Effect of COVID-19 Pandemic on Psychological Wellbeing among Faculty of Nursing Students

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Abstract

Background: Nursing students are at a heightened risk compared to the general population of encountering psychological repercussions associated with the COVID-19 pandemic. **Aim:** This study aimed to assess the effect of COVID-19 pandemic on psychological wellbeing among faculty of nursing students. **Study design;** A descriptive cross-sectional design was used in this study. **Setting:** The study was conducted at the Faulty of Nursing in Kafrelsheikh University, which affiliated to the Ministry of Higher Education. The faculty started in 2014, follow credit hours and have about 2800 students at the four academic levels at 2020/2021. **Subject:** A simple random sampling technique was used in this study. **Sample size:** The study sample was selected from the four academic levels (n=350)**. Data collection tools;** 1) Demographic Data of the studied nursing students 2) Student Perception of Academic Study during COVID -19 Pandemic 3) Covid-19 Student Stress Questionnaire (CSSQ) 4) Coronavirus Pandemic Anxiety Scale (CPAS-11) 5) Beck Depression Inventory (BDI). **Results**: the results of this study showed that there were significant negative correlations between student perception of academic study during COVID-19 pandemic and their COVID-19 perceived stress, depressive symptoms, and Corona virus pandemic anxiety. **Conclusion;** the study concluded that the studied nurses experienced severe corona virus pandemic anxiety, moderate depressive symptoms and prominent level of perceived COVID-19 stress. **Recommendation;** Offering psychological therapy services to nursing students, while also enhancing their instruction on COVID-19 preventative techniques.

Keywords: Anxiety, COVID-19, Depression, Nursing Students, Stress.

Introduction

The fatal COVID-19 pandemic was first found in December 2019 in Wuhan, Hubei province, China. The World Health Organization (WHO) affirmed the disease an international unrestricted health crisis on 30 January 2020 and a pandemic on 11 March 2020 due to its rapid spread. The global COVID-19 cases count has risen, as of March 31, 2021; 128 million people have COVID-19, with over 2.8 million dying *(Chowdhury, 2021).*

Droplet transmission is common, with 2–5% fatalities. In March 2020, 136 countries made COVID-19-related restrictions, including staying home, a 2-meter physical separation, and social restrictions. Extensive public health initiatives have promoted hand washing, cleanliness, and personal hygiene. Personal protective equipment includes masks and gloves. Despite being important, these precautions may affect vulnerable people's mental health. Individual restrictions to prevent contagious diseases may cause mental disorder **(Abba-Aji, 2020)**.

In addition, infected patients with COVID-19 have a varied assortment of symptoms, from asymptomatic to a severe version of the disease. High fever, cough, chest tightness, chills, sore throat, overall weakness, weariness, muscular discomfort, diarrhea, and altered taste and smelling senses are all possible

symptoms in most cases. As well, it could result in death. Clinical deterioration can happen quickly, according to reports, especially during the second week of the disease's course *(Huang et al, 2020).*

The pandemic's influence on people's mental health is very alarming. The distress produced by loss of money, and, in many cases, work is compounded by social sequestration, fear of contagion, and the loss of family members *(Sundarasen, 2020).* These events resulted in psychological, sociological, and high frequency of mental health disorders among the population, including acute stress, post-traumatic stress, anxiety, depression, irritability, insomnia, and impaired attention. COVID-19 pandemic significantly impacted people's mental health in many countries, eliciting similar sentiments and concerns at the community level. Among those concerns, closed schools and universities and inter-regional travel was limited (Villani, 2021).

Nursing students constitute a distinct social cohort characterized by dynamic lifestyles centered on interpersonal bonds, physical and academic pursuits, exploration, and communal events. Nursing students' psychological well-being throughout the pandemic is essential to their academic progress; the pandemic situation had a significant impact on their lives: due to university regulations, teaching in presence was prohibited from March 11, 2020, to the beginning of September. The development of an online teaching service allowed students to take courses, assessments, and discuss theses and doctoral dissertations remotely *(Villani, 2021).*

Collectively, nursing students worldwide may possess an intrinsic susceptibility to experiencing psychological distress. A recent comprehensive analysis of nursing students from several nations revealed a notable deficiency in psychological well-being, as evidenced by elevated levels of stress and a high prevalence of poor psychological health. *(Li &Hasson, 2020).*

Nursing students are stressed by academic and clinical obligations. Stress, depression, and sleep difficulties can result. The rapid change from in-person to online schooling, together with worries about academic advancement and employment prospects, has increased stress and anxiety *(Kim, 2021).*

Clinical training for nursing students has also been disrupted. Many students have successfully entered the workforce despite not having completed their formal education. However, this raised concerns about their final ratings and whether they have the academic capabilities required to complete their degree studies and the practical abilities required to do certain assignments. These students are also concerned about perhaps spreading the virus to other members of their families *(Reverté &Villarroya, 2021).*

The transferal of educational levels to online platforms has resulted in a learning access disparity. While students can access the platforms using their mobile phones, the type and capacity of the device is a barrier owing to a lack of memory space to download the platforms. Many students reside in remote locations with limited or no Internet connectivity, insufficient financial resources, lack of essential textbooks, reliance on university libraries, and lack of access to computers. *(Agu, 2021)* been disrupted has socializing students.

