: It is the way of thinking or opinions of student nurses towards the use of e-learning during COVID-19 pandemic. The tool used for student attitude assessment toward the e-learning contained 18 questions. This tool has three domains like 6 items for usefulness of e-learning, 6 items for e-learning ease and 6 items for behavioral intentions. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= (strongly agree). The negative attitude was considered at scores of less than 60%, while positive attitude of students toward e- learning was at the scores of 60% and more.

Obstacle: The hindrances namely technical, mechanical, management, and curriculum etc. faced nursing students during e-learning. The tool used to the assess obstacles faced by nursing students toward the e-learning consisted of 35 questions. This tool has 5 dimensions likely 5 items for learners' characteristics, 5 items for technical and management support, 5 items for infrastructure and technology use, 5 items for curriculum content and 5 items for instructors' characteristics dimension. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= strongly agree. The obstacles occurrences were present at scores 60% or more, obstacles occurrences faced of students toward e- learning were absent at the scores of less than 60%.

E-learning: The acquisition of knowledge occurred through online resources with direct contact is e-learning

HYPOTHESIS

Null Hypothesis

- There is no difference in the attitude of nursing students towards E-learning during COVID-19 pandemic.
- There is no difference in the occurrences of obstacles faced by nursing students towards E-learning during COVID-19 pandemic.

Alternative Hypothesis

- There is a difference in the attitude of nursing students towards E-learning during COVID-19 pandemic.
- There is a difference in the occurrences of obstacles faced by nursing students towards E-learning during COVID-19 pandemic.

PROBLEM STATEMENT

A global emergency as declared by World Health Organization due to the COVID19 pandemic outbreak, majority government put restriction on the mobilization of people for the prevention of spread of COVID. During this pandemic period in all educational institutions of different countries, the teachers start to utilize the e-learning in delivering the educational content to the students for teaching and learning purposes. Universities strive to achieve excellence in the use of advance technology during this demanding era and use e-learning for the provision of conductive learning environment for better quality of content delivery from teacher to students. Moreover, e-learning promotes teamwork and sharing of ideas between the teachers and students to promote active learning in an interactive way. The nature of electronic learning is dynamic and substitute the traditional classroom learning into online learning. In e-learning, teachers and students enhanced their acquisition of knowledge by the use of different methods of advance technology for supporting the teaching learning process.

MATERIAL AND METHODS

Study Design: The study design was cross sectional descriptive in nature.

Settings: This study was conducted at school of nursing, Private Sector University.

Sample Size: A stratified random sample technique was used for the selection of 30% from the students in each of the four academic years enrolled in the School of Nursing, Private Sector University during the academic year 2019-2020. The sample size was 120 students (50 were in the first year, 40 were in the second year, 20 were in the third year and 10 were in the fourth year) out of 204 students enrolled in the first to fourth years (80, 50, 47, 27 respectively) in baccalaureate nursing program, school of nursing, Private Sector University. All undergraduate nursing students enrolled in the first to fourth years in the above mentioned setting accept the participation in the study.

Sampling Technique: Stratified random sample technique was used for this study.

Inclusion Criteria: Students who were willing to participate in the study.

Students who have used electronic learning during Corona Pandemic.

Students who were enrolled in the academic year 2019- 2020.

Exclusion Criteria: Nurses with seriously ill during the time of data collection were excluded. All students of post graduate were excluded from the study. Those students who have not used electronic learning during Corona Pandemic

DATA COLLECTION PROCEDURE

Study participants were informed about the purpose and objective of the study. The researcher visited the School of Nursing and handed over the questionnaire with consent form to the students in each classroom individually in leisure time for the enhancement of response rate. Participants were informed about the voluntary participation, right of withdraw at any stage of data collection and their identity should have kept confidential. The questionnaires were delivered immediately to the researcher after completion to avoid any biasness resulted from interaction of nurses with each other. The randomly selected nurses were invited to fill the questionnaire sheet comprising of 3 sections, demographics of study participant section, attitude of the nursing students towards the e-learning during COVID-19 pandemic and the obstacles faced by nursing students towards the e-learning section. This whole procedure take maximum 20 minutes of the study participants.

DATA COLLECTION TOOL

Three tools were used for data collection to fulfill the aim of the study.

