UNIVERSITI PUTRA MALAYSIA

LEVEL OF STRESS OF E-LEARNING AND SATISFACTION REGARDING CLINICAL PRACTICE AMONG NURSING STUDENTS DURING COVID-19 PANDEMIC IN UNIVERSITI PUTRA MALAYSIA (UPM)

MOHAMAD SHARIE BIN MOHD NOR

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BACHELOR OF NURSING

UNIVERSITI PUTRA MALAYSIA

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MOHAMAD SHARIE BIN MOHD NOR

Thesis Submitted to the Faculty of Medicine and Health Sciences,

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ABSTRACT

LEVEL OF STRESS OF E-LEARNING AND SATISFACTION REGARDING CLINICAL PRACTICE AMONG NURSING STUDENTS DURING COVID-19 PANDEMIC IN UNIVERSITI PUTRA MALAYSIA (UPM)

Mohamad Sharie Mohd Nor, Ruthpackiavathy Rajen Durai

Department of Nursing, Faculty of Medicine and Health Sciences, University Putra Malaysia

Introduction: In the early 2020, the world was shocked with an unexpected ambush of COVID-19. This led to the decision of Ministry of Higher Education Malaysia where all learning method was conducted through online. E-learning had a stressful impact to the nursing students and effected their satisfaction during clinical practice. This study was conducted to investigate the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic. **Objective:** To determine the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 in UPM. **Methods:** This study design was a cross-sectional study. This quantitative study used multistage random sampling using coin tossing in choosing a program. Every year of study had a 50% probability to be chosen. CLES+T and SSI scales were used in this study. The questionnaires were distributed through an online platform that compromises 88 respondents of nursing students in UPM. The data were collected online using Google Form. SPSS version 26.0 was used for data entry and analysis. Determining stress level of e-learning and satisfaction regarding clinical posting among students in University Putra Malaysia was analysed using Pearson correlation, independent T-test, and one-way independent ANOVA according to the data's nature. **Results:** A total of 41 respondents had participated in the study. The findings in this study showed that the mean ± SD for the experienced academic stress with an average of 85.78 ±18.613 while the majority of them satisfied regarding clinical posting with an average of 129.00 ±16.803. Analysis done had revealed that there was no statistically significant link between age (p=0.425), gender (p=0.425), monthly income (p=0.118), willingness to study (p=0.758) and the stress level. However, there was a statistically significant link between the year of study (p=0.034) and the stress level. There is no significant association between socio-demographic characteristics such as age (p= 0.284), gender (0.085), year of study (p=0.426), monthly income (p=0.558), willingness to study nursing (0.233) and stress level. Moreover, there is no significant association between stress level and satisfaction during clinical posting. **Conclusion:** Socio-demographic characteristics did not influence the stress level and satisfaction during clinical posting. In addition, nursing students in UPM had a moderate stress level but most of them still had high satisfaction with their clinical practice. Hence, the stress level did not depend on satisfaction regarding clinical practice. As a result, it was critical to improve students' stress level by providing a stable educational system and maintaining a stable educational framework for students.

Keywords: level of stress, satisfaction regarding clinical posting, nursing students in UPM

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In the name of Allah, the Most Gracious and the Most Merciful. All the Praise to Allah with His Merciful and guidance, His blessing in everything, finally I had finished my Final Year Project entitled a '**Level of Stress of E-Learning and Satisfaction Regarding Clinical Practice among Nursing Students during COVID-19 Pandemic in UPM**.' I am forever in His debt allowing me to complete this research project.

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It is now certified that we had read this thesis entitled **Level of Stress of E-Learning and Satisfaction Regarding Clinical Practice among Nursing Students during COVID-19 Pandemic in UPM** by **Mohamad Sharie bin Mohd Nor** and in our opinions, it is satisfactory in terms of scope, quality and presentation as partial fulfillment of the requirement for NUR4999 (A&B) Research Project.

DR RUTHPACKIAVATHY D/O RAJEN DURAI

Supervisor

Department of Nursing

Faculty of Medicine and Health Sciences

Universiti Putra Malaysia

Date : 10.06.2022

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LIST OF ABREBRIATION

COVID-19	Coronavirus disease 2019
UPM	Universiti Putra Malaysia
FMHS	Faculty of Medicine and Health Sciences
MCO	Movement Control Order
SSI	Student Stress Inventory
CLES+T	Clinical Learning Environment, Supervision and Nurse Teacher
SPSS	Statistical Package for Social Science

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

In the early 2020, the world was shocked with an unexpected ambush of coronavirus infection known as COVID-19. It was first discovered in Wuhan City, Hubei Provei, China in December 2019 which caused a pandemic. In Malaysia, COVID-19 was first detected on 25th January 2020 to 3 Chinese tourists who had close contact with an infected person in Singapore. They were then sent and treated in Sungai Buloh Hospital, Selangor. Nevertheless, the first Malaysian was confirmed with COVID-19 on the 4th February 2020 (Elengoe, 2020). Since then, the Malaysian government had set a new guideline which to some extent changed the way of life of Malaysians to new norms.

This unforeseen pandemic gave no choice to the government other than to shut down most businesses and organizational systems, including the educational system in order to flatten the curve, curtailing individual interactions to alleviate and contain the spread of COVID-19, and reducing the risk of exposure (Devi, 2020). This set a new game whereby on 27th May 2020, Malaysia's Higher Education Ministry decided that all teaching and learning activities at the tertiary level must be conducted online and until September 2021, the decision was still functioning to avoid any outbreak. However, a sense of physical, emotional, and social remoteness from the students including health sciences students and the educators generated a variety of obstacles and negative experiences.

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Philippe et al. (2020) stated that both students and instructors uncovered the unexpected truths about each other whenever they use social and physical distance. This led to an unexpected and unhappy connection. Students, in particular, may become acutely aware of their lecturers' constraints and limitations, particularly when it came to the use of technology and dealing with time management issues. During pandemic, the students faced technical difficulties, internet troubles, and poor audio-visual transmission when using virtual learning. In professional schools like nursing, hands-on practical learning, clinical placements, and patient contact later in the curriculum are critical (Dutta, 2021). The requirement for the health sciences students to do clinical posting had been delayed due to the implementation of the Movement Control Order (MCO) by the government where all internships needed to be barred at a certain region to decrease the exposure and risk of getting infected with COVID-19. This implementation more or less caused stress to the students because they were not allowed to go to the clinical posting to practice their skill and complete their clinical hours.

1.2 Problem statement

Since e-learning is still new to the nursing students where they usually have physical learning method, the teaching method is harder than classroom teaching for both student and teacher as it takes time for them to get comfortable to the new approaches (Thapa, Bhandari & Pathak, 2021). Online class more or less gives an impact to the students especially nursing students as they need to practice the procedures hands-on in the skills laboratory before entering the clinical posting for the practicum sessions to the wards in the hospital.

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Clinical nursing training is a hands-on way to teaching prospective nursing students the skills they need to perform as nurses. During clinical training, nursing students build and equip themselves with basic knowledge and skills, as well as the capacity to apply knowledge to the real practice of nursing. Clinical nursing education is a critical component of nursing education, accounting for nearly half of the nursing curriculum. When the student cannot have enough practice, this will contribute to stress when they feel they are not ready enough to enter the clinical posting in physical and this can affect their satisfaction. Rafati, Rafati and Khoshnood (2021) mentioned that nursing students' clinical stressors include caring for dying and end-stage patients, a lack of clinical knowledge and skills, clinical dishonesty, fear of making a mistake, interpersonal conflicts with peers, fear of unknown events and phenomena, new clinical situations, and a heavy workload.

1.3 Significance of the study

Level of stress of e-learning is critical to assess student's opinion and perspective on virtual learning and learning methodologies. Majority of the researches that have been conducted in international settings mostly focused on students with non-medical backgrounds. Satisfaction during clinical practicum is crucial as it will affect patient care and also the well-being of the student. Educators can use this information to optimize their students' learning process by becoming more aware of and understanding their clinical satisfaction throughout clinical training in various scenarios (Hamadi et al., 2021).

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1.4 Research objectives

1.4.1 General objective

To investigate the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic in UPM.

1.4.2 Specific objective(s)

i. To determine the socio-demographic characteristics among nursing students in UPM.

ii. To determine the level of stress of e-learning among nursing students during the COVID-19 pandemic in UPM.

iii. To determine the satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM.

iv. To determine the relationship between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM.

v. To determine the relationship between socio-demographic characteristics and the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM.

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1.5 Research question(s)

i. What are the socio-demographic characteristics that can influence the level of stress of e-learning?

ii. What is the level of stress of e-learning among nursing students in UPM?

iii. Are the nursing students in UPM satisfied with their clinical practice during the COVID-19 pandemic?

iv. Does the level of stress of e-learning effects satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM?

v. Can socio-demographic characteristics influence the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM?

1.6 Hypotheses

1.6.1 Null hypothesis

There is no significant association between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic.

