

# The impact of COVID-19 pandemic on the clinical training of nursing students' in UAE

Huda Mohammad Ali Rasheed\*, Israa Abuijlan, Rachel James, Shaimaa Abd Elsamad, Vijaya Kumardhas

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**AIM:** This study aimed to assess the impact of the COVID - 19 pandemics on nursing students' attitudes and practice during clinical training.

**DESIGN:** A quantitative, descriptive, cross-sectional study done on Bachelor of Science in nursing students' and consecutive 198 samples selected.

**METHODS:** The data collection tool consists of two parts: first on demographic information, second consisted two questionnaires on the attitude and practice.

**RESULTS:** The finding indicated that the majority were age group between 21 to 25 years old, females, 4th year studying, working in medical ward and living with their parents, with no health risk condition and tested between 11 to 19 times, negative results, not isolated with family negative results. The major findings showed that students' attitude and practice were average (73.7%, 70.2%). In conclusion, nursing students' attitudes and practice were average during clinical training and need a training program to cultivate students' skills in disasters management.

**Key Words:** Attitude and practice; Bachelor of science in nursing students; Clinical training; COVID-19

## INTRODUCTION

Coronavirus is a disease that can affect the population's health and can cause no symptoms or to have symptoms ranging from cold to severe sickness or even death. Due to this pandemic, student nurses who are going to hospitals for training face many difficulties dealing with and giving care for the patients in the hospital. This can affect the patient's health and student's attitude and practice during their clinical training.

In December 2019, the first reported cases of COVID-19 were in Wuhan, China. The disease had a negative impact on the population, and it had spread all over the world very quickly (1). United Arab Emirates (UAE) Ministry of Health and Prevention (2) follows WHO guidelines for preventing coronavirus spreading by providing good health awareness to all UAE populations throughout all social media. The information is disseminated regularly, focusing on updated information related to updated roles and regulations of the present situation that makes people aware of this pandemic, causing people to protect themselves and others from COVID-19 disease.

One of the largest groups affected were educational sectors, including college students, especially those enrolled in medical and nursing education, as those students have a vital role in maintaining the health and promoting the wellbeing of all populations. Hence, college students are a priority population for health promotion and disease prevention (3). According to their quality of training and teaching, nursing students are the future health care providers; this pandemic will affect their knowledge, attitude, and practice during their clinical training (4).

The challenges faced by nursing students during COVID-19 can react negatively on their attitude and practice during clinical training, therefore causing poor quality of care to the patients. On the other hand, students need to prevent, manage, and control their health status and wellbeing while going to clinical training (5). Some research studies indicated the importance of studying about COVID-19 pandemic and its effect on nursing students.

Unfortunately, the available literature still does not offer enough in-depth analyses of nursing students' experiences during this pandemic, which could significantly affect the level of global understanding of the seriousness of nursing students' needs problems, and difficulties in extreme crises (6).

This study aims to assess the impact of COVID-19 pandemic on nursing students' attitude and practice during clinical training and to determine the association between COVID-19 pandemic on the attitude and practice with selected demographic variables including the year of study, clinical

placement, which lives with them in the house, Do they or their family members having any risk conditions. They also have the risk condition, the COVID-19 test result, and being isolated because of positive COVID-19 test results.

## METHODS

### Sampling

Participants were all Bachelor of Science in nursing students currently studying in Nursing Colleges of Northern Emirates and attending clinical training in the hospitals were 345 students from four universities (the University of Sharjah-Sharjah, Higher College of Technology-Sharjah, Fatima College of health science-Ajman, RAK Medical and Health Science University-Ras Al Khaimah). The samples were 198 consecutive samples of Bachelor of Science in nursing students who were going to clinical for training.

The inclusion criteria of the research study were all Bachelor of Science in nursing students who are going for clinical training in the hospitals. On the other hand, the exclusion criteria were Bachelor of Science in nursing students who were not attending clinical training in the hospitals.

### Instrumentation

The tools contain two self-constructed questionnaires included the following:

**Section I:** A questionnaire about personal information of participants that consists of 12 questions which include age, gender, year of the study, the current area of clinical placement, with whom staying at home, if they or their family members were having any health risk conditions, if they did COVID-19 test and the results if they are being isolated because of COVID-19 contacts or because of positive results. If they have a contact with COVID-19 person.