First Tool: Assessment Sheet

This sheet include the demographic characteristic of study participants and consisted on 6 questions regarding nurse's socio-demographic information, including subjects age, gender, academic years, devices for e-learning activities, internet facility at home, and years of experience in using a computer.

Second Tool: Attitude Towards E-learning Scale

Attitude is the way of thinking or opinions of student nurses towards the use of e-learning during COVID-19 pandemic. The tool used for student attitude assessment toward the e-learning contained 18 questions. This tool has three domains like 6 items for usefulness of e-learning, 6 items for e-learning ease and 6 items for behavioral intentions. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= (strongly agree). The negative attitude was considered

at scores of less than 60%, while positive attitude of students toward e- learning was at the scores of 60% and more.

Third Tool: Obstacles of E-learning Questionnaire

The hindrances namely technical, mechanical, management, and curriculum etc. faced nursing students during e-learning. The tool used to the assess obstacles faced by nursing students toward the e-learning consisted of 35 questions. This tool has 5 dimensions likely 7 items for learners' characteristics, 7 items for technical and management support, 7 items for infrastructure and technology use, 7 items for curriculum content and 7 items for instructors' characteristics dimension. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= strongly agree. The obstacles occurrences were present at scores 60% or more, obstacles occurrences of students toward e- learning were absent was at the scores of less than 60%.

Reliability of the tools

The tools were tested for reliability by measuring their internal consistency using Cronbach's alpha coefficient method. The reliability of attitude tool for e-learning is α = 0.90 and obstacle scale for e-learning is α = 0. 85.

DATA ANALYSIS PROCEDURE

The aim of the present study is to assess attitude and obstacle faced by nursing students toward e-learning during COVID-19 pandemic. Participants were informed about the purpose of study and their identity should have kept confidential. The research should examined the questionnaire for completeness of response and carefully assign code to each of the questionnaire. The data were entered to the computer and analyzed by SPSS Version-21.0. The questionnaire sheet comprising of 2 sections, namely demographics of study participant section and level of implementation of nursing process by nurse and ranked according to the order of importance. The descriptive statistics for instance, frequencies, mean, percentages, and standard deviation for each item were calculated. For the correlation among each item for each section were calculated.

RESULTS

Demographic Characteristics
Table 1. *Demographic characteristics of the study subjects (n= 120)*

S. No	Variables	Frequency n	Percentage %
1	Gender		
	• Male	26	22
	• Female	94	78
2	Age		
	• ≤ 20	46	38
	• 21-22	58	49
	• ≥ 23	16	13
3	Qualification		
	• First year	50	42
	• Second year	40	33
	• Third year	20	17
	• Fourth year	10	8
4	Devices for e-learning activities		
	• Computer		
	• Laptop	16	13
	• Mobile	35	29
	• No device	64	54
		5	4
5	Computer Use (years)		
	• < 5	79	66
	• ≥ 5	41	43
6	Internet facility at home		
	• Yes	80	67
	• No	40	33

Table 1 shows the demographic characteristic of study participants to assess their attitude and obstacles faced during e-learning of COVID-19 pandemic. The personal characteristics of nursing students consisted on gender, age, qualification, Devices for e-learning activities, computer use in years, and Internet facility at home. The results show that the majority of study respondents were female (n = 94) while male represent (n = 26) of the sample. Moreover, some of study participants (38%) belong to age ≤ 20 years and majority of the student nurses (49%) belong to age bracket 21-22 years, whereas very low number of the study participants (13%) belong to the age brackets ≥ 23 years. The qualification based percentages of study respondents participated in study were first year nursing student (42%), second year nursing student (33%), third

year nursing student (17%), fourth year nursing student (8%) respectively. Moreover, nursing students' utilization of devices for e-learning activities, the majority of nursing students (96%) had devices for e-learning activities and they percentage use of computer, laptop, mobile for their e-learning were 13%, 29%, & 15 % respectively. While 4 % study participants' had no device for e-learning activities. Majority of the study participants 66% having experience of less than 5 years in using a computer for different activities while remaining study participants (43%) had experience of equal or greater than 5 years. About 67% nursing students had internet facility at home to work properly while 33% had no internet at home so faced different problems during their e-learning.