Furthermore, Students in the nursing profession report higher rates of anxiety, stress, and depression more than students in other fields and the general population. Stress can arise from four sources: clinical practice, theoretical training, one's personal life, and one's social life *(Tran et al, 2021).*

Significance of the study:

As a result of being exposed to several long-term and uncontrollable stressors during their learning period, nursing students experience a decline in their health and a worsening of their professional identity

development as a consequence of the COVID-19 pandemic. Students experience stress due to various circumstances, including caring for sick folks, lacking confidence in practical applications, and inadequate assistance from instructors. Among the many things that cause nursing students great distress is the dread of contracting a disease, as well as other related fears, such as not knowing how the illness would impact their loved ones or feeling unsafe in their own neighborhood *(Özdemir et al., 2021)*.

Unforeseen disruption of academic instruction and discontinuation of nursing students' clinical practice in hospitals has raised concerns about their adequacy. Nursing education heavily relies on clinical skill development, and the lack of opportunities to apply these skills in practice has created uncertainty among students. They are unsure about when, where, and how to receive compensatory training to address their inadequacies, which can cause significant stress.

As a result of being separated from friends and having little to no social life, students are anxious about the duration of the COVID-19 Pandemic and when they will be able to resume their normal lives *(Aslan, 2021)*.

Aim of the study

This study aimed to assess the effect of COVID-19 pandemic on psychological wellbeing among faculty of nursing students.

Research Questions:

- What is the effect of COVID- 19 pandemic on stress level among Faculty of Nursing students?

- What is the effect of COVID- 19 pandemic on anxiety level among Faculty of Nursing students?

- What is the effect of COVID- 19 pandemic on depressive symptoms among Faculty of Nursing students?

Working Definition:

Psychological wellbeing in this study is limited to stress, anxiety, and depression.

Subjects and method

I: Technical design

A- Research design:

A descriptive cross-sectional design was used in this study.

B- Setting:

The study was conducted at the Faulty of Nursing in Kafrelsheikh University which is allied to the Ministry of Higher Education. The faculty started in 2014, follow credit hours and have about 2800 students at the four academic levels at 2020/2021.

C- Subjects of the study:

Type of sample: A simple random sampling technique was used in this study, to choose students to take part in this study by list of student names through choosing students randomly in their four academic levels.

Sample size: The study sample was selected from the four academic levels; they were selected in the 2nd semester of 2021/2022 academic year.

According to Epi-ANOVA equation for determining sample size for research activities.

$n = (Za)2 * (S)2/(d)2$

n= The sample size.

Za=The standard normal coefficient.

S= The standard deviation.

D=the desired precision level expressed as half of the maximum acceptable confidence interval width.

Groups	Total	%	Sample Size
The first level	964	27.8%	97
The 2nd level	1250	36.0%	125
The 3rd level	762	22.0%	76
The 4th level	492	14.2%	49
Total	3468	100.0%	347

D- Data Collection Tools:

Four tools were used for data collection:

Tool I: An interview questionnaire it includes two parts:

Part1) Demographic Data of the studied nursing students:

This was developed by the researcher. It included age, sex, academic year, residence, and family income.

Part2) Student Perception of Academic Study during COVID -19 Pandemic:

This was developed by the researchers after reviewing related literature to assess concerns regarding academic study during COVID-19 pandemic. This tool consisted of 21 items covering (three domains) to measure (a) students' perception regarding difficulties in learning (12statement), (b) performance in clinical setting (7statement), (c) opinion of future career (2statement). There are no reversed score items.

The tool was rated in a 4-point Likert scale in which strongly disagree = 1, disagree = 2, agree = 3, and strongly agree = 4.

-Scoring system was as follow:

Student perception of academic study	No. of items	Positive perception <60%	Negative perception ≥60%
Difficulty in learning theoretical coarse	12 statements	12:33	34:48
Performance in clinical setting	7 statements	7:19	20:28
Opinion of future career	2 statements	2:5	6:8
Total	21	21:58	59:84

Tool II: A) Covid-19 Student Stress Questionnaire (CSSQ):

The COVID-19 Student Stress Questionnaire (CSSQ) is valid and reliable tool at (o.86), it developed by **Zurlo, et al.**

(2020), and adopted by the researcher to determine the stress that college students felt during the COVID-19 quarantine. It rated on a 5-point Likert scale in which zero =Not at all ,1=Somewhat, 2= Moderate, 3=Very, and 4=Extremely. Each item was carefully crafted to address elements affected by the COVID-19 pandemic lockdown and potentially stressful. These aspects include: the risk of contagion, social isolation, relationships with relatives and colleagues, relationships with professors and academic studying, and relationships with academics. To conform to our religious and cultural norms, we omitted measures of sexual intimacy and couple's relationship closeness from the scale. A stress score between zero and twenty-four is produced by the scale.

-Scoring system according to original cutoff points (**Zurlo, et al. 2020**) was as follow:

- 0-5 =Low level of COVID-19 perceived stress.
- 6-13= Average level of COVID-19 perceived stress.
- 14-24= High level of COVID-19 perceived stress.