**Section II:** A questionnaire on the attitude and practice of nursing students towards patient care during COVID- 19 pandemic; this section is divided into two parts:

Part-A consists of 12 questions using a Likert scale ranging from strongly agrees was five to strongly disagree was one related to the assessment of nursing students' attitudes toward patient care during the COVID- 19 pandemics. The questions were concentrated on nursing students' attitude toward COVID-19 and dealing with patients that were:

I would be proud to be a front liner (who deals directly with COVID-19 patients), I feel confident that I can provide care for potential COVID

College of Nursing, RAK Medical and Health Sciences University, UAE

Correspondence: Huda Mohammad Ali Rasheed, College of Nursing, RAK Medical and Health Sciences University, UAE. Telephone +971-7-2043108, e-mail huda@rakmhsu.ac.ae

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19 positive patients, I get motivated to work better if I receive a positive reinforcement from the patients or their families, I feel competent to provide patient care during any health-related crisis, I am willing to provide care to patients recovered from COVID-19, I am worried about transmitting the COVID-19 infection to my family members every time I return from the clinical area, I believe that wearing personal protective equipment can help in preventing COVID-19 infection, I believe that maintaining frequent hand hygiene can help in preventing COVID-19 infection, I'm afraid of getting infected with COVID-19, I hesitate to enter patient room even if patient is COVID-19 negative, I am preoccupied with the thought whether my patients have been tested for COVID-19 recently, I am usually bothered when my COVID-19 test report gets delayed.

Part B consists of 11 questions using a Likert scale from strongly agree was five to strongly disagree was one related to the assessment of nursing student's practice toward patient care during the COVID-19 pandemics. The questions were concentrated on nursing students' practice toward COVID-19 and dealing with patients that were:

My clinical practice has been affected as I cannot communicate face to face and discuss cases with my colleagues as before the pandemic, I carry out the procedures with patients in hurry as I am afraid of getting infected with COVID-19 nowadays, I practice hand hygiene frequently to prevent spreading of COVID-19 infection, I am putting on personal protective equipment before dealing with any patient even if they are COVID-19 negative, I am able to communicate with my patients effectively even with my mask on, physical distancing does not interfere my ability in performing clinical procedures, receiving appropriate guidance from my preceptors during this pandemic helped me to fulfill my clinical objectives, I am getting opportunities to perform clinical procedures like vital sign, dressing, medication distribution etc. even during this pandemic, I am able to perform different crisis management skills like triaging and prioritizing the cases, the COVID-19 outbreak had positive impact on my clinical training, I am making sure to follow hospital and university guidelines when getting in contact with COVID-19 positive patient.

**The validity and reliability**

The instrument's content validity was carried out by the experts from the education, nursing, and medical fields. The Cronbach alpha for reliability was estimated as 0.81.

**Pilot study**

A feasibility study on nursing students of 10 students was conducted. Based on pilot study findings, the result of the last COVID-19 was added to the students' demographic information.

**Design**

A quantitative, descriptive, cross-sectional study done on selected Nursing Colleges of the Northern Emirates of United Arab Emirates.

**Data collection procedure**

The data collection procedure started after approval from the Research and Ethical Committees of four nursing colleges that began on January 13, 2021. So, the questionnaire was sent by Google's online platform to all nursing students who were going to clinical training in the hospitals of four colleges by email filled by them after agreement on the consent form.

The responses and collection on the questionnaire took around three months that ended on March 22, 2021.

**RESULTS**

The data was analyzed using descriptive statistics like frequency, percentage, mean and standard deviation to assess the impact of COVID-19 pandemic on nursing students' attitude and practice during clinical training and inferential statistics like ANOVA test and Chi square test to check the significance among the variables by using Statistical Package for the Social Sciences (SPSS) version 22.