ATTITUDE TOWARDS E- LEARNING ITEMS AMONG THE STUDIED STUDENTS

Table 2: Attitude towards e- learning items among the studied students *(n= 120).*

S. No	Statement	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly Disagree %
E-learning usefulness						
1	E-learning contents are informative.	33.4 63.5	30.1 67	17.6 64.7	10.7 60.2	8.2 64.4
2	E-Learning enhances my learning efficiency	26.4	40.6	9.2	14.4	9.4
3	E-Learning encourages me to search for additional information on the topic of learning.	15.0	20.3	10.6	31.5	22.6
4	E-learning is a useful learning tool in providing distance education	28.4	36.3	8.2	15	12.1
5	E learning improves my success in my study.	11.8	21.1	6.6	35.4	25.1
6	E-learning enables me to accomplish the learning	13.1	18.0	8.1	25.5	35.3

activities more quickly.

E-learning ease of use

#						
7	It is easy for me to handle e-learning content	12.2	10.3	8.5	38.4	30.6
8	E-learning gives all the materials I need in my studies.	17.4	14.5	12.6	25.2	30.3
`9	E-learning gives facilities to manage my time efficiently	4.3	10.6	20.1	36.6	28.4
10	E-learning makes my learning process easier	31.7	28.5	5	20.7	14.1
11	E-learning reduces students educational cost.	7.7	12.3	14.2	31.2	34.6
12	E-learning provides flexible interaction with teachers and friends	24.1	40.3	18.5	7.1	10

Behavioral intention

#						
13	E-learning is efficient as teaching method.	28.6	36.2	9.3	11.7	14.2
14	E learning is better than face-to-face education in learning process. Low	6	16.4	11.5	32.1	34
15	I prefer to use e-books for my studies.	10.9	22.4	5.1	35.4	26.2
16	I interested in studying courses that use e-learning.	7.4	14.6	10.1	34.5	33.4
17	I recommend using e learning system for other students	6.3	13.6	15.1	36.6	28.4
18	I enjoy using e learning system on my course	18	9.4	10.4	30.1	32.1

Key: 5= Strongly Agree 4=Agree 3= Neutral 2= Dis-agree 1= Strongly Disagree

Attitude is the way of thinking or opinions of student nurses towards the use of e-learning during COVID-19 pandemic. The tool used for student attitude assessment toward the e-learning contained 18 questions. This tool has three domains like 6 items for usefulness of e-learning, 6 items for e-learning ease and 6 items for behavioral intentions. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= (strongly agree).

The table 3 depicted the percentage of nursing student's attitude towards the use of e-learning during COVID-19 pandemic. Majority of the study participant's responses indicating strongly agree or agree statement towards the use of e-learning during COVID-19 pandemic. Nursing students strongly agree (63.5%) with the e-learning usefulness domain statement item as ''E-learning contents are informative. E-learning enhance the sharing of ideas between the teachers and students to promote active learning in an interactive way. The nature of electronic learning is dynamic and substitute the traditional classroom learning into online learning. In e-learning, teachers and students enhanced their acquisition of knowledge by the use of different methods of advance technology for supporting the teaching learning process.

Likewise, majority of the nurses (67%) showed positive response to the -learning usefulness domain as ''E-Learning enhances my learning efficiency'' and 64.7 percent responses related to the statement of ''E-learning is a useful learning tool in providing distance education''. While, the nursing students showed disagree response (60.8%) to the questionnaire item of ''E-learning enables me to accomplish the learning activities more quickly''.

However, concerning the e-learning ease of use domain, most of the student nurses were strongly agreeing with the statement ''E-learning provides flexible interaction with teachers and friends'' (64.4%). E-learning is user friendly and comfortable for both learners and teachers. Teachers are comfortable and easy in virtual learning environment because they have freedom to deliver lectures form home. While students attend classes from home without traveling to campus which save their money and time.

Additionally, student nurses were agreeing with the statement ''E-learning makes my learning process easier'' (60.2%)''. Therefore, e-learning is an opportunity to learn without restrictions due to geographical or temporal constraints. So, e-learning is a good option for lifelong learning through enhanced access to education.