1.6.2 Alternative hypothesis

There is a significant association between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic in UPM.

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1.7 Operational Definition

Table 1.1: The definition of the terms

Terms	Conceptual Definition	Operational Definition
Stress	A situation in which internal or external demands, or both, are assessed as taxing or exceeding an individual's or group's adaptive or coping resources (Majrashi, Khalil, Nagshabandi & Majrashi, 2021)	The pressure from having virtual learning among nursing student during COVID-19 pandemic by using Student Stress Inventory (ISS)
E-Learning	The application of information and communication technology to facilitate access to online learning/teaching resources (Arkorful, 2014)	A virtual learning that the nursing students have to face during COVID-19 pandemic
Satisfaction	The discrepancy between what is expected or desired and what is actually experienced (Dan, 2015)	The desired of clinical practical practice during the pandemic by using Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale
Clinical Practice	A system of procedures or strategies for measuring, diagnosing, and treating psychological or physical disorders in patients (Gupta, 2022)	Practice of procedure at the assigned place during the pandemic

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Nursing student	A student enrolled in a nursing program, which could be a diploma, associate degree, baccalaureate, or master's program (Medical Dictionary for the Health Professions and Nursing, 2012)	A student enrolled in a Bachelor of Nursing program from Faculty of Medicine and Health Sciences, UPM
COVID-19 pandemic	Coronavirus disease, an infectious disease caused by the SARS-CoV-2 virus that has spread across multiple countries or continents and typically affects a large number of people (CDC, 2012; WHO, n.d.)	The Coronavirus disease that affects the whole country and causes the students to learn virtually

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1.8 Conceptual framework

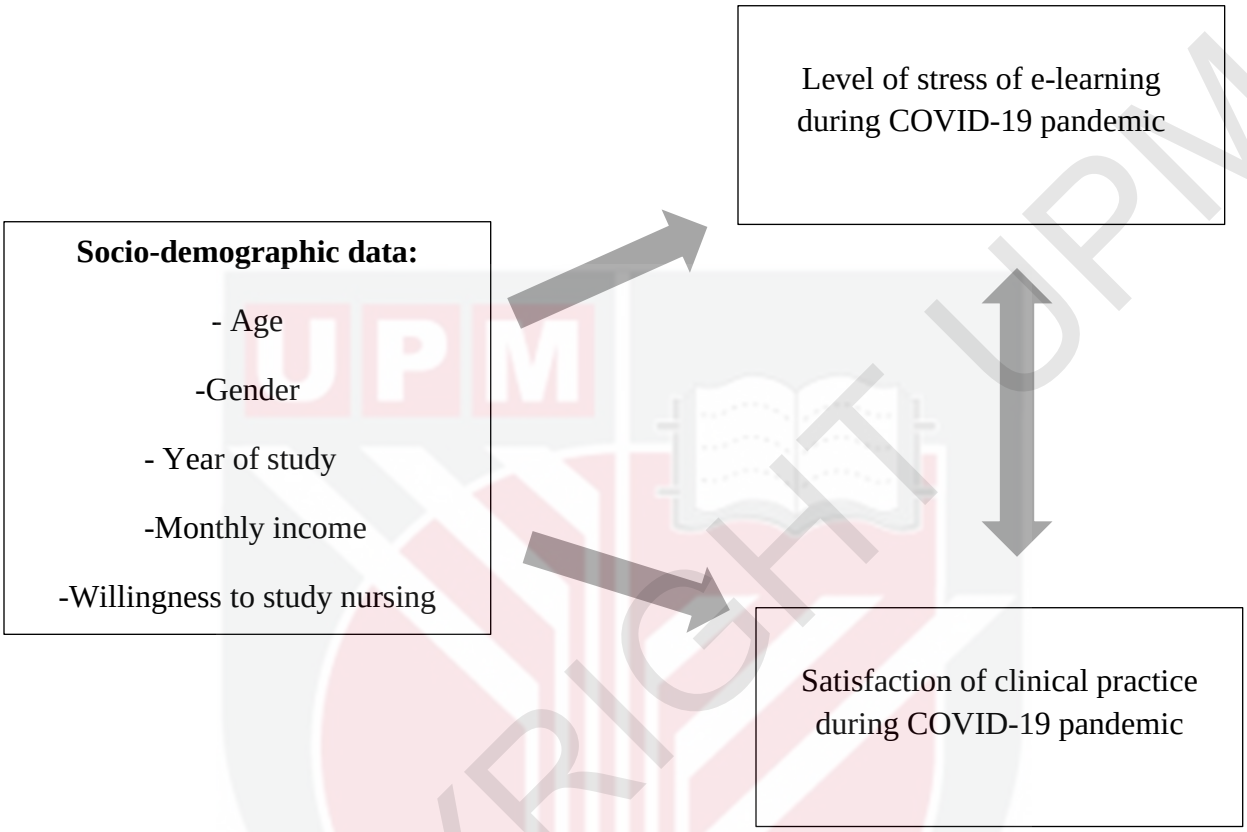

Figure 1.1: The framework of stress level of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic in UPM

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Stress is a physical, mental or emotional factor that makes the body respond to pressure that is unmanageable. Stress can be classified as good stress (eustress) which is useful for a productive lifestyle and bad stress (distress) which will drain a lot of energy. Rafati, Rafati and Khoshnood (2021) stated that stress was an ongoing issue in nursing education. According to a study of the research, nursing students were more stressed than students in other majors. Academic, clinical, and financial considerations could all contribute to stress in nursing students. Today, roughly 30% of Malaysians aged 16 and above suffer from mental health issues (Kotera, et al, 2020). In the aftermath of COVID-19, online classrooms became the most effective way of delivering education to pupils. Teachers were forced to run their classes online as a result of the statewide lockdown, largely using Zoom, Google Meet, and other internet-based means. The growing popularity of virtual education had boosted teachers', students', and parents' acquaintance with online classes. For the most part, it was their first time.

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2.1 Socio-demographic data

A recent study found that the nursing students had an average age of 21.55±3.24 year old (Tuffah & Al-Jubouri, 2021). It also stated that the number of female nursing students who participated in the research was nearly three times that of male nursing students, indicated that the female students were outnumbered the male students. Mueller, Naragon & Smith (2016) discovered that the role of staff nurses as leaders was more important and influential to sophomore nursing students than to senior nursing students. The nursing students' monthly income refered to adequate income, while near half of the students had barely adequate income. More than half of the students were enrolled in nursing school on their initiative.

2.2 Factors associated with stress during e-learning

Despite its benefits, e-learning had some drawbacks, including social isolation, a lack of student-teacher connection, and technical and connectivity issues. Lack of technological support was recognized as one of the hurdles to e-learning (Thapa, Bhandari & Pathak, 2021). Sahi, Mishira and Singh (2020) stated that the major barriers in e-learning implied in medical education were the absence of clinical teaching with a "live" patient, reduced interactions and discussions, uninterrupted internet access, infrastructure provision, and familiarity with the technology. More than 60% of the students saw cyber security as a concern in becoming more receptive to e-learning technologies, only one-third of participants were challenged by the technological requirements of e-learning platforms. Unstable internet connections were cited by about 76% of the study cohort as a major impediment to pursuing e-learning.

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Sheroun, Wankhar, Devrani, Lissamma & Chatterjee (2020) stated that there was no link between felt stress and any of the sociodemographic indicators. This was in contrast to the Limacao (2020) study, which found that age (less than 30 years old) and gender (females) were related to increase reported stress. However, according to the current study's findings, perceived stress is higher in students than in employed or jobless individuals. Students in their third and fourth years whose curriculum was mostly based on clinical training in health care institutions placed high importance on clinical training. Clinical training gave them confidence in their learning of nursing care in health care settings. Due to the pandemic, some of the students in their last year (4th year) indicated that they would prefer to graduate later in order to complete all of the clinical training (Ramos-Morcillo, Leal-Costa, Moral-García, & Ruzafa-Martínez, 2020).

2.3 Satisfaction during clinical posting

According to Karim, Majid, Mohd, Rashdan, and Yaman (2020), nursing students had a high level of satisfaction with the clinical learning environment, which had a significant impact on clinical practice among nursing students, particularly in terms of preparation for practice and student satisfaction with the nursing profession. Although nursing students had the highest level of satisfaction with clinical learning environment, it was regarded as one of the most stressful aspects of nursing education due to the dual roles that they must fulfill: learner and worker.

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2.4 Factor affecting the nursing students' experience

The three most common stressors identified by students were instructors' lack of knowledge about personal safety, instructors' limited skills, and instructors' insufficient attention and guidance. Nursing students may feel vulnerable and unsure in clinical settings because they were in unfamiliar environments, learning new skills, and concerned about how the staff would perceive their actions (Mueller, Naragon & Smith, 2016). The role of the mentor in nursing students discovered that nursing students regarded nurse mentors as role models. Furthermore, using preceptors in the clinical setting improves nursing students' learning. This suggested that having positive relationships with preceptors may result in positive learning environments for students.

