

Original Article

Hands-on Training and Student Nurses in the Pandemic: The Relationship of Perceptions and Attitudes towards Covid-19 and Clinical Stress

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Abstract

Background: The Covid-19 pandemic has affected nursing education as well as all areas of life. Clinical practices are an important part of nursing education and students continue their clinical practice by providing appropriate conditions and student safety.

Aim: This study was conducted to find out the relationship between perceptions and attitudes towards Covid-19 and clinical stress of nursing students who participated in clinical practice during the pandemic process.

Methodology: This study was conducted with a descriptive and cross-sectional design. A total of 240 fourth year nursing students studying at a university in Turkey, who accepted to participate in the study and who participated in clinical practice in March-April 2021 were included in the study. This study carried out with 218 fourth year students. "Personal Information Form", "Clinical Stress Questionnaire" and "Perceptions and Attitudes towards Covid-19 Pandemic Questionnaire" were used in data collection. The data were analyzed with SPSS 21.00 statistical package program. Descriptive tests and Pearson correlation test were used to evaluate the data.

Results: Mean age of the students was 22.30 ± 1.07 and 75.7% were female. It was found that 22% of the students had been infected with Covid 19 and 75.2% were vaccinated. Positive, low and significant relationship was found between students' clinical stress and perception of disease, danger, perception of causes, conspiracy, environment, belief, personal control, avoidance behaviors, cognitive avoidance and avoidance of common areas ($p < 0.05$).

Conclusion: As a result of the study, it was found that the perceptions and attitudes of nursing students towards the Covid 19 pandemic were correlated with students' clinical practice stress.

Key Words: Covid 19, nursing student, clinical practice, stress, perception and attitude

Introduction

Covid-19 disease, the causative agent of which is SARS-CoV-2 virus, emerged in China in December 2019, spreading almost all over the world and causing millions of people to be

infected and hundreds of thousands of people to die (Dikmen et al., 2020; Yuksel and Ozgor, 2020). The epidemic of Covid-19, which was declared as pandemic on March 11, 2020 by World Health Organization (WHO); brought

about some negative effects in all areas of life (Duran and Acar, 2020; World Health Organization, 2020). The pandemic affected especially education significantly and in many countries education was suspended or distance education was started (Ustun and Ozciftci, 2020).

In Turkey, in the statement by the Higher Education Institution (YOK) regarding the spring term of 2020-2021 academic year, it was stated that applied training could be conducted face-to-face by diluting and dividing students into groups, provided that “maximum attention is paid and strict measures are taken” (YOK, 2021).

Nursing education, which consists of both theoretical and practical education, is an intensive and stressful education under normal conditions (Yilmaz and Buyukozturk, 2021).

Studies conducted show that nursing education is stressful and students experience stress especially in clinical practices (Chernomas ve Shapiro, 2013; Labrague, 2013a; Chen et al., 2015; John and Al-Sawad, 2015; Smith and Yang, 2017; Sancar et al., 2018).

It has been reported in literature that during pandemic periods such as SARS and MERS epidemic, nursing students are exposed to various stressors such as the fear of catching infection, they are reluctant to work in healthcare facilities during the pandemic (Elrggal et al, 2018) and they feel at higher risk of infection (Wong et al, 2004).

In a study conducted during the Covid-19 pandemic period, it was found that nursing students experienced anxiety about catching Covid-19, contact, infecting their families, patients or healthcare professionals and being a carrier, interrupting their education; their anxiety increased after they started clinical practice and therefore their practice was inefficient and they had difficulty in fulfilling their care giver roles (Yilmaz and Buyukozturk, 2021).

Similarly, in another study conducted in this period, nursing students were found to have high anxiety level (Savitsky et al., 2020). Perceived anxiety and stress affect students’ quality of life, education and clinical practices negatively (Sanad, 2019).

In addition, although stress perceived in low levels allows students to learn better and show better performance (Rudland et al., 2020), it has been emphasized that being exposed to high level of

stress can be harmful in terms of students’ health and may lead to dropouts from the nursing program (Rafati et al., 2017).