On the other hand, with regards to the behavioral intention of e-learning domain, majority of the nursing students show strongly agree statement to "E-learning is efficient as teaching method" (64.8%). E-learning play an important role in strengthening the teaching and learning process by changing the traditional way of delivering the teaching content and an effective tool in making the learning process interesting. Conversely, nursing students strongly dis-agree with the item behavioral intention towards the use of e-learning "E learning is better than face-to-face education in learning process 66.1%".

However, overall the nursing students had negative attitude (>60%) towards the use of e-learning and remaining nursing students had positive attitude about the utilization of e-learning during COVID-19 pandemic.

E-LEARNING OBSTACLES FACED BY NURSING STUDENTS

Table 3. *Percentages of e-learning obstacles from the nursing students' perspective (n=120).*

S. No	Statement (E-learning obstacles)	Strongly agree %	Agree %	Neutral %	Disagree %	Strongly Disagree %
	Learners' characteristics dimension					
1	Lack of sufficient knowledge and skill in the use of e-learning.	30.1	37.1	15.1	5.4	12.3
2	Lack of devices to use for e-learning	32.0	31.0	10.7	12.4	14.9
3	Lack confidence and shyness from learning online	20.7	10.9	16.1	25.3	27
4	No internet connection	27.1	41.0	6.6	10.4	14.9
5	Lack time management skills to keep up with the pace of the course.	40.0	25.7	12.9	20.0	1.4
6	Lack of interaction with my	41.5	30.8	14.9	5.7	7.1

	colleagues through the e-learning platform					
7	Lack language skills and typing skills for online learning	34.3	40.0	8.6	1.4	15.7

Technical and Management support dimension

8	Faced with system errors and lack of access to the e-learning platform	36.1	48.6	2.4	5.5	7.4
9	The slowness of network is an obstacle to my learning online	28.1	53.3	17.1	1.5	0
10	Lack of support services such as tutors	42.1	42.0	7.6	4.4	3.9
11	The e-learning system is unavailable most of the time	30.3	34.3	14.3	5.4	15.7
12	The college does not provide technical support for using e-learning	36.9	54.4	5.3	2.4	1
13	University books are not compatible with the use of e-learning	31.4	40.6	17.1	6.5	4.4
14	Lack technical assistance to handle technological problems.	44.3	46.4	2.6	1.5	5.2

Infrastructure and technology dimension

15	Low bandwidth connections with frequent breakdowns	45.1	46.6	2.7	1.4	4.2
16	Lack of proper training before using e-learning platform.	36.9	54.4	5.3	2.4	1

17	The cost of internet fees/charges from the private cafe' impede e-learning	40.1	42.9	7.1	1.5	8.4
18	Lack of counselling during taking e-learning courses	20.3	22.5	28.1	13.4	15.7
19	E-learning system design is not flexible and difficult to use	42.1	42.0	7.6	4.4	3.9
20	Erratic power supply at home hinders my use of e-learning resources	31.4	40.6	17.1	6.5	4.4
21	The rules and program directions in using online discussion are difficult to me.	44.3	46.4	2.6	1.5	5.2

Curriculum content dimension

22	Learning and teaching resources that are available on the e-learning system are not in accordance with the Curriculum.	31.3	42.1	2.3	14	10.3
23	Difficult to access e-resources from the e-platform when at home	30.3	52.8	3.5	8.5	4.9
24	Difficult to learn the contents of my subject using e-learning	20.0	35.7	12.9	20	11.4
25	Difficult to understand the contents of the subject through e-learning	45.5	44.7	1.1	4.8	3.9
26	Disproportion of e-learning	37.1	25.7	14.3	12.4	10.5

	with curriculum content					
27	Concerns about the practical nature of some courses are not offered electronically	45.7	40.2	7.6	1.1	5.4
28	Lecture notes are supported by multimedia tools (flash animations, simulations, videos, audios, etc.).	8.2	15.9	25.3	30.5	20.1
Instructors' characteristics dimension						
29	Instructors do not have sufficient knowledge and skill to use e-learning	31.5	38.3	14.0	4.2	12
30	My teachers not confident in using e-learning	30.7	32.1	5.7	15.0	16.4
31	Lack of clear instructions from my teacher.	23.1	32.3	8.9	22.4	13.3
32	Lack of timely feedback from instructor	35.3	43.2	3.5	13.8	4.2
33	My teachers prefer conventional ways of teaching and research.	33.4	54.3	8.4	2.9	0
34	My teacher's delay in submitting courses online on time affects my performance	45.3	47.3	1.4	3.3	2.7
35	Difficulty contacting with academic staff when at home	42.1	40.0	8.6	5.4	3.9