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CHAPTER 3

METHODOLOGY

3.1 Research design

This cross-sectional study was conducted to investigate the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 in UPM.

3.2 Study location

The research was carried out in the Faculty of Medicine and Health Sciences (FMHS), UPM which located in Serdang, Selangor. This faculty offered six undergraduate programs, including the bachelor of medicine, nursing, dietician, nutrition, biomedical science, and environmental health and occupational safety.

3.3 Study population

The study included 100 undergraduate nursing students from the first until fourth year in the FMHS, UPM.

3.4 Subject criteria

3.4.1 Inclusion criteria

- Bachelor in nursing
- UPM student
- Nursing student from the first year until the fourth year who experienced clinical practice at the FMHS, UPM

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3.4.2 Exclusion criteria

- Student who had never experienced clinical practice
- Students are not willing to participate in the study

3.5 Sample size estimation

The Raosoft calculator was used to compute the sample size. Raosoft survey tools provided a variety of utilities for database and survey file handling. This program also gave data combination, distribution, and analysis into particular categories. The nursing student population determined by the Dean of Faculty Medicine and Health Sciences, Universiti Putra Malaysia for the 2020/2021 session was 100 students.

Using the Raosoft calculator, the estimated number of participants in this study was 80. The formula used for the sample size calculation was derived from (www.raosoft.com) as below:

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For sample size:

$$n = \frac{Nx}{[(N\ -\ 1)E^2\ +\ x]}$$

Where: n = required sample size

x = Z value (eg. 1.96 for 95% confidence level)

N = Population size (108 students)

E = Degree of accuracy (5%), expressed as a proportion (.05); It is margin of error.

$$n = \frac{(100)(0.95)}{[(100\ -\ 1)0.05^2\ +\ 0.95]}$$

$n =\ 80\ number\ of\ student$

However, the estimation of non-respond rate was 10%.

Hence,

The final sample = n + 0.1(n)

= 80 + 0.1(80)

= 88 number of respondents

So, the final sample will be 88 number of respondents

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3.6 Sampling method and subject recruitment

In this study, the participants chose the multi-staging method at the first stage, where the researcher listed all of the available year of study, which were four at UPM. Following the listing of the four year of study, the researcher used the computer generator method to select the participant based on the inclusion and exclusion criteria. Only three year of study included in this study based on the study criteria which were year 2, 3 and 4. Coin tossing was a simple random sampling method that included in one of the probability approaches. Each toss of a coin facing head picked with a 50% chance of success. The coin tossing was done under the watch of the supervisor and in the presence of one independent observer. All 3 year of study had been chosen from the coin tossing method.

The researcher then moved on to the second stage. The non-probability convenience sampling approach was employed by the researcher to answer the questionnaire because the sample size was accessible at the time or period of the research and was chosen for convenience. The questionnaire was given to undergraduate students from the three year of studies that were accessible at the time until the sample size was met. This method was a convenient sample method; as a result, it was rapid, saved time was inexpensive and convenient. It is known as convenient sampling because the researcher chose the sample elements based on their ease of availability and vicinity (Elfil and Negida, 2017). The respondents needed to fill in the questionnaire in a Google form.

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3.7 Data collection

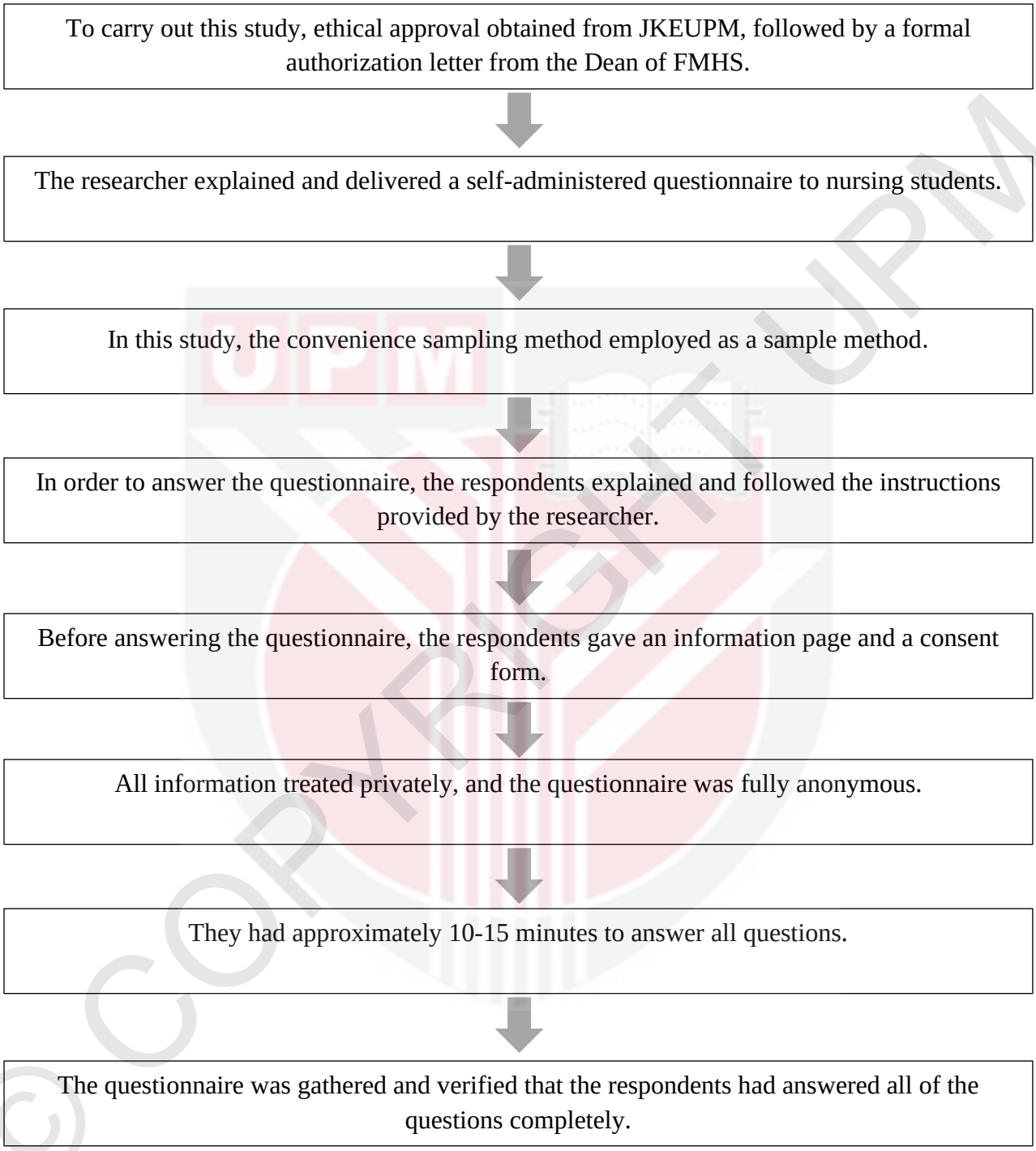

Figure 3.1: The flowchart of the study

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3.8 Research tool

This study used a self-administered questionnaire (**Appendix 1**). The questionnaire contained three major sections which were Section A: Socio-Demographic characteristics; Section B: Stress Level of E-Learning; and Section C: Satisfaction regarding Clinical Practice.

3.8.1 Section A: Socio-demographic characteristics

This section consisted of 5 items which were age, gender, year of study, economic status and willingness to study nursing. This section had been adapted from a study conducted by Tuffah & Al-Jobouri (2021) on their research entitled '*Academic Stress of E-learning Among Nursing Students during the Pandemic of COVID-19*.'

3.8.2 Section B: Stress level of e-learning

The stress level of e-learning was assessed by using Student Stress Inventory (SSI) scale. It consisted of 40 items that divided into four subscales (10 items from each subscale) which were subscale 1: Physical (10 items), subscale 2: Interpersonal relationship (10 items), subscale 3: Academic (10 items) and subscale 4: Environmental (10 items). The SSI scale was designed with an ordinal scale of 'Never,' 'Somewhat frequent,' 'Frequent,' and 'Always' for scoring. The value marks assigned to each option are as follows: 1 for 'Never,' 2 for 'Somewhat Frequent,' 3 for 'Frequent,' and 4 for 'Always.' The maximum score for this questionnaire was 160 points.

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The Cronbach alpha for this scale studied by Arip, Kamaruzaman, Roslan, Ahmad, Rahman, & Malim (2015) on their research entitled '*Development, validity and reliability of student stress inventory (SSI)*' was 0.805 (80.5%) for an overall score. For this study, the Cronbach alpha for this scale was 0.940 (94.0%).