Tool III) Coronavirus Pandemic Anxiety Scale (CPAS-11):

The Coronavirus Pandemic Anxiety Scale (CPAS-11), it is valid and reliable tool (0.87), it was developed by **Bernardo, et al. 2020,** to estimate the extent to which the COVID-19 epidemic has caused anxiety and to pinpoint those who may receive help from mental health assistance. The scale included 11 items that referred to various anxiety symptoms. It is rated on a 4- point Likert scale in which 0 = Not at all ,1= Rarely, 2 = Some days, and 3 = Nearly every day.

Scoring system was as follow:

Mild anxiety (Score 0-10)

Moderate anxiety (score11-22)

Severe anxiety (score 23-33)

Tool WI: The Beck Depression Inventory (BDI)

The Beck Depression Inventory (BDI), it is a valid and reliable self-rated scale (0.88%), It was developed by **Beck 1961** and adopted by

the researcher to quantify the presence and severity of depressive symptoms. The twenty-one items that made up the scale assess important depressive symptoms such as mood, pessimism, feeling of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal thoughts, cryingو irritability, withdrawal from social situations, indecision, altered body image, difficulty at work, insomnia, and fatigability.

Loss of appetite, weight loss, somatic preoccupation, and loss of libido were uninvolved in the scale to match our culture and religion. Individual scale items are scored on a 4-point Likert scale adapted by researcher in which 0 = Little ,1 = Somewhat, 2 = Much time, 3 = All time, with a total score range of 0–60.

Scoring system was as follow:

- Normal range of mood (1-10)

- Mild mood disturbance (11-16)

- Borderline clinical depression (17-20)

- Moderate depression (21-30)

- Severe depression (31-40)

- Extreme depression ($\uparrow$ 40)

II. Operational design:

A-Preparatory phase:

The preparatory phase includes perusing relevant books, articles, journals, and online publications to get theoretical understanding of different areas of the research.

B-Validity and reliability:

Five psychiatric-mental health nursing specialists from Ain Shams University examined the Student Perception of Academic Study during the COVID-19 Pandemic for completeness, accuracy, clarity, and relevance to test the tool's content validity.

Reliability of the study tool of Student Perception of Academic Study during COVID - 19 Pandemic was examined by Cronbach's Alpha test:

Cronbach's alpha results for the study tools:

Scale: perception regarding academic study during COVID-19 pandemic	No. of items	Cronbach's alpha result
Perception regarding difficulties in learning theoretical courses	12	0.79
Performance in the clinical setting	7	0.91
Opinion of future career	2	0.88
Total	21	0.86

Accepted reliability ≥0.70 & excellent at ≥0.90

III- Administrative Design:

The study was granted official authorization by the Dean of the Faculty of Nursing at Kaferelshiek University. The researcher encountered the director and elucidated the objective and methodologies of data acquisition.

c) Pilot Study:

The pilot study was undertaken in March 2022. A study was conducted on a sample of 10% (35 students) from the overall study population to verify the clarity, feasibility, and usefulness of the tool, as well as to estimate the time needed to complete the sheet. The instrument was deemed suitable and easily understandable by the participants throughout the pilot study, and no alterations were made. The duration required for completing the sheet varied from 20 to 30 minutes. All participants from the pilot study were included in the sample for the main study.

D) Field Work:

Prior to commencing the research, explicit authorization to carry out the study was acquired from the Dean of the faculty of nursing.

-The researcher provided a clear explanation of the study's objective and the components of the

tools to the nursing students. The researcher ensured that the tools were well understood and addressed any questions to prevent any confusion, including defining the meaning of each item on the scales. It was emphasized that the data collected would be used for the study.

- The researcher had also enlightened the rights to accept or refuse participation in the research to students.

-Oral consent was obtained from students who accepted to partake in the study.

-.Questionnaires are self-administrated by students from four levels.

- Data were collected within two weeks (2nd April to 21st April 2022) where the researcher met the students according to studying schedule of their four academic levels, at the end of the clinical day, and after obtaining permission from clinical instructor attending with the students. Nearly 20 to 30 minutes were taken to fill the questionnaire.

Ethical considerations:

The study received approval from the Ethical Committee of the Faculty of Nursing, Ain Shams University. The study was authorized. Every subject willingly consented to partake in the study. They supplied information regarding the objective of the study and the participants' entitlement to decline or retract their participation at any point. The confidentiality of the acquired information was verified. The experimental maneuvers are devoid of any adverse effects on the individual.

IV- Statistical Design:

A. Data management & Statistical Analysis:

Statistical Package for the Social Sciences (SPSS Inc., Chicago, Illinois, USA) was used to review, code, tabulate, and import the data acquired into a personal computer. Each parameter's data type informed the presentation and analysis of the resulting data.

B. Descriptive Statistics:

The mean±standard deviation (SD) was used to express the quantitative data. Frequency and percentage were used to express the qualitative data.

C. Analytical Statistics:

A battery of tests was conducted:

To assess proportions of qualitative factors, the chi-square (x 2) test of significance was utilized.