Key: 1=Never, 2=Don't Know, 3= Sometimes, 4=Usually, 5= Always

The hindrances namely technical, mechanical, management, and curriculum etc. faced nursing students during e-learning. The tool used to the assess obstacles faced by nursing students toward the e-learning consisted of 35 questions. This tool has 5

dimensions likely 5 items for learners' characteristics, 5 items for technical and management support, 5 items for infrastructure and technology use, 5 items for curriculum content and 5 items for instructors' characteristics dimension. The responses of study participants were graded on a five-point Likert scale from 1 = strongly disagree to 5= strongly agree.

The table 3 depicted the percentage of e-learning obstacles namely learners' characteristics dimension, Technical and Management support dimension, Infrastructure and technology dimension, Curriculum content dimension and Instructors' characteristics dimension from the nursing students' perspective. Majority of the study participant's responses indicating strongly agree or agree statement towards the obstacles faced during e-learning in COVID-19 pandemic. Nursing students agree (67.2%) with the learners' characteristics dimension of obstacles faced by the statement that ''Lack of sufficient knowledge and skill in the use of e-learning''. This characteristics of nursing students make the students incompetent in the use of e-learning cause of lack of knowledge and practices. As we know e-learning play an important role in strengthening the teaching and learning process by changing the traditional way of delivering the teaching content and an effective tool in making the learning process interesting.

Likewise, majority of the nurses (65.7%) showed positive response to the learners' characteristics dimension of obstacles by ''Lack time management skills to keep up with the pace of the course'' and 74.3 percent responses related to the statement of ''Lack language skills and typing skills for online learning'. All these learner's characteristics make learning process ineffective during this pandemic. Higher training establishments everywhere in the world face numerous demanding situations associated with the implementation, preservation and improvement of on line programs. Challenges affecting on line studying with inside the Middle East encompass low net penetration, low public appreciation for on line studying, and a loss of on line instructional repositories. Furthermore, demanding situations result in failure of on line training are institutional elements along with loss of information of on line training, styles of on line studying, loss of control help for on line training, range of college students enrolled, and college qualifications. However, most of the student nurses are strongly agreeing with dimension items of technical and management support of e-learning challenges by statements ''Faced with system errors and lack of access to the e-learning platform

(84.7%), ''The college does not provide technical support for using e-learning'' (91.3%), and ''Lack technical assistance to handle technological problems'' (90.7%). These technical and management support obstacles of e-learning not prepare the nursing students to learn effectively during COVID-19 pandemic.

Furthermore, majority of the nursing students show positive perception towards Infrastructure and technology dimensions of obstacles faced during Covid-19 pandemic in the form of statement likely ''Low bandwidth connections with frequent breakdowns'' (90.7 %), ''Lack of proper training before using e-learning platform (91.3 %)'' and ''E-learning system design is not flexible and difficult to use'' (84.1%). There are various factors that affect student's acceptance regarding e-learning in achieving their educational goals in universities. There are barriers that effect the application of e-learning were categorized into different dimensions namely teacher's infrastructure, technology issues, learners' infrastructure and management of institution.

Additionally, the statistics of e-learning items related to dimensions of curriculum content and instructors' characteristics of obstacles faced during COVID-19 pandemic were as follows. The nursing students strongly agree with the curriculum content dimension statements as ''Difficult to understand the contents of the subject through e-learning'' (90.2%) and Concerns about the practical nature of some courses are not offered electronically (85.9%). Likewise, the nursing students responded strongly agree or agree with different items of instructors' characteristics dimension by my teachers prefer conventional ways of teaching and research (87.7%), My teacher's delay in submitting courses online on time affects my performance (92.6%) during teaching learning process and Difficulty contacting with academic staff when at home (82.1%).

Overall, the nursing students' responses about different dimension of obstacles of e-learning indicated that nursing students perceived the technical and management support 82%, infrastructure and technology 85%, and instructors' characteristics 80% dimensions were the most agree obstacles of e learning faced during COVID-19 pandemic. While the least perceived obstacle dimension of e-learning were learners' characteristics 60% and curriculum content 70%by the nursing students.