3.8.3 Section C: Satisfaction regarding clinical practice

The satisfaction regarding the clinical practice section was assessed by using Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) evaluation scale. It consisted of 34 items to measure five factors which were factor 1: Supervisory relationship, factor 2: Pedagogical atmosphere on the ward, factor 3: Role of nurse teacher, factor 4: Leadership style on the ward manager and factor 5: Premises of nursing on the ward. The students were responded on a 5-point Likert-type scale, with the following options: fully disagree, disagree to some extent, neither agree nor disagree, agree to some extent, and fully agree. The Cronbach's alpha internal consistency reliability coefficients of the CLES + T studied by Karim, Majid, Mohd, Rashdan, and Yaman (2020) entitled '*Nursing Students' Satisfaction towards Clinical Learning Environment (CLE) in Universiti Kebangsaan Malaysia Medical Centre'* for this questionnaire were ranged from 0.83 to 0.98. For this study, the Cronbach alpha for overall scale was 0.955 (95.5%).

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3.9 Validity and reliability

A pre-test from this study was conducted at the Faculty of Medicine and Health Sciences to test the validity of the questions, and it included 10% of the total sample size (8 students). The results of the pre-test were analyzed using the Statistical Package for Social Science (SPSS) version 26.0 to determine the Cronbach alpha (α). The value of Cronbach alpha (α) is used to indicate the internal consistency of a test or scale, according to Tavakol and Dennick (2011). It was expressed as a digit between 0 and 1. Internal consistency was determined before a test to ensure validity is performed. The questionnaire was deemed reliable because Cronbach alpha with a value of 0.70 or higher is considered a sufficient measure of an instrument's reliability or internal consistency. The outcome was compared to the previous study as an indicator for reliability aspects and the significant value of both studies.

3.10 Data analysis

Data were analyzed by using Statistical Package for Social Sciences (SPSS) version 22.0. The table showed the data analysis for every objective in this study.

Table 3.1: Descriptive analysis for this study

Objectives	Variables	Types of Variables	Statistical measurements
i. To identify the socio-demographic characteristic among respondents.	Age	Categorical	Descriptive statistics. The data was presented in frequency and percentage.
	Gender	Categorical	
	Year of study	Categorical	
	Monthly income	Categorical	
	Willingness to study nursing	Categorical	

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ii. To determine the level of stress of e-learning	Level of stress of e-learning	Continuous	Descriptive statistics. The data was presented in frequency and percentage based on those with mild, moderate and severe stress.
iii. To determine the satisfaction regarding clinical practice	Satisfaction regarding clinical practice	Continuous	Descriptive statistics. The data was presented in frequency and percentage based on those with low satisfaction and high satisfaction.

Table 3.2: Inferential analysis for this study

Objectives	**Dependent variables**	**Independent variables**	**Analysis (parametric)**
iv. To determine the relationship between the level of stress of e-learning and satisfaction regarding clinical practice during COVID-19 pandemic	Satisfaction regarding clinical practice (Continuous)	Level of stress (Continuous)	Parametric: Pearson correlation or regression Nonparametric: Spearman correlation

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v. To determine the relationship between socio-demographic characteristics and the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM	Level of stress (Continuous)	Age (Categorical)	Parametric: One way Independent ANOVA Non-parametric: Kruskal-Wallis Test
		Gender (Categorical)	Parametric: Independent t-test Non-parametric: Mann-Whitney Test
		Year of study (Categorical)	Parametric: One way Independent ANOVA Non-parametric: Kruskal-Wallis Test
	Satisfaction regarding clinical practice (Continuous)	Monthly income (Categorical)	Parametric: One way Independent ANOVA Non-parametric: Kruskal-Wallis Test
		Willingness to study nursing (Categorical)	Parametric: Independent t-test Non-parametric: Mann-Whitney Test

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3.11 Expected outcome

At the end of this study, the researcher expected that there was no association between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic. The researcher hoped that all nursing student that participates in this study were aware of their stress level and satisfaction regarding their clinical practice. This was because studies reported that nursing students were under moderate stress during e-learning (Tuffah & Al-Jubouri, 2021). From this study, hopefully, the student would get an idea on how to manage the stress that can cause them to satisfy during clinical practice which can improve the quality of health service and care of patients.

3.12 Ethical consideration

An official letter of permission to carry out the study and data collection among students was submitted to the Dean of Faculty of Medicines and Health Science to get approval as the respondents in this study involving undergraduate students. Besides that, the written approval and permission was obtained from the Jawatankuasa Etika Universiti Untuk Penyelidikan Melibatkan Manusia (Ethics Committee for Research Involving Human Subjects) Universiti Putra Malaysia (JKEUPM).

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Before the respondents participate in this study, the researcher provided the information sheet and the consent form to be signed for voluntarily participation in this study. In addition, to ensure the identity of the participant remained confidential and anonymous, no identifying information such as name, identification card number, and complete address of the participant was collected. Thus, all obtained data will be preserved and cannot be traced by other individuals, and will be stored secure in a Google Account that can only be viewed by the researcher. The downloaded data will be stored in a password-protected computer, thumb drive, and cloud account for 5 years before being irreversibly destroyed.

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CHAPTER 4

RESULTS

4.0 Introduction

This chapter describes the respondents' socio-demographic profile, level of stress, and satisfaction regarding clinical posting among nursing students during the COVID-19 pandemic. Table 4.1 displayed the information on the socio-demographic profile. This information was critical for determining the associations between socio-demographic characteristics and level of stress with satisfaction regarding clinical posting, and for determining the relationship between levels of stress, with satisfaction regarding clinical posting, which is presented later in this chapter.

4.1 Response rate

The planned sample size for this study was 88 participants from Year 2 to Year 4 of Bachelor of Nursing in UPM. Due to several limitations, such as MCO, online questionnaire and limited time to collect the data, only 41 people participated, resulting in a response rate of 46.59 percent. During the clinical practice, the nursing students were allocated at a different place depending on their semester and objective of the posting, which made the researcher, was unable to address this group adequately.

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4.2 Normality test

The normality of the dependent variable was determined using Skewness, Kurtosis, Kolmogorov-Smirnova and Shapiro Wilk analysis. Skewness and Kurtosis were 0.057 and -0.534, respectively, based on the normalcy test for this study. Both the Kolmogorov-Smirnov and the Shapiro-Wilk tests had values of 0.094 and 0.345. Referring to Figure 1, the normal curve was bell-shaped and symmetric about the mean=85.78. As a result, it was possible to conclude that the data collected was normally distributed.

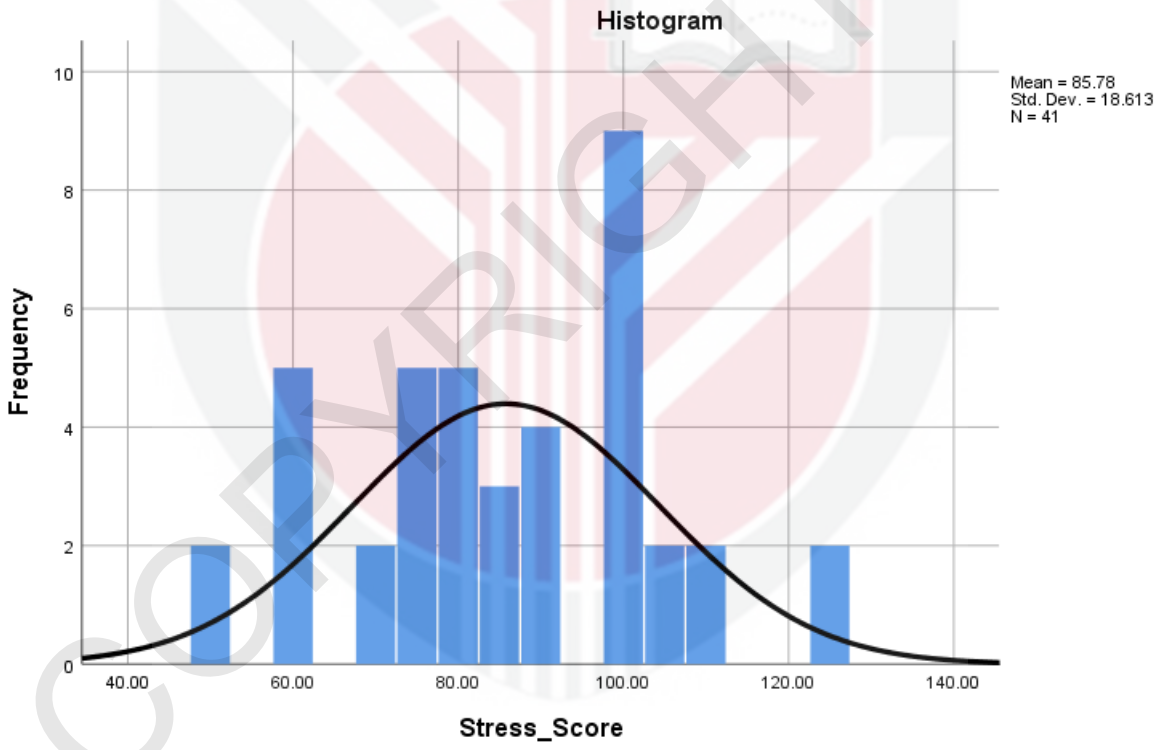

Figure 2.1: Results for normality test for the dependent variable which is Stress Score

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4.3 Socio-demographic characteristics of participants

Table 4.1 displayed socio-demographic information such as age, gender, year of study, economic situation, and willingness to pursue nursing. The total number of nursing students who participated in this study was 41. According to the data, the majority of respondents were female (n=33, 80.5 percent) followed by male (n=8, 19.5 percent). The majority of respondents (n=13, 31.7%) were ages of 23 followed by age 22 (n=11, 26.8%), 21 (n=10, 24.4%) and 24 (n=7, 17.1%). The majority of the respondent were in Year 4 (n=17, 41.5%), followed by Year 3 (n=14, 34.1%) and Year 2 (n=10, 24 4%). Table 4.1 showed that most of the nursing students had sufficient monthly income (n=19, 46.3%), followed by barely sufficient income (n=12, 29.3) and insufficient income (n=10, 24.4%). Most of the nursing students had the willingness to study nursing (n=40, 97.6%).