Two sets of variables were evaluated for their degree of relationship using Pearson's correlation coefficient (r) test .

The margin of error accepted was set at 5% and the confidence interval at 95%.

This leads to the following conclusion about the significance of the p-value :

A significance level of less than 0.05 was used to figure out the probability (P-value. (

A p-value less than 0.001 to be highly significant .

A p-value > 0.05 to be insignificant.

Results

Table (1) shows demographic data of nursing students, regarding age more than two fifths of the studied students (41.4% & 41.2%) were within 19 years old and at age group19 to 21 years old respectively, with mean $\pm$ SD 20.07±102 years old. Regarding their sex, more than three quarters (78.9%) of them were females. Regarding the academic year, more than one quarter (27.7%) of them were enrolled in first year, more than one third of them (35.7%) were enrolled in second year, less than one quarter of them (22.3%) were enrolled in third year and only (14.3%) of them were enrolled in fourth year. According to the residence, nearly two thirds (67,1%) of them were from rural areas, and most of them (83.7%) had enough family income.

Figure (1) illustrates that more than two thirds (70.60%, 68%, & 65.10%) of the studied students had positive perception regarding performance in the clinical setting, difficulties in learning theoretical courses, and opinion of future career, respectively.

Figure (2) shows that more than two thirds (69.1%) of the studied students had positive perception regarding academic study during COVID-19 pandemic while less than

one third (30.90%) of them had negative perception.

Figure (3) shows that nearly three fifth (57.10%) of the studied students had average level of COVID-19 perceived stress while less than one third of them (29.70%) had high level of COVID-19 perceived stress and only (13.10%) of them had low level of COVID-19 perceived stress

Figure (4) shows that less than one quarter (24.6%, 23.1%, 22.9%, & 22.9%) of the studied students had border line clinical depression, normal range of mood, mild depression and moderate depression respectively, while only (5.70% & 0.9%) had severe depression and extreme depression, respectively.

Figure (5) reveals that less than half (41%) of the studied nursing students had severe Corona virus pandemic anxiety, while more than one third (34%) of them had moderate Corona virus pandemic anxiety and one quarter of them (25%) had mild Corona virus pandemic anxiety.

Table (2) represents that, there were significant negative correlations between student perception of academic study during COVID-19 pandemic and their COVID-19 perceived stress, depressive symptoms, and Corona virus pandemic anxiety in which r=-0.367, -0.113, & -0.160 at p value=0.001, 0.035, & 0.031 respectively.

Also, there was a significant positive correlation between level of COVID-19 perceived stress of the studied nursing student and their depressive symptoms and Corona virus pandemic anxiety in which r=0.227 & 0.274 at p value = 0.021 & 0.017, respectively.

Also, there was a significant positive correlation between depressive symptoms level of the studied nursing students and their Corona virus pandemic anxiety level in which r=0.208 at p value= 0.001.

Table (1): Frequency distribution of the studied nursing students according to their demographic characteristics (n=350).