DISCUSSION

The implementation of e-learning in higher education has enabled a fundamental change in teaching and learning practice. The advancement in technology affects all the organization around the globe. The rapid advances in knowledge recently put the

organizations towards the use of e- learning in every domain. The approach which facilitates and provide educational content from the teacher to learner with smooth interaction by the use of computer all over the world is called e-learning. This technological revolution gives maximum benefit to the organizations especially universities for the provision of better teaching environment for teacher and best learning for the students with the help of administrative staff (Arasaratnam-Smith & Northcote, 2017; Bahramnezhad et al., 2016). Therefore, the aim of this study is to investigate the attitude and obstacles faced by nursing students towards e-learning during COVID-19 pandemic. There are two important questions of this study: what are the attitude of nursing students towards e-learning and what are the obstacles nursing students faced during the application of e-learning in COVID-19 pandemic period?

Overall, the results of present study indicated that majority of nursing students had negative attitude (>60%) towards the use of e-learning and remaining nursing students had positive attitude about the utilization of e-learning during COVID-19 pandemic.

The findings of present study regarding the overall attitude of nursing students towards the use of e-learning during COVID-19 pandemic were consistent with result of a study conducted by

Abbasi et al., (2020). The result of Abbasi study found that overall majority nursing students (77%) were negative attitude towards e-learning (Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I., 2020). The findings of another study also similar to present study findings which indicated negative attitude towards e-learning by nursing students (Ullah, O., Khan, W., & Khan, A., 2017).

However, some previous studies results were antagonistic to the present study findings as online learning produced positive academic performance among nursing and other health care professional education (Hawks, S. J., 2014; Rotellar, C., & Cain, J., 2016). Furthermore, another study results showed that students attitude can be negative if they unable to adapt to new system of learning. The student's characteristics and perceptions about e-learning were different (Bhatia,2011).

Regarding the overall scores, the results related to three domains of attitudes of nursing students toward the use of e-learning were as: the present study showed that the high scores were the usefulness of e-learning domain followed by behavioural intension and then e-learning ease of use domain respectively. While from present study researcher perspectives, majority of the study participant's responses indicating strongly agree or

agree statement towards the use of e-learning during COVID-19 pandemic. Nursing students strongly agree (63.5%) with the e-learning usefulness domain statement item as "E-learning contents are informative. Likewise, majority of the nurses (67%) showed positive response to the -learning usefulness domain as "E-Learning enhances my learning efficiency" and 64.7 percent responses related to the statement of "E-learning is a useful learning tool in providing distance education".

However, concerning the e-learning ease of use domain, most of the student nurses were strongly agreeing with the statement "E-learning provides flexible interaction with teachers and friends" (64.4%). E-learning is user friendly and comfortable for both learners and teachers. Teachers are comfortable and easy in virtual learning environment because they have freedom to deliver lectures form home. While students attend classes from home without traveling to campus which save their money and time. On the other hand, with regards to the behavioral intention of e-learning domain, majority of the nursing students show strongly agree statement to "E-learning is efficient as teaching method" (64.8%). Conversely, nursing students strongly dis-agree with the item behavioral intention towards the use of e-learning "E learning is better than face-to-face education in learning process 66.1%".

The present study showed that high scores were the usefulness of e-learning domain followed by behavioral intension and then e-learning ease of use domain respectively by nursing students. Otherwise, all nursing students of all academic years had a low mean score related to the easiness of using the e-learning domain. Besides, third-year students had the highest mean score regarding the behavioral intension domain of e-learning. These findings line up with the result of study conducted in 2018 which found that e-learning is an important and cost effective method for the facilitation of education among teachers and students in efficient way. The accessibility of e-learning at anytime and anywhere make the life of students and teachers easy and universities achieve their goals related to education in this pandemic period (Al-Samarraie, Teng, Alzahrani, & Alalwan, 2018). Moreover, the study findings projected easiness and user-friendliness of e-learning systems will have an impact on individuals' acceptance and intention to use such systems (Salloum, Al-Emran, Shaalan, & Tarhini, 2019).