**Participants**

The participants were nursing students of n=198 and the analyses showed in Table 1 that the majority of 58.3% nursing students were age group between 21 to 25 years old (21.47 ± 5.227), females (1.07 ± 0.248) (93.4%), 4th year of nursing study (2.96 ± 0.947) (35.4%), working in medical ward (25.8%)

**TABLE 1**  
**Analysis of the personal information of Bachelor of Science in nursing students**

Personal Information	Mean ± STD Deviation	Frequency	Percent
<b>Age</b>			
Missing data		7	3.50%
18 – 20 years old	21.47 ± 5.227	60	30.20%
26 – 30 years old		115	58.30%
31 – 40 years old		11	5.50%
		5	2.50%
<b>Gender</b>			
Female	1.07 ± 0.248	185	93.40%
Male		13	6.60%
<b>Year of Bachelor of Science in Nursing study</b>			
Year 1		15	7.60%
Year 2	2.96 ± 0.947	47	23.70%
Year 3		66	33.30%
Year 4		70	35.40%
<b>Current area of clinical placement</b>			
Missing data		2	1%
Emergency Unit	4.21 ± 1.892	16	8.10%
Intensive Care Unit /Cardiology Care Unit		9	4.50%
Medical Ward		51	25.80%
Surgical Ward		37	18.70%
<b>Community Health Centers</b>		45	22.70%
Psychiatric Ward		4	2%
Pediatric Ward		22	11.10%

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Obstetrics/Gynecology Wards		12	6.10%
<b>Who lives in the same house with you</b>			
My spouse		32	16.20%
My parents	1.66 ± 2.476	150	75.80%
My grandparents		9	4.50%
My children		32	16.20%
My siblings		78	39.40%
My roommate		10	5.10%
I live alone		4	2%
Other		13	6.60%
<b>Do you have any health risk conditions, choose which of the following health risk conditions you are suffering from:</b>			
No risk condition		149	74.90%
Diabetes		12	6%
Obesity		8	4%
Hypertension	1.18 ± 2.132	6	3%
Chronic heart disease		1	0.50%
Respiratory disease		16	8%
Smoking		3	1.50%
Autoimmune diseases		3	1.50%
others		10	5%
<b>Does any of your family members( living in the same house) have any health risk conditions, choose which of the following health risk conditions your family memberis having</b>			
No risk condition			
Diabetes		50	25.10%
Obesity		75	37.70%
Hypertension	1.64 ± 3.144	23	11.60%
Chronic heart disease		80	40.20%
Respiratory disease		35	17.60%
Smoking		30	15.10%
Autoimmune diseases		12	6%
Other		4	2%
<b>How many times have you done the PCR test</b>			
Missing data		8	4%
5 - 10 times	13.99 ± 6.882	55	27.50%
11 - 19 times		93	47%
20 - 30 times		42	21%
<b>What is the result of your last COVID-19 test?</b>			
Missing data		4	2%
Positive	1.96 ± 0.591	8	4%
Negative		186	94%
<b>Have you been isolated because of being in contact with COVID positive person, or obtaining a positive PCR test?</b>			
Missing data		1	0.50%
Yes	1.58 ± 0.505	81	40.90%
No		116	58.60%
<b>Have any of your close relative (first degree relatives)been tested positive for COVID-19 recently?</b>			
Missing data		2	1%
Yes	1.58 ± 0.562	87	43.90%
No		109	55.10%

**Note.** n=198 of bachelor of science in nursing students this table contain all demographic information of the students like age, gender, year of study, clinical placement, with whom they are living, if they or their family having risk conditions, how many time doing PCR test and test result, and if being isolated for positive test. Analysis done by using mean, standard deviation, frequency and percentage.

and living with their parents (75.8%)(1.66 ± 2.476). At the same time, the variable of do you have any risk condition the mean and std. deviation was 1.18 ± 2.132. So about 74.9% of the students were not suffering from any health risk condition, but their families suffered from health risk conditions (1.64 ± 3.144), especially hypertension (40.2%). The majority of the students were tested between 11 to 19 times (47%) with mean and Std. deviation as 13.99 ± 6.882, negative test results (1.96 ± 0.591) (94%), not isolated (58.6%) (1.58 ± 0.505) with family negative test results (55.1%)(1.58 ± 0.562).