Table 4.1: Socio-demographic characteristics of nursing students in UPM

Characteristics	Number, n	Percent, %
Age		
21	10	24.4
22	11	26.8
23	13	31.7
24	7	17.1
Gender		
Male	8	19.5
Female	33	80.5

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Year of study		
Year 2	10	24.4
Year 3	14	34.1
Year 4	17	41.5
Monthly income		
Insufficient	10	24.4
Barely sufficient	12	29.3
Sufficient	19	46.3
Willingness to study nursing		
Yes	40	97.6
No	1	2.4

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4.4 The level of stress of e-learning among nursing students

Table 4.2: Stress level of e-learning

No	Item	Frequency and percentage, n=41 (%)			
		Never	Somewhat frequent	Frequent	Always
Subscale 1: Physical					
1	Headaches	5 (12.2)	19 (46.3)	11 (26.8)	6 (14.6)
2	Back pain	4 (9.8)	16 (39.0)	16 (39.0)	5 (12.2)
3	Sleep problem	6 (14.6)	16 (39.0)	18 (43.9)	1 (2.4)
4	Difficulty breathing	24 (58.5)	17 (41.5)	0 (0)	0 (0)
5	Excessive worry	4 (9.8)	19 (46.3)	13 (31.7)	5 (12.2)
6	Stomach pain/nausea	24 (58.5)	13 (31.7)	2 (4.9)	2 (4.9)
7	Constant tiredness/fatigue	3 (7.3)	13 (31.7)	13 (31.7)	12 (29.3)
8	Sweating/sweaty hands	22 (53.7)	16 (39.0)	2 (4.9)	1 (2.4)
9	Frequent cold/flu/fever	22 (53.7)	15 (36.6)	3 (7.3)	1 (2.4)
10	Drastic weight loss	25 (61.0)	11 (26.8)	4 (9.8)	1 (2.4)
Subscale 2: Interpersonal Relationship					
11	I find difficult to meet my high parent's expectation	12 (29.3)	17 (41.5)	10 (24.4)	2 (4.9)
12	My parents treat me as a helpless person	36 (87.8)	5 (12.2)	0 (0)	0 (0)

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13	I feel guilty if I fail to fulfill my parent's hope	2 (4.9)	12 (29.3)	15 (36.6)	12 (29.3)
14	My parents wish only for my success	10 (24.4)	11 (26.8)	10 (24.4)	10 (24.4)
15	I find difficult to get along with groupmates in doing academic task	16 (39.0)	18 (43.9)	7 (17.1)	0 (0)
16	My friends did not care about me	18 (43.9)	18 (43.9)	5 (12.2)	0 (0)
17	I feel disturbed when having problem with my boyfriend/girlfriend	29 (70.7)	8 (19.5)	4 (9.8)	0 (0)
18	My families are not supportive	35 (85.4)	4 (9.8)	2 (4.9)	0 (0)
19	My lecturers/ teachers are not supportive	17 (41.5)	20 (48.8)	2 (4.9)	2 (4.9)
20	I feel frustrated by the lack of faculty management	4 (9.8)	10 (24.4)	19 (46.3)	8 (19.5)
Subscale 3: Academic					
21	I have a financial problem because of the expenses of the university	10 (24.4)	19 (46.3)	11 (26.8)	1 (2.4)
22	I find difficult to juggle time between study and social activity	5 (12.2)	18 (43.8)	16 (39.0)	2 (4.9)

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23	I feel nervous delivering the class presentation	8 (19.5)	10 (24.4)	13 (31.7)	10 (24.4)
24	I feel stressed as submission deadline neared	1 (2.4)	11 (26.8)	18 (43.9)	11 (26.8)
25	I feel stressed to sit for examination	1 (2.4)	18 (43.9)	15 (36.6)	7 (17.1)
26	I find difficult to juggle time between study and society involvement	4 (9.8)	21 (51.2)	11 (26.8)	5 (12.2)
27	I loss interest towards courses	12 (29.3)	18 (43.9)	11 (26.8)	0 (0)
28	I feel burden of academic workloads	1 (2.4)	21 (51.2)	17 (41.5)	2 (4.9)
29	I feel stressed dealing with difficult subject	1 (2.4)	21 (51.2)	12 (29.3)	7 (17.1)
30	I feel difficult in handling my academic problem	5 (12.2)	24 (58.5)	8 (19.5)	4 (9.8)
Subscale 4: Environmental					
31	I have transportation problem	17 (41.5)	17 (41.5)	4 (9.8)	3 (7.3)
32	I feel stressed with bad living condition of hostel	17 (41.5)	18 (43.9)	6 (14.6	0 (0)
33	Surrounding noise distracted me	15 (36.6)	17 (41.5)	7 (17.1)	2 (4.9)

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34	Pollution make me uneasy	12 (29.3)	15 (36.6)	12 (29.3)	2 (4.9)
35	Hot weather make me avoid to go out	7 (17.1)	16 (39.0)	8 (19.5)	10 (24.4)
36	Messy living conditions distracted me	6 (14.6)	13 (31.7)	19 (46.3)	3 (7.3)
37	I feel frustrated of inadequate campus facilities	13 (31.7)	21 (51.2)	5 (12.2)	2 (4.9)
38	Crowding make me feel uneasy	7 (17.1)	21 (51.2)	11 (26.8)	2 (4.9)
39	Waited in a long line make me feel uneasy	10 (24.4)	19 (46.3)	6 (14.6)	6 (14.6)
40	I feel scared being at the insecure place	7 (17.1)	20 (48.8)	12 (29.3)	2 (4.9)

Table 4.2 above showed the response frequency of the respondents for every question regarding the level of stress of e-learning. The value marks assigned to each option were as follows: 1 for 'Never,' 2 for 'Somewhat Frequent,' 3 for 'Frequent,' and 4 for 'Always.' Based on the result above, the highest frequency was 36 (87.8%) respondents scored Never on “My parents treat me as a helpless person." This showed that the nursing students’ parents supported and treated them fairly. Then, 24 (58.5%) was the highest frequency for Somewhat Frequent scoring on “I feel difficult in handling my academic problem."

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About 19 (46.3%) of the respondents scored Frequent on “I feel frustrated by the lack of faculty management” and “Messy living conditions distracted me." However, 12 (29.3%) of the respondents scored Always on “Constant tiredness/fatigue.”

Table 4.3: Total assessment of stress level of e-learning among nursing students

Variable	Number, n	Percent, %	Mean (± Standard Deviation)
Stress Level			
Low stress	19	46.3	85.78 (±18.613)
Moderate stress	20	48.8	
Severe stress	2	4.9	

Based on Table 4.3, the analysis of overall stress level revealed that students experienced academic stress with an average of 85.78 ±18.613; students had moderate levels of academic related stress during the COVID-19 pandemic (n=20, percent =48.8).