The possibility of contracting Covid-19, which is a highly contagious disease, increases stress level. The risk of transmission is quite high especially in clinical environments (Artan et al., 2020a).

In this context, it is thought that determining the relationship between perceptions and attitudes towards Covid-19 and clinical stress in nursing students who are in their clinical practice is necessary to develop health policies to prevent possible problems (Artan, 2020b).

It is a known fact that knowledge, attitudes and behaviors of individuals in the fight with such contagious diseases and complying with the recommended measures is important in taking Covid-19 pandemic under control (Person et al., 2004; Ajilore et al., 2017).

In the SARS epidemic in 2003, it was reported that knowledge, attitude and stress levels affected the fight with the disease (Person et al., 2004). Sufficient knowledge, correct perception and positive attitude can decrease students’ clinical stress and increase their wish to learn. In this context, determining the perceptions and attitudes of nursing students towards Covid-19 is also important in developing evidence-based strategies in issues such as crisis management, coping with stress, determining needs and carrying out clinical practice effectively.

When the literature is reviewed, it can be seen that although studies have been conducted on stress perceived towards Covid-19 in nursing students (Shaheen et al., 2021; Ersin and Kartal, 2021; Medina et al., 2021; Labrague, 2021b), limited number of studies have been conducted on the perceptions, attitudes and clinical stress experienced by students who participate in practice for the first time (Yilmaz and Buyukozturk, 2021; Savitsky et al., 2020).

For this reason, the present study will fill in the gap and contribute to literature.

The present study was carried out to find out the relationship between perceptions and attitudes towards Covid-19 and clinical stress of nursing students who participated in clinical practice with the measures while the Covid 19 epidemic and precautions continue.

Answers were sought to the following questions in the study.

What is the clinical stress level experienced by nursing students who participated in practice for the first time during the pandemic period?

What is the Covid-19 pandemic perception and attitudes of nursing students who participated in practice for the first time during the pandemic period?

Are Covid-19 pandemic perception and attitudes of nursing students who participated in practice for the first time during the pandemic period associated with clinical stress?

Methodology

This descriptive and cross-sectional study was conducted at a university in Turkey. In the study, it was aimed to reach all students who participated in clinical practice in March-April 2021.

The study was completed with 218 students who agreed to participate in the study out of 240 fourth year students who participated in clinical practice.

Data Collection Instruments: As data collection instruments, "Personal Information Form" was used to find out the sociodemographic characteristics of students, "Clinical Stress Questionnaire" was used to evaluate students' clinical stress states about the practice and "Perceptions and Attitudes towards Covid-19 Pandemic Questionnaire" was used to evaluate students' perceptions and attitudes about Covid 19 pandemic.

Personal Information Form: It consists of 8 questions prepared to find out the participants' sociodemographic characteristics and their states related with the Covid 19 pandemic.

Clinical Stress Questionnaire: It is a Likert type self-assessment scale developed by Pagana in 1989 to determine the baseline value of stress which threatens students or which requires them to struggle (Pagana, 1989). The scale, which consists of a total of 20 items, has four sub-dimensions as "threat", "fighting", "loss" and "benefit".

The score range is "0-80". Low score indicates low stress level, while high score indicates high level of stress. Reliability and validity study of

Clinical Stress Questionnaire was conducted by Şendir and Acaroglu (2006) and internal consistency coefficient was found as 0.70 (Sendir and Acaroglu, 2006).

In this study, Cronbach alpha coefficient was found as 0.85.

Perceptions and Attitudes towards COVID-19 Pandemic Questionnaire: Reliability and validity study of this scale was conducted by Artan et al. (2020b) to evaluate the perceptions and attitudes of individuals during the Covid-19 pandemic. The scale consisted of 4 subscales, "General Perception", "Causes" and "Control Perception" and "Avoidance Behaviors".

Each of the scales is evaluated independently and separate scores are obtained. High scores from the subscales show that the belief in that field is high.

General Perception subscale which evaluates general perception towards the disease consists of 8 items including the sub-dimensions of "contagiousness" and "danger".