**Analyses of the impact of COVID-19 pandemic on nursing student's attitude and practice during clinical training**

This section that showed in Tables 2 and 3 discussing the analyses of the impact of COVID-19 pandemic on nursing student's attitude and practices

toward patient care (N = 198); Table 2 is about Analyses of the impact of COVID-19 pandemic on nursing student's attitude showed the variables I would be proud to be a front liner (who deals directly with COVID-19 patients) were strongly agree (49%), I feel confident that I can provide care for potential COVID 19 positive patients were strongly agree (32.8%). But this variable I get motivated to work better if I receive positive reinforcement from the patients or their families got two similar percentage in two options strongly disagree and neutral those were 24.7%.

This variable I feel competent to provide patient care during any health-related crisis students answered neutrally was 27.3%. These variables most of the students strongly agreed and agreed that where I am willing to provide care to patients recovering from COVID-19 was (39.4%), I am

TABLE 2

Analyses of the impact of COVID - 19 pandemic on nursing student's attitude toward patient care

Students Attitude	Parameter	Frequency	Percent %
I would be proud to be a front liner (who deals directly with COVID-19 patients).	Strongly Disagree	6	3%
	Disagree	7	3.50%
	Neutral	33	16.70%
	Agree	55	27.80%
	Strongly Agree	97	49%
I feel confident that I can provide care for potential COVID 19 positive patients.	Strongly Disagree	14	7.10%
	Disagree	21	10.60%
	Neutral	35	17.70%
	Agree	64	32.30%
I get motivated to work better if I receive a positive reinforcement from the patients or their families.	Strongly Agree	65	32.80%
	Strongly Disagree	22	11.10%
	Disagree	49	24.70%
	Neutral	36	18.20%
	Agree	42	21.20%
I feel competent to provide patient care during any health related crisis.	Strongly Disagree	38	19.20%
	Disagree	19	9.60%
	Neutral	54	27.30%
	Agree	41	20.70%
	Strongly Agree	46	23.20%
I am willing to provide care to patients recovered from COVID - 19.	Strongly Disagree	11	5.60%
	Disagree	8	4%
	Neutral	42	21.20%
	Agree	59	29.80%
	Strongly Agree	78	39.40%
I am worried about transmitting the COVID - 19 infections to my family members every time I return from the clinical area.	Strongly Disagree	6	3%
	Disagree	3	1.50%
	Neutral	27	13.60%
	Agree	47	23.70%
	Strongly Agree	115	58.10%
I believe that wearing personal protective equipment can help in preventing COVID -19 infections.	Strongly Disagree	45	22.70%
	Disagree	15	7.60%
	Neutral	54	27.30%
	Agree	55	27.80%
	Strongly Agree	29	14.60%
I believe that maintaining frequent hand hygiene can help in preventing COVID -19 infections.	Strongly Disagree	51	25.80%

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	Disagree	5	2.50%
	Neutral	43	21.70%
	Agree	62	31.30%
	Strongly Agree	37	18.70%
I'm afraid of getting infected with COVID - 19.	Strongly Disagree	6	3%
	Disagree	4	2%
	Neutral	60	30.30%
	Agree	65	32.80%
	Strongly Agree	63	31.80%
I hesitate to enter patient room even if patient is COVID - 19 negative.	Strongly Disagree	24	12.10%
	Disagree	44	22.20%
	Neutral	71	35.90%
	Agree	28	14.10%
	Strongly Agree	31	15.70%
I am preoccupied with the thought, whether my patients have been tested for COVID -19 recently.	Strongly Disagree	20	10.10%
	Disagree	34	17.20%
	Neutral	105	53%
	Agree	30	15.20%
	Strongly Agree	9	4.50%
I am usually bothered when my COVID -19 test report gets delayed.	Strongly Disagree	28	14.10%
	Disagree	24	12.10%
	Neutral	52	26.30%
	Agree	56	28.30%
	Strongly Agree	38	19.20%
Total attitude score category	Poor	1	0.50%
	Average	146	73.70%
	Good	51	25.80%

**Note.** n=198 this table contain all the variables related to attitude of nursing students to ward patient care during COVID-19 pandemic that been categorized strongly disagree, disagree, neutral, agree, strongly agree identify the frequency and percentage of each

worried about transmitting the COVID-19 infections to my family members every time I return from the clinical area (58.1%), I believe that wearing personal protective equipment can help in preventing COVID-19 infection (27.8%), I believe that maintaining frequent hand hygiene can help in preventing COVID-19 infection (31.3%) and I'm afraid of getting infected with COVID-19 were 32.8%. I hesitate to enter the patient room even if the patient is COVID-19 negative, and I am preoccupied with whether my patients have been tested for COVID-19 recently got neutral (35.9% and 53%). The last variable I am usually bothered by when my COVID-19 test report gets delayed was agreed (28.3%).