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4.5 The satisfaction regarding clinical practice among nursing students

Table 4.4: Satisfaction regarding clinical practice

No	Items on factor	Frequency and percentage, n=41 (%)				
		Fully disagree	Disagree to some extent	Neither agree nor disagree	Agree to some extent	Fully agree
Factor 1: Supervisory relationship						
1	I felt comfortable going to the ward at the start of my shift	2 (4.9)	0 (0)	10 (24.4)	15 (36.6)	14 (34.1)
2	There was a positive atmosphere on the ward	0 (0)	6 (14.6)	9 (22.0)	25 (61.0)	1 (2.4)
3	My supervisor showed a positive attitude towards supervision	0 (0)	7 (17.1)	12 (29.3)	15 (36.6)	7 (17.1)
4	I felt that I received individual supervision	0 (0)	6 (14.6)	15 (36.6)	19 (46.3)	1 (2.4)
5	I continuously received feedback from my supervisor	2 (4.9)	10 (24.4)	4 (9.8)	23 (56.1)	2 (4.9)
6	Overall I am satisfied with the supervision I received	5 (12.2)	7 (17.1)	8 (19.5)	18 (43.9)	3 (7.3)
7	The supervision was based on a relationship of equality and promoted my learning	0 (0)	6 (14.6)	12 (29.3)	21 (51.2)	2 (4.9)
8	There was a mutual interaction in the supervisory relationship	0 (0)	9 (22.0)	11 (26.8)	14 (34.1)	7 (17.1)

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9 Mutual respect and approval prevailed in the supervisory relationship	3 (7.3)	2 (4.9)	15 (36.6)	16 (39.0)	5 (12.2)
10 The supervisory relationship was characterized by a sense of trust	1 (2.4)	2 (4.9)	18 (43.9)	15 (36.6)	5 (12.2)
Factor 2: Pedagogical atmosphere on the ward					
11 The staffs were easy to approach	0 (0)	0 (0)	4 (9.8)	28 (68.3)	9 (22.0)
12 During staff meetings (e.g. before shifts) I felt comfortable taking part in the discussions	0 (0)	3 (7.3)	13 (31.7)	19 (46.3)	6 (14.6)
13 Patients received individual nursing care	0 (0)	0 (0)	12 (29.3)	18 (43.9)	11 (26.8)
14 There were no problems in the information flow related to patients & care	0 (0)	0 (0)	9 (22.0)	25 (61.0)	7 (17.1)
15 Documentation of nursing (e.g. nursing plans, daily recording of nursing procedures, etc.) was clear	0 (0)	0 (0)	3 (7.3)	22 (53.7)	16 (39.0)
16 The staff were generally interested in student supervision	0 (0)	5 (12.2)	17 (41.5)	13 (31.7)	6 (14.6)
17 The staff learned to know the students by their personal names	1 (2.4)	11 (26.8)	9 (22.0)	13 (31.7)	7 (17.1)
18 There were sufficient meaningful learning situations on the ward	0 (0)	2 (4.9)	6 (14.6)	24 (58.5)	9 (22.0)

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19	The learning situations were multidimensional in terms of content	0 (0)	1 (2.4)	9 (22.0)	22 (53.7)	9 (22.0)
20	The ward can be regarded as a good learning environment	0 (0)	0 (0)	7 (17.1)	27 (65.9)	7 (17.1)
Factor 3: Role of nurse teacher						
21	In my opinion, the nurse teacher was capable to integrate theoretical knowledge and everyday practice of nursing	0 (0)	0 (0)	5 (12.2)	27 (65.9)	9 (22.0)
22	The nurse teacher was capable of operationalize the learning goals of this clinical placement	0 (0)	2 (4.9)	5 (12.2)	29 (70.7)	5 (12.2)
23	The nurse teacher helped me to reduce the theory-practice cap	0 (0)	0 (0)	11 (26.8)	25 (61.0)	5 (12.2)
24	The common meetings between myself, mentor and nurse teacher were comfortable experience	0 (0)	1 (2.4)	9 (22.0)	27 (65.9)	4 (9.8)
25	Climate of the meetings was congenial	0 (0)	2(4.9)	10 (24.4)	19 (46.3)	10 (24.4)
26	Focus on the meetings was in my learning needs	0 (0)	2 (4.9)	3 (7.3)	28 (68.3)	8 (19.5)

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Factor 4: Leadership style on the ward manager					
27 The ward manager regarded the staff on her/his ward as key resource	0 (0)	2 (4.9)	7 (17.1)	16 (39.0)	16 (39.0)
28 The ward manager was a team member	0 (0)	0 (0)	7 (17.1)	20 (48.8)	14 (34.1)
29 Feedback from the ward manager could easily be considered a learning situation	0 (0)	0 (0)	5 (12.2)	24 (58.5)	12 (29.3)
30 The effort of individual employees was appreciated	0 (0)	0 (0)	12 (29.3)	19 (46.3)	10 (24.4)
Factor 5: Premises of nursing on the ward					
31 The wards nursing philosophy was clearly defined	0 (0)	0 (0)	12 (29.3)	17 (41.5)	12 (29.3)
32 The nurse teacher was like a member of the nursing team	0 (0)	3 (7.3)	11 (26.8)	21 (51.2)	6 (14.5)
33 The nurse teacher was capable to give his or her pedagogical expertize to the clinical team	(2.4)	1 (2.4)	11 (26.8)	23 (56.1)	5 (12.2)
34 The nurse teacher and the clinical team worked together supporting my learning	0 (0)	2 (4.9)	5 (12.2)	26 (63.4)	8 (19.5

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Table 4.4 above showed the response frequency of the respondents for every question regarding the satisfaction regarding clinical posting. The students were responded on a 5-point Likert-type scale, with the following options: fully disagree, disagree to some extent, neither agree nor disagree, agree to some extent, and fully agree. Based on the result above, the highest frequency was 16 (39.0%) respondents scored Fully agree on “Documentation of nursing (e.g. nursing plans, daily recording of nursing” and “The ward manager regarded the staff on her/his ward as key resource." This showed that the nursing students very satisfied with the documentation at the place that they had posted and the ward manager were very helpful. Then, 29 (70.7%) were the highest frequency for agree to some extent scoring on “The nurse teacher was capable of operationalize the learning goals of this clinical placement." About 18 (43.9%) of the respondents scored neither agree nor disagree on “The supervisory relationship was characterized by a sense of trust.” Unfortunately, 11 (26.8%) of the respondents scored disagree to some extent on “The staff learned to know the students by their personal names.” Last but not least, 5 (12.2%) of the respondents scored fully disagree with “Overall I am satisfied with the supervision I received.”

Table 4.5: Total assessment of satisfaction regarding clinical posting

Variable	Number, n	Percent, %	Mean (± Standard Deviation)
Stress Level			
Low satisfaction	2	4.9	129.00 (±16.803)
High satisfaction	39	95.1	

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Based on Table 4.5, the analysis of overall satisfaction during clinical practice revealed that students satisfied regarding clinical posting with an average of 129.00 ±16.803; students had high satisfaction during the COVID-19 pandemic (n=39, percent =95.1).

4.6 The relationship between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students

Since both level of stress of e-learning and satisfaction regarding clinical practice were continuous data, Pearson correlation was utilised to calculate the correlation between the two. According to Table 4.4, Pearson Correlation Analysis revealed that there was no correlation between age and amount of knowledge on depression, as indicated by p-value = 0.201.

Table 4.6: Pearson Correlation between level of stress of e-learning and satisfaction regarding clinical practice

Variable	Satisfaction regarding clinical practice	
	r-value	p-value
Level of stress	-0.204	0.201

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4.7 The relationship between socio-demographic characteristics and the level of stress of e-learning

One-way independent ANOVA method was used to identify the relationship between age, year of study, monthly income and the level of stress. There was no statistically significant link between age (p=0.425) with monthly income (p=0.118) and the level of stress. However, there was a statistically significant link between the year of study (p=0.034) and the level of stress. Table 4.5 contains the specifics.

The independent T-test was employed to determine the association between gender, willingness to study nursing and level of stress. The p-value of 0.425 indicated that there was no significant link between gender and the level of stress. The result also showed that there was no significant relationship between willingness to study nursing and the level of stress as the p-value was 0.758.

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Table 4.7: Association between socio-demographic characteristics and the level of stress of e-learning

Characteristics	n	Mean (95% CI) ±SD	df	F/t	p value
Age			3	0.953	0.425*[b]
Gender			39	0.618	0.085*[a]
Male	8	75.63±20.340			
Female	33	88.24±**17.621**			
Year of study			2	3.702	0.034*[b]
Monthly income			2	2.262	0.118*[b]
Willingness to study nursing			39	0.311	0.758*[a]
Yes	40	85.93±18.826			
No	1	80.00±0.000			

[a] = Independent T-test

[b] = One-way ANOVA

4.8 The relationship between socio-demographic characteristics and the satisfaction regarding clinical posting

The independent T-test was employed to determine the association between gender, willingness to study nursing and satisfaction regarding clinical posting. The p-value of 0.085 indicated that there was no significant link between gender and satisfaction regarding clinical posting. The result also showed that there was no significant relationship between willingness to study nursing and level of stress as the p-value was 0.233.

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One-way independent ANOVA method was utilised to determine the association between age, year of study, monthly income and level of stress. There was no statistically significant link between age (p=0.284), monthly income (p=0.558), year of study (p=0.426) and level of stress. The details are provided in Table 4.6.

Table 4.8: Association between socio-demographic characteristics and satisfaction regarding clinical practice

Characteristics	n	Mean (95% CI) ±SD	df	F/t	p value
Age			3	1.315	0.284*[b]
Gender			39	0.618	0.085*[a]
Male	8	75.63±20.340			
Female	33	88.24±17.621			
Year of study			2	0.874	0.426*[b]
Monthly income			2	0.592	0.558*[b]
Willingness to study nursing			39	1.212	0.233*[a]
Yes	40	129.50±16.706			
No	1	109.00±0.000			

[a] = Independent T-test

[b] = One-way ANOVA

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CHAPTER 5

DISCUSSION

5.0 Introduction

The primary goal of this study was to examine the relationship between socio-demographic variables and the level of stress of e-learning along with satisfaction regarding clinical practice, as well as the relationship between the level of stress of e-learning and satisfaction regarding clinical practice among nursing students. The outcomes of the examined data will be addressed in this chapter about the specific objectives of this study.