The answer to the second question was cited below: what are the obstacles nursing students faced during the use of e-learning in COVID-19 pandemic. The present study results depicted that there are five dimension of obstacles (namely learners'

characteristics dimension, technical and management support dimension, infrastructure and technology dimension, curriculum content dimension and instructors' characteristics dimension) faced by nursing students during the application of e-learning in education. The most prevailing obstacle nursing students faced were infrastructure and technology, technical and management support, and instructors' characteristics while, the least obstacles were the curriculum content and learners' characteristics dimension as perceived by student nurses.

As the findings of current study depicted that infrastructure and technology dimension was the first important obstacle of e-learning use faced by nursing students. Majority of the nursing students show positive perception towards infrastructure and technology dimensions of obstacles faced during Covid-19 pandemic in the form of statement likely "Low bandwidth connections with frequent breakdowns" (90.7 %), "Lack of proper training before using e-learning platform (91.3 %)" and "E-learning system design is not flexible and difficult to use" (84.1%). There are various factors that affect student's acceptance regarding e-learning in achieving their educational goals in universities. Therefore, these were the significant obstacles that imped the application of e learning from present study findings. These results were supported with the findings of a survey study which found that poor infrastructure and technology were the major barrier faced by students during the use of e-learning (Aljaraideh, Y., & Al Bataineh, K., 2019). Furthermore, technical and management support dimension was the second most important obstacle faced by nursing student in the present study. Most of the student nurses are strongly agreeing with dimension items of technical and management support of e-learning challenges by statements "Faced with system errors and lack of access to the e-learning platform (84.7%), "The college does not provide technical support for using e-learning" (91.3%), and "Lack technical assistance to handle technological problems" (90.7%). These technical and management support obstacles of e-learning not prepare the nursing students to learn effectively during COVID-19 pandemic. These findings are supported by a study whose results found that one of the main barriers of e-learning use is technical difficulties such as lack of technical support, poor and outdated computer systems and connectivity issues (Ali, et al., 2018).

The third most important obstacle nursing student faced in the use of e –learning was instructors' characteristics dimension. Nursing students responded strongly agree or agree with different items of instructors' characteristics dimension by my teachers

prefer conventional ways of teaching and research (87.7%), My teacher's delay in submitting courses online on time affects my performance (92.6%) during teaching learning process and Difficulty contacting with academic staff when at home (82.1%). This finding is supported by the results of Osman et al., study which depicted that teachers play important role to enable the student to achieve educational objectives by using the e-learning system through, motivation suggestion and support (Osman, et al.,2018). According to present study findings, the least perceived obstacle dimension of e-learning were learners' characteristics and curriculum content dimension by the nursing students. These findings are supported by the previous result indicated that learner's flexibility and curriculum content achievement were very important dimensions for effective e-learning (Tarus, et al.,2015).

CONCLUSION

The aim of this study is to investigate the attitude and obstacles faced by nursing students towards e-learning during COVID-19 pandemic. The findings of current study depicted that the overall attitude of nursing students about the use of e-learning was negative. Overall, the nursing students had negative attitude (>60%) towards the use of e-learning and remaining nursing students had positive attitude about the utilization of e-learning during COVID-19 pandemic. Moreover, the nursing students' responses about different dimension of obstacles of e-learning indicated that nursing students perceived the technical and management support 82%, infrastructure and technology 85%, and instructors' characteristics 80% dimensions were the most important obstacles of e learning faced during COVID-19 pandemic. While the least perceived obstacle dimension of e-learning were learners' characteristics 60% and curriculum content 70% by the nursing students

STRENGTHS OF THE STUDY

- This study results may be utilized to enhance the faculty awareness about the different obstacles faced regarding effective utilization of e-learning
- The findings of present study help the administration to organize seminars on the importance of e-learning in the COVID-19 pandemic.
- This study suggests instructor's evaluation on periodic basis and it is necessary to incorporate unused behaviors in the utilization of e-learning in education.

LIMITATIONS OF THE STUDY

- This study does not collect data from faculty members so future researches are needed to investigate the attitude of faculty members to e-learning.
- Future researches are needed to identify barriers from the perspective of faculty members to e-learning implementation
- Only quantitative methods were used for data collection so qualitative approach would be used to achieve the richness of data.
- There is a small sample size and findings not generalizable so next study need to be conducted with a larger sample.

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