The total score category of nursing students' attitude toward patient care showed that nursing students had an average attitude toward patient care (73.7%).

In Table 3 shows analyses of the impact of the COVID-19 pandemic on nursing students' practice toward patient care. The scores of the variable my clinical practice has been affected as I cannot communicate face to face and discuss cases with my colleagues as before the pandemic were neutral (37.9%), I carry out the procedures with patients in a hurry, as I am afraid of getting infected with COVID-19 nowadays was 25.8% as neutral. Also, I frequently practice hand hygiene to prevent the spreading of COVID-19 infections strongly agree (47.5%). I am putting on personal protective equipment before dealing with any patient, even if they are COVID-19 negatives strongly agreed (42.4%). Moreover, I am able to communicate with my patients effectively even with my mask on was agree (29.8%). These variables mostly answered neutrally were physical distancing does not interfere with my ability in performing clinical procedures, receiving appropriate guidance from my preceptors during this pandemic helped me to fulfill my clinical objectives, I am getting opportunities to perform clinical procedures like vital signs,

dressings, medication distribution, etc. even during this pandemic, I am able to perform different crisis Management skills like triaging and prioritizing the cases, the COVID- 19 outbreak had a positive impact on my clinical training and their percentage were (36.9%, 35.9%, 31.3%, 36.9%, and 36.4%). The last variable was I am making sure to follow hospital and university guidelines when getting in contact with COVID-19 positive patients strongly agreed (47.5%).

The total score category of nursing students' practice toward patient care showed that nursing students had average practice toward patient care (70.2%).

### Association between COVID-19 pandemic on the attitude and practice with selected demographic variables

Table 4 identify the association between COVID-19 pandemic on the attitude and practice with selected demographic variables including the year of the studying, the clinical placement, Who lives with them in the house, Do they or their family members is having any health risk conditions and what is the risk condition they are having, What were the COVID-19 test result and if they are being isolated, shows that there is no significant association between COVID-19 pandemic on the attitude and practice with selected demographic variables except for attitude of nursing students, year of the study ( $\chi^2=12.223$ ,  $p=0.029$ ), who lives with you in the house answered, my siblings ( $\chi^2=4.294$ ,  $p=0.080$ ), what is the health risk condition you are suffering from answered, obesity ( $\chi^2=5.898$ ,  $p=0.094$ ) and respiratory disease ( $\chi^2=7.506$ ,  $p=0.027$ ). Lastly, what is the health risk condition your family member is suffering from answered, autoimmune disease ( $\chi^2=6.576$ ,  $p=0.073$ ). On the other hand, for the practice of nursing students, there is no significant association between COVID-19 pandemic on the nursing students practice with selected demographic variables except who lives with you in the house answered,

TABLE 3

Analyses of the impact of COVID - 19 pandemic on nursing student's attitude toward patient care