5.1 Socio-demographic characteristics of participants

According to the data, the majority of the respondents were female (n=33, 80.5 percent), followed by male (n=8, 19.5 percent). This was due to the population of nursing students at the UPM being mostly female and supported the statement of (Tuffah & Al-Jubouri, 2021), where the female students outnumbered male students by three times. Next, Most of the nursing students had sufficient monthly income (n=19, 46.3%), followed by barely sufficient income (n=12, 29.3) and insufficient income (n=10, 24.4%). This parallel with Mueller, Naragon & Smith (2016) statement, where the nursing students' monthly income referred to sufficient income while near half of the students had barely adequate income.

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5.2 The level of stress of e-learning among nursing students during the COVID-19 pandemic

Based on the statistical analysis, the nursing students had moderate stress scores from e-learning during the COVID-19 pandemic (n=20, percent =48.8). Majority of them scored Frequent at “Sleep problem” (n=18, percent=43.9%), “I feel guilty if I fail to fulfill my parent’s hope” (n=15, percent=36.6%), “I feel frustrated by the lack of faculty management” (n=19, percent=46.3%), “I feel stressed as submission deadline neared” (n=18, percent=43.9%) and “Messy living conditions distracted me” (n=19, percent=46.3%). This showed that one of the stressors were the nursing students needed to balance their requirement as a student where they need to complete the given assignment, and as a trained nurse trained at the assigned posting. Due to this stressor, they needed to take priority and set a deadline to complete the task given as well as go to the clinical practice. This parallel with Karim, Majid, Mohd, Rashdan, and Yaman (2020) was one of the most stressful aspects of nursing education was the dual roles that they must fulfil: learner and worker.

5.3 The satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM

The nursing students had high satisfaction during the COVID-19 pandemic (n=39, percent =95.1). Based on the result in Table 4.4, the majority of the nursing student scored either agree to some extent or fully agree. Nonetheless, there was a quite number of nursing students who scored disagree to some extent on “I continuously received feedback from my supervisor” (n=10, percent=24.4%), “There was a mutual interaction in the supervisory relationship” (n=9, percent=22.0%) and “The staff learned to know the students by their personal names” (n=11, percent=26.8%). These results could not be

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taken lightly as Mueller, Naragon & Smith (2016) declared that the three most common stressors identified by students were instructors' lack of knowledge about personal safety, instructors' limited skills, and instructors' insufficient attention and guidance. The nursing students may feel vulnerable and unsure in clinical settings because they are in unfamiliar environments, learning new skills, and concerned about how the staff will perceive their actions. Thus, these scores will become worse in the future if no improvements are made by the responsible party.

5.4 Relationship between level of stress of e-learning and satisfaction regarding clinical posting

Pearson correlation analysis revealed that there is no significant correlation between the level of stress of satisfaction regarding clinical practice among nursing students during the COVID-19 pandemic in UPM (r-value= -0.204, p-value = 0.201), indicating that the level of stress has no influence on the satisfaction during clinical posting. As a result, the null hypothesis is accepted. Although a majority of nursing students had moderate levels of academic-related stress during the COVID-19 pandemic (n=20, percent =48.8), they had a high satisfaction during the COVID-19 pandemic (n=39, percent =95.1). This corresponds to the Karim, Majid, Mohd, Rashdan, and Yaman (2020) statement where nursing students had the highest level of satisfaction with the clinical learning environment; it was regarded as one of the most stressful aspects of nursing education due to the dual roles that they must fulfil: learner and worker.

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5.5 Relationship between socio-demographic data and level of stress of e-learning

According to statistical research, there is no significant association between age, gender, monthly income and willingness to study nursing with the level of stress during e-learning. This suggests that socio-demographic factors did not affect one's degree of awareness about stress level. Regardless of socio-demographic variables such as age, gender, monthly income and willingness to study nursing, the nursing students at UPM appeared to have good knowledge on stress-reduction tactics as well as steps to prevent them from getting the viral infection. This could be because the responders were aware of the effects caused by non-treated stress. This link with Sheroun, Wankhar, Devrani, Lissamma & Chatterjee (2020) statement where there was no link between the stress level and any of the sociodemographic indicators. It also contrasts with the Limacao (2020) study, which found that age (less than 30 years old) and gender (females) were related to the increased reported stress. Nevertheless, there was a significant association between the year of study and the level of stress during e-learning. This shows that the year of study affects the level of stress where nursing students start placed a highly important to the clinical posting in their third and fourth years (Ramos-Morcillo, Leal-Costa, Moral-García, & Ruzafa-Martínez, 2020).

As a result, the findings of this study demonstrated that socio-demographic factors such as age, gender, monthly income and willingness to study nursing except for the year of study do not affect the level of stress during e-learning.

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5.6 Relationship between socio-demographic data and satisfaction regarding clinical posting

This study finding reveal that there is no significant association between age, gender, year of study, monthly income or willingness to study nursing with nursing students' satisfaction regarding their clinical practice. It suggests that socio-demographic factors did not affect the students' satisfaction during clinical posting. Nursing students at UPM appeared to have high satisfaction, regardless of socio-demographic criteria such as age, gender, year of study, monthly income or willingness to study nursing. This link with the statements of Karim, Majid, Mohd, Rashdan, and Yaman (2020), where there was no significant association between gender and the level of satisfaction but the contrast with the results where significant findings in the relationship between the year of study and students' satisfaction during clinical practice.

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CHAPTER 6

LIMITATION AND RECOMMENDATION

6.0 Introduction

This chapter made additional concessions in terms of aspects to be improved based on the results and restrictions. As a result, some limits were discovered throughout the research period, which will be described more in this chapter.

6.1 Limitation

This study had some limitations discovered by the researchers. This study had several drawbacks, one of which was the difficulty in finding respondents. The cooperation of students to engage in our research was one of the problems we faced. Some of them were uninterested in participating in our study and chose to disregard it. To attain our target number of respondents, the researcher must blast the questionnaire many times. This study employed a cross-sectional design and random sampling, which increases self-selection bias. Some of the respondents declined to answer all of the questions and chose to withdraw from the study.

The time frame for completing this research was limited. Every student has only one semester to complete their research, and it is quite difficult during this movement control order (MCO).

Next, because of COVID19, the study's progress has been slowed because several items have been delayed. However, the researchers made every effort to complete the data-gathering phase.

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6.2 Recommendation

Several recommendations can be made to improve and lessen the stress level among nursing students. First and foremost, the department of nursing in UPM, as an educational institution, plays a role in providing a stable educational system and maintaining a stable educational framework for students by providing adequate information about the curriculum and exam dates. The importance of holding educational sessions and workshops for students and their families to teach them more vital stress-reduction strategies as well as measures to protect them from the COVID-19 infection.

The nursing lecturers need to swiftly adjust to online teaching methods and technical challenges due to the usage of modern technologies. The difficulties are more pronounced in clinical sessions than in non-clinical ones. However, considerable work was expended in preparing students for clinical instruction, which was scheduled to begin at a later, safer stage. This also applies to online tests. This pandemic has taught nursing lecturers to adapt to changes and optimise their use of technology to avoid fully impeding the teaching and learning process. However, higher education institutions must provide greater assistance, such as technical and mental health support.

Next, building a healthy interpersonal tie with nursing students in clinical settings can help the clinical instructor and nursing staff minimise stress among nursing students.

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To increase the satisfaction regarding clinical posting, reflection or guided learning after the end of the shift should be strengthened to increase the satisfaction regarding clinical posting, to obtain ongoing input from the preceptors and the students on their learning process and clinical placement performance. This also can enhance the supervisory relationship with the student where the preceptor listens to the students' problems that occurred during clinical practice and tries to fix or reduce the issue. To improve the pedagogical atmosphere on the ward, the ward staff should be exposed to the nursing students' scope of learning in the clinical placement through seminars or lectures. The nursing students also can introduce themselves to the ward staff at the beginning of the posting.

If the future researcher wishes to research UPM, the random sample approach still can be employed to collect data. However, if they intended to change the target responder to strengthen the analysis, they may use a different strategy. Furthermore, the data collection period could be extended to reach a greater number of respondents. In addition, researchers should look for other stress questionnaires that focus on specific issues, such as the perceived stress among nursing students.

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6.3 Conclusion

In conclusion, this survey discovered that students experienced academic stress with an average of 85.78±18.613. However, the majority of them satisfy regarding clinical posting with an average of 129.00±16.803. Furthermore, there is no significant relationship between socio-demographic factors and level of knowledge and perception of depression. Last but not least, with a p-value=0.201, there is no significant link between the level of stress of e-learning and satisfaction regarding clinical posting among nursing students in UPM. As a result, the null hypothesis of this study is accepted as this study reveals that the stress level does not affect satisfaction during clinical practice.