| Demographic data	No.	%
Age (years)		
Less than 19 years	145	41.4
19 to 21 years	144	41.2
More than 21 years	61	17.4
Mean ±SD→	20.07±1.18	
Sex		
Male	74	21.1
Female	276	78.9
Academic Year		
First	97	27.7
Second	125	35.7
Third	78	22.3
Fourth	50	14.3
Residence		
Urban	115	32.9
Rural	235	67.1
Family Income		
Enough	293	83.7
Not Enough	57	16.3
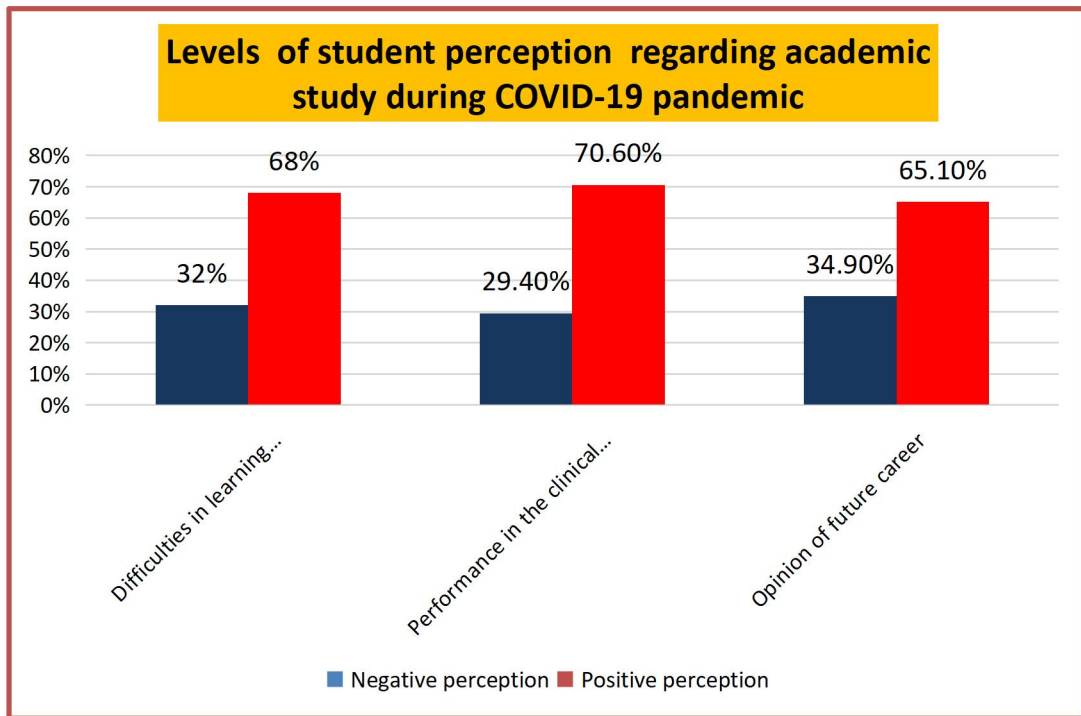
Figure (1): Frequency distribution of the studied nursing students according to their level of perception of academic study during COVID-19 pandemic domains (n=350).
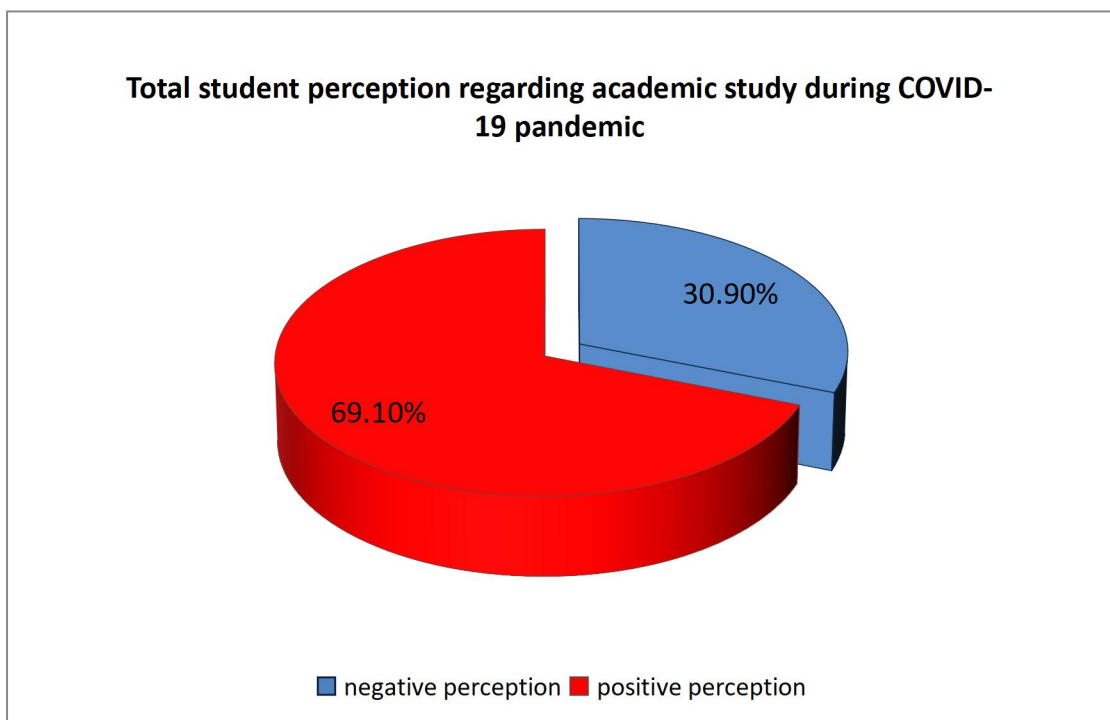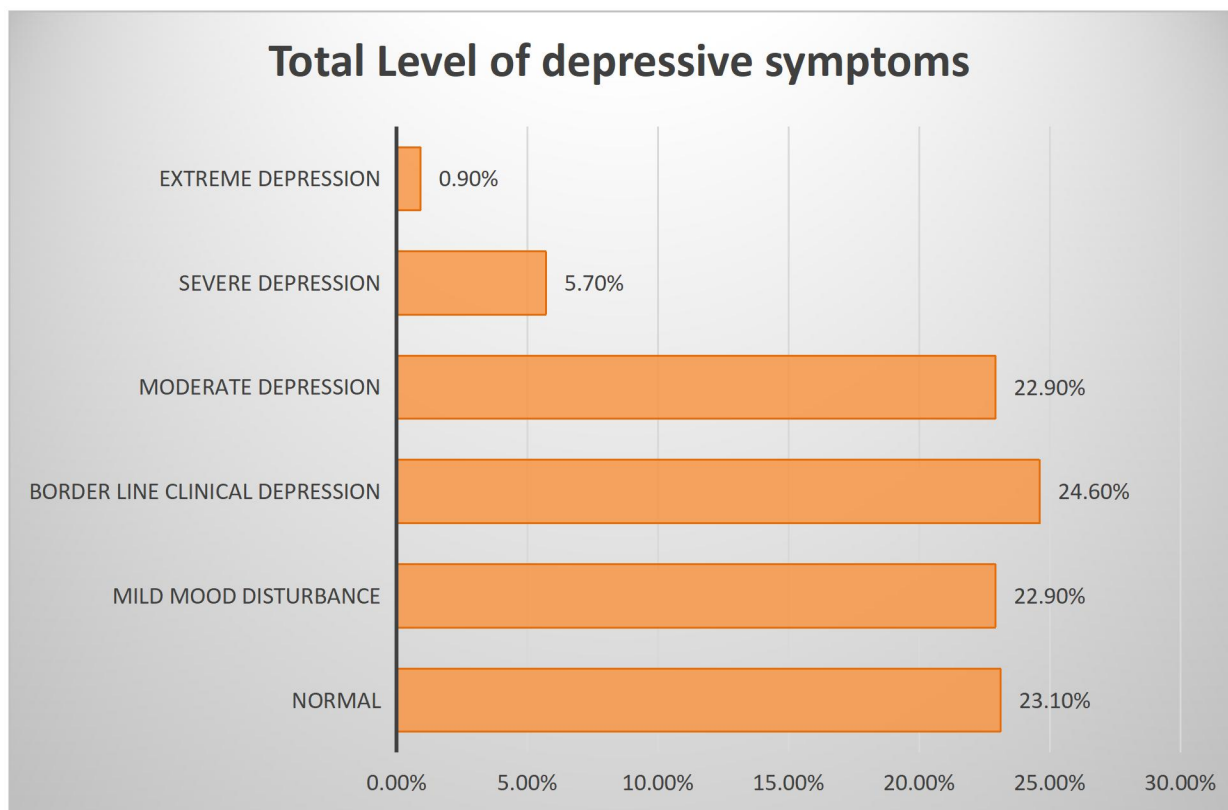