Students Practice	Parameter	Frequency	Percent %
My clinical practice has been affected as I cannot communicate face to face and discuss cases with my colleagues as before the pandemic	Strongly Disagree	24	12.10%
	Disagree	19	9.60%
	Neutral	75	37.90%
	Agree	37	18.70%
	Strongly Agree	43	21.70%
I carry out the procedures with patients in hurry, as I am afraid of getting infected with COVID - 19 nowadays.	Strongly Disagree	33	16.70%
	Disagree	43	21.70%
	Neutral	51	25.80%
	Agree	43	21.70%
	Strongly Agree	28	14.10%
I practice hand hygiene frequently to prevent spreading of COVID - 19 infection.	Strongly Disagree	6	3%
	Disagree	5	2.50%
	Neutral	30	15.20%
	Agree	63	31.80%
	Strongly Agree	93	47.50%
I am putting on personal protective equipment before dealing with any patient even if they are COVID - 19 negative.	Strongly Disagree	7	3.50%
	Disagree	10	5.10%
	Neutral	37	18.70%
	Agree	60	30.30%
	Strongly Agree	84	42.40%
I am able to communicate with my patients effectively even with my mask on.	Strongly Disagree	32	16.20%
	Disagree	15	7.60%
	Neutral	44	22.20%
	Agree	59	29.80%
	Strongly Agree	48	24.20%
Physical distancing does not interfere with my ability in performing clinical procedures.	Strongly Disagree	25	12.60%
	Disagree	28	14.10%
	Neutral	73	36.90%
	Agree	51	25.80%
	Strongly Agree	21	10.60%
Receiving appropriate guidance from my preceptors during this pandemic helped me to fulfil my clinical objectives.	Strongly Disagree	7	3.50%
	Disagree	14	7.10%
	Neutral	71	35.90%
	Agree	61	30.80%
	Strongly Agree	45	22.70%
I am getting opportunities to perform clinical procedures like vital sign, dressing, medication distribution etc. even during this pandemic.	Strongly Disagree	37	18.70%
	Disagree	15	7.60%
	Neutral	62	31.30%
	Agree	58	29.30%
	Strongly Agree	25	12.60%
I am able to perform different crisis Management skills like triaging and prioritizing the cases.	Strongly Disagree	31	15.70%
	Disagree	15	7.60%
	Neutral	73	36.90%

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	Agree	51	25.80%
	Strongly Agree	28	14.10%
The COVID- 19 outbreak had positive impact on my clinical training.	Strongly Disagree	29	14.60%
	Disagree	25	12.60%
	Neutral	72	36.40%
	Agree	46	23.20%
	Strongly Agree	26	13.10%
I am making sure to follow hospital and university guidelines when getting in contact with COVID - 19 positive patients.	Strongly Disagree	6	3%
	Disagree	7	3.50%
	Neutral	34	17.20%
	Agree	57	28.80%
	Strongly Agree	94	47.50%
Total practice category	Poor	7	3.50%
	Average	139	70.20%
	Good	52	26.30%

**Note.** n =198 this table contain all the variables related to practice of nursing students to ward patient care during COVID-19 pandemic that been categorized strongly disagree, disagree, neutral, agree, strongly agree identify the frequency and percentage of each variables and, lastly is the total practicescore category that been identified by poor, average and good attitude the result showed average practice.

**TABLE 4**  
Association between COVID - 19 pandemic on the attitude and practice with selected demographic variables

Demographic Variables	Value ( $\chi^2$ ) of Attitude Of Nursing Students	Significance (at 0.05 level)	Value( $\chi^2$ )of practice of nursing students	Significance (at 0.05 level)
Year of the study	12.223	0.029	5.802	0.412
	23.511	0.192	0.523	0.47
Who lives with you in the house :				
My spouse	1.183	0.588	5.388	0.054
My parents	1.427	0.505	0.817	0.712
My grand parents	1.459	1	1.084	0.585
My children	1.428	0.482	1.843	0.357
My siblings	4.294	0.08	2.332	0.291
My room mate	2.405	0.486	5.715	0.063
I live alone	3.595	0.29	1.58	0.626
Other	1.409	0.761	2.569	0.269
What is the health risk condition you are suffering from				
Diabetes	1.227	0.76	3.88	0.071
Obesity	5.898	0.094	1.919	0.216
Hypertension	1.722	0.68	1.414	0.346
Chronic heart disease	3.53	1	2.594	0.276
Respiratory disease	7.506	0.027	0.118	0.768
Smoking	2.703	0.57	1.965	0.561
Autoimmune diseases	4.354	0.203	1.965	0.561
Other	5.291	0.131	0.775	0.462
Not having any risk condition	3.05	0.21	2.768	0.222
What is the health risk condition your family member is suffering from				
Diabetes	0.593	1	4.333	0.108
Obesity	4.807	0.111	2.772	0.287
Hypertension	1.687	0.443	8.631	0.013
Chronic heart disease	0.711	0.733	1.58	0.626
Respiratory disease	2.727	0.299	2.383	0.224



Smoking	1.588	0.751	2.147	0.306
Autoimmune diseases	6.576	0.073	0.731	1
Other	5.318	0.133	0.135	1
Not having any risk condition	0.898	0.683	15.045	0
if you been isolated because of COVID-19 positive results	5.497	0.628	12.893	0.009