The second factor (causes) which has 18 items evaluates the factors that cause disease. It consists of the sub-dimensions of conspiracy, environment and belief. Control perception subscale evaluates the control perception towards the disease and consists of 13 items. It includes sub-dimensions of macro control, personal control and inevitability.

All the items in the inevitability sub-dimension require adverse coding and high scores taken from this sub-dimension show that the individual has a high belief that he/she can avoid the disease.

The subscale which evaluates avoidance behaviors consists of 5 Likert-type 14 items which include options between "I have never done this" and "I have done this very often".

The sub-dimensions of this scale are cognitive avoidance, avoiding common areas and avoiding personal contact. Cronbach Alpha values were 0.650, 0.847, 0.780 and 0.849, respectively.

Cronbach Alpha values were found as 0.79, 0.84, 0.72 and 0.77, respectively in the present study.

Data Collection: The data in the study were collected face-to-face from students who participated in clinical practice during the pandemic process.

The questionnaires were given to students to fill in.

The study was based on volunteering and verbal consent was taken from the students before starting. No time limit was applied to the participants.

Assessment of Data: The data obtained in the study were transferred to computer environment and analyzed by using IBM SPSS Statistics 20.0 (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.) package program.

Descriptive tests and Pearson correlation test were applied. Cronbach Alpha coefficient was calculated to test validity and reliability. The results were interpreted at $p < 0.05$ significance level.

Ethical considerations: Approval was taken from A University Ethics Committee before starting the study (B.30.2.ATA.0.01.00/148).

After the students were informed that the information obtained in the study would be kept confidential and used only for this study, the data were collected after verbal consents were taken from the volunteering participants.

Helsinki Declaration of Human Rights was adhered to during the study period since individual rights should be protected.

Results

Mean age of the students in the study was 22.30 ± 1.07 and 75.7% were female. 22% of the students were found to have been infected with

Covid 19. The rate of family members who had been infected with Covid 19 was 51.4%. 75.2% of the students were vaccinated, 92.7% did not have a chronic disease. 62.4% of the students were staying in a dormitory and 34.9% participated in practice in surgical clinics (Table 1).

The students' total mean scores were found as 39.02 ± 13.75 in Clinical Stress Questionnaire, as 3.74 ± 0.68 in Disease perception (General Perception), as 3.00 ± 0.60 in Causes perception, as 2.63 ± 0.51 in Control perception and as 2.83 ± 0.69 in Avoidance behaviors (Table 2).

Positive, low and significant relationship was found between students' clinical stress and perception of disease, danger, perception of causes, conspiracy, environment, belief, personal control, avoidance behaviors, cognitive avoidance and avoidance of common areas ($p < 0.05$).

Positive, low and significant relationship was found between students' threat sub-dimension and perception of disease, danger, perception of causes, conspiracy, environment, avoidance behaviors, cognitive avoidance and avoidance of common areas ($p < 0.05$).

Positive, low and significant relationship was found between students' loss sub-dimension and perception of disease, danger, perception of causes, conspiracy, environment, avoidance behaviors, cognitive avoidance and avoidance of common areas ($p < 0.05$, Table 3).

Table 1. Distribution of the students by their sociodemographic characteristics (N=218)

Characteristics	Number (n)	Percentage (%)
Age		
($X \pm SD = 22.30 \pm 1.07$)	218	
Gender		
Female	165	75.7
Male	53	24.3

The state of having been infected with Covid-19		
Yes	48	22
No	170	78

The state of family members having been infected Covid 19		
Yes	112	51.4
No	106	48.6

The state of having been vaccinated		
Yes	164	75.2
No	54	24.8

Presence of chronic disease		
Yes	16	7.3
No	202	92.7

Place of stay		
Home	82	37.6
Dormitory	136	62.4

Practice clinic		
Internal medicine clinics	61	28.0
Surgery clinics	76	34.9
Pediatric clinics	37	17.0
Psychiatry clinics	23	10.6
Gynaecology and obstetrics clinic	21	9.5

Table 2. Total mean scores of students from Clinical Stress Questionnaire and Perceptions and Attitudes towards COVID-19 Pandemic Questionnaire and subscales