Figure (2): Frequency distribution of the studied nursing students regarding their total perception of academic study during COVID-19 pandemic (n:350).
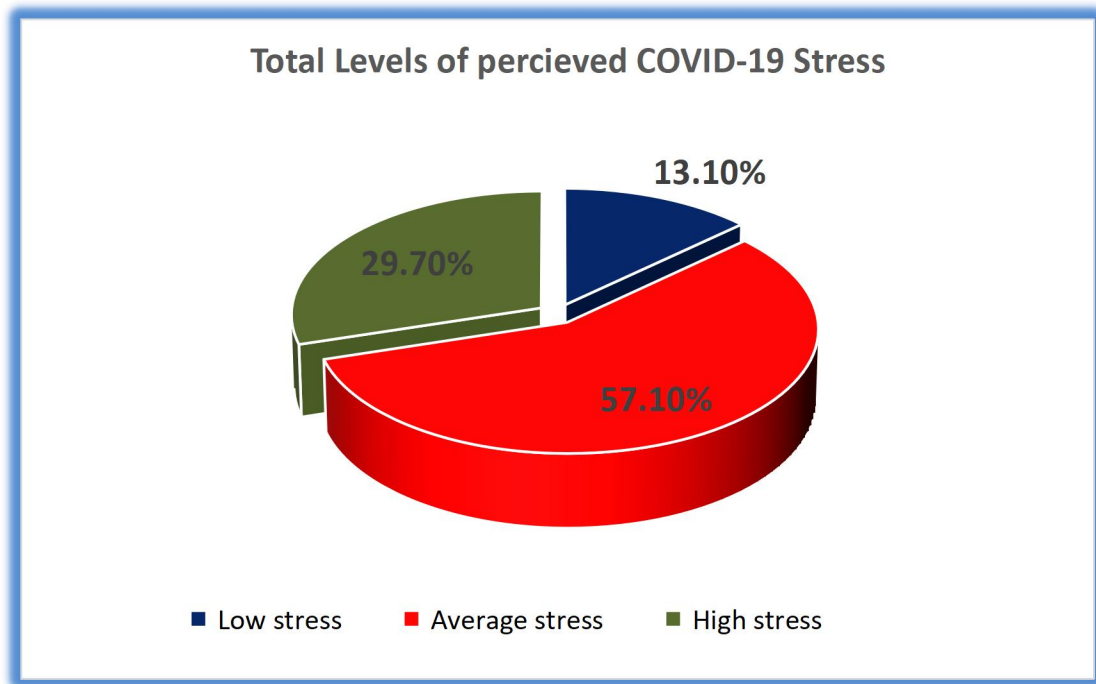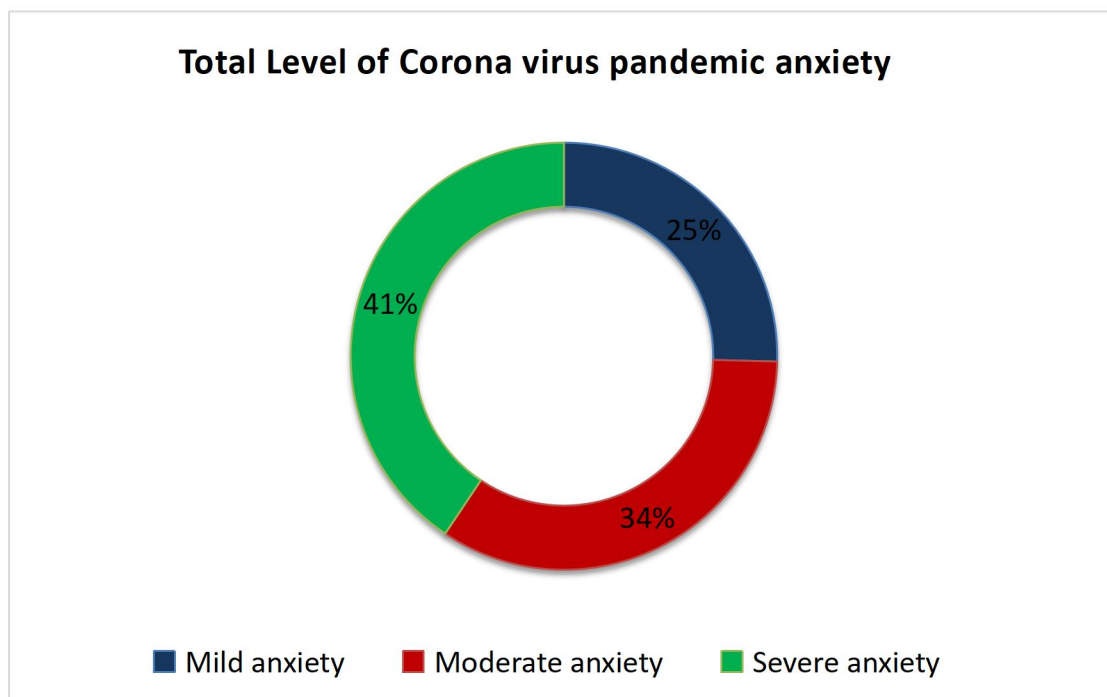
Figure (3): Frequency distribution of the studied nursing students according to their total levels of perceived COVID-19 stress (n=350).