**Note.** n =198 this table contain association between COVID - 19 pandemic on the attitude and practice with selected demographic variables including the year of the studying, the clinical placement, Who lives with them in the house, Do they or their family members is having any health risk conditions and what is the risk condition they are having, What were the COVID-19 test result and if they are being isolated. The association measured using chi square and identifying the significance at the level of (P <0.05)

my spouse ( $\chi^2=5.388$ ,  $p=0.054$ ) and my roommate ( $\chi^2=5.715$ ,  $p=0.063$ ), what is the health risk condition you are suffering from answered, diabetes ( $\chi^2=3.880$ ,  $p=0.071$ ), what is the health risk condition your family member is suffering from answered, hypertension ( $\chi^2=8.631$ ,  $p=0.013$ ), not having any risk condition ( $\chi^2=15.045$ ,  $p=0.000$ ). Lastly, if you been isolated because of COVID-19 positive results ( $\chi^2=12.893$ ,  $p=0.009$ ).

### DISCUSSION

COVID-19 pandemic is a disease that can affect all aspects of human lives and learning, especially health care professional education, including curriculum, teaching methods, and clinical instruction. This study aimed to evaluate the impact of the COVID-19 pandemic on the attitude and practices of nursing students during clinical training.

The majority of nursing students' were age group between 21 to 25 years old, females, 4<sup>th</sup> year of nursing study, working in a medical ward, living with their parents, not suffering from any health risk condition with their families suffering from health risk condition especially hypertension. Also, the majority of the students were tested for COVID-19 between 11 to 19 times with negative test results, not isolated and family negative test results.

A questionnaire of two variables assessed the study aims; one variable was assessing the impact of COVID-19 pandemic on nursing students' attitude toward patient care and the second on the impact of COVID-19 pandemic on nursing students' practice patient care. Also, the association between the impact of the COVID-19 pandemic on the attitude and practices of nursing students during clinical training with selected demographic variables had been identified.

Impact of COVID-19 pandemic on nursing students' attitude and practice during clinical training: Related to the impact of the COVID-19 pandemic on nursing students' attitude toward patient care, the majority of nursing students' had positive responses toward feeling proud of being nurses, feeling confident, and willing to provide care for potential COVID-19 positive patients, understanding and adhering to the infection control practices. But, the motivation to work better if received positive reinforcement from the patients or their families and the competency to provide care during health crises was neutral. It negatively showed that students were afraid and hesitant when caring for the patients in this situation.

Moreover, the students were afraid when COVID-19 test results were delayed and concerning getting an infection and transmitting the disease to their families. One of the studies found that the students' worries about their family members being infected can affect their attitude toward patient care. But they also believed that the preventive measures taken while providing care to the patients would prevent the spread of the disease (7).

Contrariwise, a study conducted by Eweida et al (8) reported that the majority of nursing students tried to diminish their contact with the patients during the pandemic. They shed light on students' concerns about being contagious and reported their concern about transmitting the infection. Such concern was recognized as a source of stress in pandemic situations (9). In this study, the students were understandable and adhering to infection control practice.

Related to the impact of COVID-19 pandemic on nursing students practice, the study showed disruption in their practice when answered were neutral for this variable clinical practice has been affected as the communication face to face and discuss cases with the colleagues as before the pandemic, carrying out the procedures in a hurry and being afraid of getting infected with COVID-19, the practice of physical distancing interfere their ability in performing clinical procedures. Moreover, the students want to receive appropriate guidance from preceptors during this pandemic that can help them to fulfill clinical objectives. Also, in opportunities to perform clinical procedures during this pandemic is destructed, unable to perform different crisis management skills, the COVID-19 outbreak negatively impacted their

clinical training. In contrast, the students were trying to improve and adjust the practice during this pandemic when answered strongly agree and agree about practicing hand hygiene frequently to prevent spreading of COVID-19 infections, putting on personal protective equipment before dealing with any patient even if they are COVID-19 negatives, the communication when dealing with patients effectively even with a mask on and making sure to follow hospital and university guidelines when getting in contact with COVID-19 positive patient.