	Min	Max	Mean±SD
Clinical Stress	4.00	79.00	39.02±13.75
Disease perception (General Perception)	1.00	5.00	3.74±.68
Causes perception	1.44	5.00	3.00±.60
Control perception	1.31	3.77	2.63±.51
Avoidance behaviors	1.00	5.00	2.83±.69

Table 3. Correlation between students' clinical stress Questionnaire and sub-dimensions and Perceptions and Attitudes towards COVID-19 Pandemic Questionnaire subscales

	Threat	Fighting	Benefit	Loss	Clinical Stress
Disease perception (General Perception)	r=.202 p=.003	r=.000 p=.998	r=.013 p=.847	r=.136 p=.044	r=.153 p=.024
Danger sub-dimension	r=.202 p=.003	r=-.016 p=.815	r=-.009 p=.896	r=.136 p=.045	r=.141 p=.037
Contagiousness sub-dimension	r=.124 p=.067	r=.028 p=.683	r=.046 p=.497	r=.086 p=.208	r=.115 p=.090
Causes perception	r=.253 p=.000	r=.077 p=.257	r=.054 p=.427	r=.229 p=.001	r=.258 p=.000
Conspiracy	r=.223 p=.001	r=.040 p=.558	r=.026 p=.701	r=.203 p=.003	r=.211 p=.002
Environment	r=.174 p=.010	r=.038 p=.581	r=.010 p=.880	r=.164 p=.015	r=.168 p=.013
Belief	r=.094 p=.167	r=.104 p=.125	r=.105 p=.123	r=.072 p=.291	r=.142 p=.036

Control perception	r=-.041 p=.544	r=-.009 p=.893	r=-.033 p=.624	r=-.031 p=.647	r=-.042 p=.534
Macro Control	r=.000 p=.998	r=-.028 p=.684	r=-.037 p=.584	r=.043 p=.529	r=-.004 p=.959
Personal Control	r=-.119 p=.079	r=-.056 p=.414	r=-.053 p=.433	r=-.135 p=.057	r=-.146 p=.031
Avoidance	r=.069 p=.312	r=.080 p=.237	r=.038 p=.577	r=.066 p=.331	r=.105 p=.123
Avoidance behaviors	r=.255 p=.000	r=-.024 p=.727	r=-.044 p=.519	r=.193 p=.004	r=.180 p=.008
Cognitive avoidance	r=.162 p=.017	r=.003 p=.967	r=-.047 p=.491	r=.171 p=.012	r=.138 p=.042
Avoiding common areas	r=.280 p=.000	r=-.060 p=.381	r=-.055 p=.420	r=.190 p=.005	r=.171 p=.011
Avoiding personal contact	r=.108 p=.111	r=-.010 p=.881	r=.031 p=.647	r=.001 p=.988	r=.054 p=.430

Discussion

This study was conducted to find out the correlation between Covid-19 related perceptions and attitudes of nursing students who participated in clinical practice for the first time during the pandemic period.

The results obtained from the study were discussed in line with the related literature and research findings.

In the study, it was found that students had a mean total score of 39.02 ± 13.75 in Clinical Stress Questionnaire and they experienced moderate level of stress in this period. In pre-pandemic studies, Savci et al. (2019) found clinical stress levels of nursing students as 28.25 ± 9.72 ; while total mean clinical stress levels were found as 27.10 ± 10.41 in KaragOzoglu et al.'s (2013) study, as 28.40 ± 9.20 in Unsal Avdal et al.'s (2014) study and 26.13 ± 10.10 in Mankan et al.'s (2016) study and it was concluded that the students had low clinical stress levels.

However, in the studies conducted in the pandemic process, it was found in parallel with the results of the present study that stress and anxiety levels of nursing students towards clinical practice had increased (Savitsky et al., 2020).

In another study, it was found that nursing students had higher anxiety after they started clinical practice in the pandemic period (Yilmaz and Buyukozturk, 2021).

Perceived stress increases as the probability of catching Covid-19 increases (Artan et al., 2020a).

The results of this study were found to be in parallel with the results of other studies and with the literature. Covid-19, which causes a large number of psychological problems such as anxiety, fear and stress, has a very high risk of transmission although protective measures are taken, especially in clinical environment.