Figure (4): Frequency distribution of the studied nursing students according to their total level of depression symptoms (n=350).

Figure (5): Frequency distribution of the studied nursing students according to their total level of corona virus pandemic anxiety symptoms,

Table (2): Correlation between student perception of academic study during COVID-19 pandemic, COVID-19 perceived stress, Corona virus pandemic anxiety, and depressive symptoms among the studied nursing students (n=350).

Pearson correlation		Perception of academic study	Stress	Depressive symptoms
COVID-19 student perceived Stress	R	-0.367		
	P	<0.001**		
Depressive symptoms	R	-0.113	0.227	
	P	0.035*	0.021*	
corona virus pandemic Anxiety	R	-0.160	0.274	0.208
	P	0.031*	0.017*	0.001**

*p-value <0.05 significant correlation; **p-value <0.001 highly significant*

Discussion

The COVID-19 pandemic has changed nursing education programs worldwide. Isolation forced many nursing students to abandon lessons and clinical placements and use virtual or hybrid learning. COVID-19 presented a new stressor for nursing students, influencing their stress, anxiety, and depression levels affecting their psychological well-being. This research aimed to assess the effect of COVID-19 pandemic on psychological wellbeing among faculty of nursing students.

The outcomes of the current study also revealed that slightly more than two third of the studied students had positive perception regarding performance in the clinical setting, difficulties in learning theoretical courses, and opinion of future career respectively, and nearly one third of them had negative perception. From the researcher's perspective, this could be due to the difficulties and challenges face the students during online learning. Some of them can adapt and cope with challenges by listening to the recorded lectures and explanation when needed and, they save time of transportation and going to the faculty and use this time in studying their lessons while others prefer the face-to-face contact and interaction to get knowledge and skills. The study was supported by **Rana et al., (2021)** who revealed

that more than half of the participants had positive perception and less than half of them had negative perception moreover,

The current study illustrated that more than two thirds of the studied students had positive total perception on academic study during COVID-19 pandemic while less than one third of them had negative perception. The study findings also supported by **Ana et al., (2021)** who studied "Students' Perceptions of the Twists and Turns of E-learning in the Midst of the Covid 19 Outbreak", revealed that most participants had positive perception on online learning. The study was contradictory to Pakistani study conducted by **Abbasi et al., (2020)** who studied "Perceptions of students regarding E-learning during Covid-19 at a private medical college" and revealed that about more than three quarters of students had negative perception.

In terms of overall levels of felt COVID-19 stress, the current study revealed that over 60% of the students surveyed experienced an average level of COVID-19 perceived stress, while around 30% reported a high degree of COVID-19 perceived stress. From the researcher's perspective, this could be attributed to the impact of Covid-19 on their psychological well-being and their incapacity to effectively manage stressful situations.

The findings aligned with the study conducted by **Quintiliani et al. (2022)** on the "COVID-19 Pandemic Impact on Undergraduate Nursing Students." The study revealed that most participants exhibited moderate stress levels, while less than one third reported low stress levels, and about one third reported high stress levels.

Furthermore, the present study found support from **Masha'al et al. (2020)**, who examined the "Distance learning–related stress among undergraduate nursing students during the COVID-19 pandemic." Their findings revealed that most participants had significant stress levels in relation to Covid-19 and online learning.