In a study done by Flumer (10), the significant finding in this study was students' ability to fulfill their clinical requirements drawing the attention to nursing preceptors' role in supporting the students learning to owe to their ability to create a safe learning environment and being a role model, related the study done there is some misunderstanding in preceptor guidance, so the students been affected and afraid to provide care to the patient. Moreover, efforts to enhance students' learning experience during a pandemic are essential to avoid interruption of clinical posting, which can negatively affect the students' transitions into professional practice (11). One of these efforts is the availability of personal protective equipment (PPE) and students' commitment to putting them on. In the current study, most of the students were in compliance with PPE.

The essence findings of this study revealed that students had average attitudes (73.7%) and practices (70.2%) toward patient care during COVID-19 pandemic.

A study was done by Swift et al (12), who reported the students' positive attitude toward hospital practices despite the concern of transmitting the disease to self and others that is not inconsistent with this study. Same as, Peng et al (13) reported students' positive attitudes and proactive practices. Another cross-sectional descriptive study was done by Khasawaneh et al (14); the result showed an expected level of knowledge that can positively affect the attitude and practice about the COVID-19 virus and implementing proper strategies to prevent its spread. Although the students show average attitude and practice toward patient care in this study, they were trying to provide better care and improve their practice in the clinical training areas even though the study year of nursing students.

The students understood the country's needs, and they played an essential role in improving the health status of this pandemic.

According to the association between COVID-19 pandemic on the attitude and practice with selected demographic variables, there is no significant association between COVID-19 pandemic on the attitude and practice with selected demographic variables except for attitude, year of the study, living with whom, suffering from health risk condition (obesity and respiratory disease), and family member suffering from autoimmune disease. On the other hand, there is no significant association between COVID-19 pandemics on the nursing students' practice with selected demographic variables except living with spouse and roommate, suffering from diabetes, and a family member suffering from hypertension, lastly isolation because of COVID-19 positive results.

So there were variables that affected the students' attitude and practice while going to clinical training. Particular concern about health risk condition that if the student or any family member suffers from this concern will affect their attitude and practice toward patient care in clinical areas. A study was done by Angelo, Alemayehu and Dacho (15) about knowledge, attitudes, and practices toward Covid-19 and associated factors among university students showed residency is positively associated with the practice that disseminates information about Covid-19 that will not bring the difference in the implementation of preventive measures (16). The study's same finding was mainly concerned about health risk conditions for family members or for the students themselves and the resident family members that will be affected with infection.



## The impact of COVID - 19 pandemic

In another study done in the United Arab Emirates about knowledge, attitudes, and practices of United Arab Emirates medical and health sciences students, the finding showed that the majority of the students were worried that they or a member of their family might get infected (7). This finding positively supporting the research study that the students were afraid to get infected because of the health status of any member of their family who may get an infection.

Therefore, appropriate preparation of students through a training program on disaster management was recommended as a strategy to relieve students' worries about the transmission of the disease (15,17).

### LIMITATIONS

The limitation of this study was difficult to identify significant relationships from the data because of the small sample size, and the data findings can't be generalized because of the small sample size. By using a self-reported questionnaire which proposes the results to be subjective.

### CONCLUSION

Based on the results of the current study finding concluded that students had average attitude and practices toward patient care during COVID-19 pandemic, that creating clues about development in the professional education of new learning and training strategies and mandate the undergraduates nursing program to re-think about the clinical education strategies to enable the students from fulfilling college requirements while being well equipped to deal with stress associated with the pandemic crises. Experiential learning is essential for students learning and cannot be curtailed or replaced by any other learning methods. The pandemic affects the nursing student's clinical learning experience; without delay, the curriculum should meet the college requirement. So, the reported findings on students' proactive practices and initiatives should be cultivated through sufficient preparation on disaster management, enhancing their coping behaviours, and preparing competent preceptors. So, they can be recognized as a driving force for nursing students toward feeling their value and being recorded in the history and reflects the positive impact of the COVID-19 pandemic on the nursing image.

#### Relevance for clinical practice:

This research study was done to assess the Impact of the COVID-19 pandemics on nursing students' attitude and practice during clinical training that is essential for the institutions, educators, and students to identify and assess the issues faced by the students during this pandemic and trying to find interventions for the continuity of the education smoothly without any struggles. Furthermore, the institutions can develop a curriculum that reflects disaster management and would ease students and educators during any crisis or pandemic situation like COVID.

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