This result brings to mind that stress levels of students were negatively affected although they had clinical experience in Covid-19 pandemic.

In our study, it was found that Covid-19- related disease perception was high in students, sub-dimensions of disease perception and danger were associated with the sub-dimensions of threat and

loss related with clinical stress level and they were also associated with clinical stress level.

In a study conducted during SARS epidemic, it was reported that health sciences students felt under higher infection risk (Wong et al., 2004).

In another study conducted during the pandemic period, it was found that nursing students experienced anxiety about catching Covid-19, contact, infecting their families, patients or healthcare professionals and being a carrier, interrupting their education; their anxiety increased after they started clinical practice (Yilmaz and Buyukozturk, 2021).

In a study by Cao et al. (2020), it was found that having a relative infected with Covid-19 increased students' anxiety levels. In a study conducted on different groups thought to be sensitive to Covid-19 pandemic in China, the prevalence rate of stress was found as 73.4% (Liu et al., 2020).

The results of the present study support the results of other studies. During the dates the study was conducted in, the number of daily cases per day was approximately 60.000, while the number of deaths was approximately 320 (Ministry of Health, 2021).

It is thought that the increase in the rate of hospitalization, presence of cases that result in death, rapid and easy transmission of the virus that causes Covid-19, the fact that students who participated in clinical practice thought that Covid-19 had threatening and harmful effects affected clinical stress level.

In the study, it was found that causes perception was correlated with conspiracy and environment sub-dimensions and threat and loss sub-dimensions and clinical stress level.

It can be said that conspiracy thoughts such as Covid-19 being a disease that was spread consciously and being a biological weapon affected students' threat and loss and clinical stress levels. It has been found in literature that this perception causes situations such as rejecting the vaccine and not accepting to use mask (Romer and Jamieson, 2020).

However, it can be said that the positive correlation between conspiracy and clinical stress in students may have affected the thought that

hospital environment is an area that creates risk. In the study, belief perception was found to be correlated with clinical stress.

Unlike the results of the study, it has been stated that religious beliefs decreased individuals' stress, depression, anxiety and psychological problems related with the disease (Dogan and Karaca, 2021; Thomas and Barbato, 2020; Dobrakowski et al., 2021).

The main cause of this difference can be explained with the facts that students encounter various risks in clinical environments, positive cases are found in clinics during the period of practice, there are positive cases among healthcare professionals and students and there may be a positive correlation between belief and clinical stress.

It has been found that control perception towards Covid-19 is high and personal control perception is correlated with clinical stress. In a study conducted in the USA by Wheaton et al. (2012), anxiety was found to be prevalent in swine flu epidemic and fear of contamination and disgust sensitivity were correlated with anxiety.

The theory of perceived control expresses the perceived capacity of an individual about handling or preventing a specific issue and individual differences in the feeling of control are closely correlated with coping successfully with stressful situations (Lachman, 2006).

In the study, nursing students were found to have high avoidance behaviors. It was also found that avoidance behaviors, individual avoidance and avoiding common areas sub-dimensions were correlated with threat and loss sub-dimensions related with clinical stress level.

Studies conducted in literature show that epidemic diseases trigger anxiety and this situation increases avoidance behavior in individuals under threat (Goodwin et al., 2011; Leppin and Aro, 2009; Roy et al., 2020).

In another study, similar results were found (Son et al., 2020). Due to harming and threatening characteristics of Covid-19, it can be said that students' getting away from their social environment and common areas of use affect their clinical stress level.

Conclusion: In the study, it was found that perceptions and attitudes of nursing students towards Covid-19 pandemic were correlated with clinical practice stress. It was also found that the

students who participated in clinical practice for the first time during the pandemic had moderately high stress levels, and high disease perception towards Covid-19 and high disease perception, causes perception, avoidance behaviors and control perception.

In line with these results, it is important to find out the perceptions and attitudes of nursing students who participated in practice during the pandemic process, to decrease the anxiety levels of students in clinical practice, which is important in terms of preparing for the profession, to receive support on this issue and to prepare appropriate practice environments.

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