The results of the present study wrote down that approximately 25% of the surveyed students exhibited borderline total clinical depression. Additionally, around one-third of the participants displayed mood within the normal range, while mild and moderate depression were reported by an equal proportion. A minority of students experienced severe and extreme depression, as perceived by the investigator. This observation

could potentially be attributed to the widespread dissemination of information and understanding regarding Covid-19 and its preventive measures, which may have enabled students to effectively manage depressive symptoms.

The present study was supported by **Hammami et al., (2020)** who examined "Physical activity and coronavirus disease 2019 (COVID-19): Specific recommendations for home-based physical training." Their findings showed that over 75% of the participants they studied had typical depressive symptoms. The study suggests that focusing on self-care activities such as exercise, keeping a healthy diet, and getting enough sleep, as well as enhancing communication between students and their social networks outside of academic and practical settings, can help alleviate negative mood symptoms in students.

On the other hand, these results were disagreed with Mendez-**Pinto, et al., (2023)** who studied "Anxiety and depression among nursing students during the COVID-19 lockdown" and revealed that in more than a third of the sample were identified borderline or abnormal depression symptoms.

The findings of the present research write down that over 40% of the surveyed nursing students experienced severe anxiety related to the Corona virus pandemic. Additionally, more than 10% reported moderate anxiety, while approximately 25% reported mild anxiety in relation to the Corona virus pandemic. From the researcher's perspective, this phenomenon may be attributed to the impact of the Covid-19 epidemic on individuals' psychological well-being, including feelings of fear and anxiety about the unknown and the future, as well as concerns about the potential loss of close relatives due to the virus.

Furthermore, these findings align with the research conducted by **Comparcini et al. (2022)**, which examined the anxiety and academic concerns of pre-registration nursing students in Italy after the second wave of the COVID-19 pandemic. Their study revealed that a significant proportion of the participants experienced high levels of anxiety. In contrast, the findings of **Savitsky et al. (2020)** contradicted the present study. Their research, titled "Anxiety and coping strategies among nursing students during the covid-19 pandemic," revealed that approximately 50% of the participants experienced moderate anxiety, while nearly 20% reported severe anxiety.

In addition, the study was like **Savitsky et al., (2020)** in study entitled "Anxiety and coping strategies among nursing students during the covid-19 pandemic", revealed that nursing students suffered significantly high levels of anxiety due to challenges presented by distance learning.

The current study examined the relationship between nursing students' perception of academic study during the COVID-19 pandemic and their perceived psychological stressors related to COVID-19. The results showed significant negative correlations between students' perception of academic study and their levels of stress, depressive symptoms, and anxiety related to the pandemic.

From a researcher's perspective, the global outbreak of the coronavirus disease (COVID-19) has necessitated a transition from in-person teaching and learning to online, distance, or remote methods for students in schools and universities worldwide. This shift has impacted the practical aspects of nursing science education, leading to a negative influence on students' academic perception. Consequently, students have experienced heightened psychological stressors, resulting in increased levels of stress, depression, and anxiety related to the COVID-19 pandemic.

The study was congruent with the study conducted by **Oducado and Estoque (2021)** on "Online learning in nursing education during the COVID-19 pandemic: Stress, satisfaction, and academic performance" found a significant negative correlation between students' overall academic perception and performance, and their psychological stressors, such as stress, anxiety, and depression. Furthermore, the findings aligned with **Özdemir et al., (2021)**, who proved a strong and statistically significant inverse correlation between students' overall academic perception and their psychological stressors.

Also, there was a significant positive correlation between the psychological stressors such as depressive symptoms level of the studied nursing students and their Corona virus pandemic anxiety level and COVID-19 perceived stress. These results are accordance with **Nway, et al. (2023**) who carried out a study to assess " Factors contributing to depressive symptoms among undergraduate nursing students" illustrated that stress had

significant positive correlation with students' depressive symptoms.

Furthermore, the researcher observed a significant positive correlation between the level of perceived stress related to COVID-19 among nursing students and their anxiety and depression levels during the pandemic. This suggests that psychological stressors are interconnected. Specifically, students who experience stress due to online learning, academic performance, and obstacles to achievement are more likely to have heightened anxiety about their future academic success and achievement, as well as potential depressive symptoms.

These results are in accordance with **Özdemir et al. (2023)** who carried out a study to assess" The relationship between psychological resilience, perceived stress, and anxiety levels of nursing students during the COVID-19 pandemic process" wrote down that there is a positive and strong relationship between perceived stress and anxiety.

In addition, the study was supported by **Laranjeira et al., (2021)** who studied "COVID-19 pandemic and its psychological impact among healthy Portuguese and Spanish nursing students" and figured out that there was highly significant positive correlation between all domains of psychological stressors such as perceived stress, anxiety and depressive manifestations.

Conclusion

The current study concluded that the studied nurses experienced severe corona virus pandemic anxiety, moderate depressive symptoms and prominent levels of perceived COVID-19 stress.

Recommendations

The result of this study recommends offering psychological therapy services to nursing students while enhancing their instruction on COVID-19 preventative strategies.

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