Many elements and reasons influence satisfaction as it is a way of thinking or feeling about something rather than something skilful, which takes time to form and is difficult to modify. As a result, awareness programs and campaigns concentrating on stress management must be conducted to raise students' understanding.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

SECTION 1: SOCIO-DEMOGRAPHIC

Tick (√) in the space provided

1. Age: ____ years old
2. Sex:
   - ☐ Male
   - ☐ Female
3. Year of study
   - ☐ First year
   - ☐ Second year
   - ☐ Third year
   - ☐ Fourth year
4. Economic status
   - ☐ Insufficient
   - ☐ Barely sufficient
   - ☐ Sufficient
5. Willingness to study nursing
   - ☐ Yes
   - ☐ No

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SECTION 2: LEVEL OF STRESS OF E-LEARNING

This inventory measures the stresses you have experienced in your study and everyday life in your campus. There are no right and wrong answers. Read each statement and circle the best describes your experiences.

Below is a list of the ways you may have felt or behaved over this semester. Please circle one answer in each box:

Subscale 1: Physical

No	Item	Never	Somewhat frequent	Frequent	Always
1	Headaches	1	2	3	4
2	Back pain	1	2	3	4
3	Sleep problem	1	2	3	4
4	Difficulty breathing	1	2	3	4
5	Excessive worry	1	2	3	4
6	Stomach pain/nausea	1	2	3	4
7	Constant tiredness/fatigue	1	2	3	4
8	Sweating/sweaty hands	1	2	3	4
9	Frequent cold/flu/fever	1	2	3	4
10	Drastic weight loss	1	2	3	4

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Subscale 2: Interpersonal Relationship

No	Item	Never	Somewhat frequent	Frequent	Always
11	I find difficult to meet my high parent's expectation	1	2	3	4
12	My parents treat me as a helpless person	1	2	3	4
13	I feel guilty if I fail to fulfill my parent's hope	1	2	3	4
14	My parents wish only for my success	1	2	3	4
15	I find difficult to get along with groupmates in doing academic task	1	2	3	4
16	My friends did not care about me	1	2	3	4
17	I feel disturbed when having problem with my boyfriend/girlfriend	1	2	3	4
18	My families are not supportive	1	2	3	4
19	My lecturers/ teachers are not supportive	1	2	3	4
20	I feel frustrated by the lack of faculty management	1	2	3	4

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Subscale 3: Academic

No	Item	Never	Somewhat frequent	Frequent	Always
21	I have a financial problem because of the expenses of the university	1	2	3	4
22	I find difficult to juggle time between study and social activity	1	2	3	4
23	I feel nervous delivering the class presentation	1	2	3	4
24	I feel stressed as submission deadline neared	1	2	3	4
25	I feel stressed to sit for examination	1	2	3	4
26	I find difficult to juggle time between study and society involvement	1	2	3	4
27	I loss interest towards courses	1	2	3	4
28	I feel burden of academic workloads	1	2	3	4
29	I feel stressed dealing with difficult subject	1	2	3	4
30	I feel difficult in handling my academic problem	1	2	3	4

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Subscale 4: Environmental

No	Item	Never	Somewhat frequent	Frequent	Always
31	I have transportation problem	1	2	3	4
32	I feel stressed with bad living condition of hostel	1	2	3	4
33	Surrounding noise distracted me	1	2	3	4
34	Pollution make me uneasy	1	2	3	4
35	Hot weather make me avoid to go out	1	2	3	4
36	Messy living conditions distracted me	1	2	3	4
37	I feel frustrated of inadequate campus facilities	1	2	3	4
38	Crowding make me feel uneasy	1	2	3	4
39	Waited in a long line make me feel uneasy	1	2	3	4
40	I feel scared being at the insecure place	1	2	3	4

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SECTION B: SATISFACTION REGARDING CLINICAL PRACTICE

The following statements related to the satisfaction of clinical practice. To what extent do you agree with the following statements?

Factor 1: Supervisory relationship

No	Items on factor	Fully disagree	Disagree to some extent	Neither agree nor Disagree	Agree to some extent	Fully agree
1	I felt comfortable going to the ward at the start of my shift					
2	There was a positive atmosphere on the ward					
3	My supervisor showed a positive attitude towards supervision					
4	I felt that I received individual supervision					
5	I continuously received feedback from my supervisor					
6	Overall I am satisfied with the supervision I received					
7	The supervision was based on a relationship of equality and promoted my learning					
8	There was a mutual interaction in the supervisory relationship					
9	Mutual respect and approval prevailed in the supervisory relationship					
10	The supervisory relationship was characterized by a sense of trust					

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Factor 2: Pedagogical atmosphere on the ward

No	Items on factor	Fully disagree	Disagree to some extent	Neither agree nor Disagree	Agree to some extent	Fully agree
11	The staffs were easy to approach					
12	During staff meetings (e.g. before shifts) I felt comfortable taking part in the discussions					
13	Patients received individual nursing care					
14	There were no problems in the information flow related to patients & care					
15	Documentation of nursing (e.g. nursing plans, daily recording of nursing procedures, etc.) was clear					
16	The staff were generally interested in student supervision					
17	The staff learned to know the students by their personal names					
18	There were sufficient meaningful learning situations on the ward					
19	The learning situations were multidimensional in terms of content					
20	The ward can be regarded as a good learning environment					

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Factor 3: Role of nurse teacher

No	Items on factor	Fully disagree	Disagree to some extent	Neither agree nor Disagree	Agree to some extent	Fully agree
21	In my opinion, the nurse teacher was capable to integrate theoretical knowledge and everyday practice of nursing					
22	The nurse teacher was capable of operationalize the learning goals of this clinical placement					
23	The nurse teacher helped me to reduce the theory-practice cap					
24	The common meetings between myself, mentor and nurse teacher were comfortable experience					
25	Climate of the meetings was congenial					
26	Focus on the meetings was in my learning needs					

Factor 4: Leadership style on the ward manager

No	Items on factor	Fully disagree	Disagree to some extent	Neither agree nor Disagree	Agree to some extent	Fully agree
27	The ward manager regarded the staff on her/his ward as key resource					
28	The ward manager was a team member					
29	Feedback from the ward manager could easily be considered a learning situation					
30	The effort of individual employees was appreciated					

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Factor 5: Premises of nursing on the ward

No	Items on factor	Fully disagree	Disagree to some extent	Neither agree nor Disagree	Agree to some extent	Fully agree
31	The wards nursing philosophy was clearly defined					
32	The nurse teacher was like a member of the nursing team					
33	The nurse teacher was capable to give his or her pedagogical expertize to the clinical team					
34	The nurse teacher and the clinical team worked together supporting my learning					

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APPENDIX 2: PATIENT INFORMATION SHEET AND INFORMED CONSENT FORM

JAWATANKUASA ETIKA UNIVERSITI UNTUK PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG, SELANGOR, MALAYSIA

FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE:

Level of Stress of E-Learning and Satisfaction Regarding Clinical Practice among Nursing Students During COVID-19 Pandemic in UPM.

2. INTRODUCTION:

In the early 2020, the world is shocked with an unexpected ambush of COVID-19. This led to the decision of Ministry of Higher Education Malaysia where all learning method will be conducted through online. E-learning has a stressful impact to the nursing student and effect their satisfaction during clinical practice. This study is conducted to investigate the level of stress of e-learning and satisfaction regarding clinical practice among nursing students during COVID-19 pandemic.

3. WHAT WILL YOU HAVE TO DO?

You have to fulfill all the inclusion criteria and to sign the agreement for nursing student from year 1 until year 4 to participate in this study voluntarily. The respondents will explain and give the instruction by researcher before answer the questionnaire.15-20 minutes will allocate for respondents to answer all the questions.

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4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

This study will be done for student in bachelor of nursing in Universiti Putra Malaysia. There will

be exclusion if you have of the criteria below:

- Postgraduate student
- Student who had never experienced clinical practice
- Students are not willing to participate in the study

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

From this study, participants will be more aware regarding their level of stress of e-learning and satisfaction regarding clinical practice during COVID-19. Besides, hopefully the student will get an idea on how to manage stress that can cause them satisfy them during clinical practice which can improve the quality of health service and care of patient.

(b) TO THE INVESTIGATOR?

The data and information from this study will raise the awareness of the stress level of e-learning and satisfaction regarding clinical practice among nursing student during COVID-19 pandemic.

6. WHAT ARE THE POSSIBLE RISKS?

There are no risk in doing this study. There are only using questionnaire to assess their level of stress of e-learning and satisfaction regarding clinical practice during COVID-19.

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7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

All the information of the subject will be kept confidential. Only the researcher and the supervisor are allowed to assess the information that is collected

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

Mr/Mrs

If you have any inquiries or want to know further development of the research, you can contact me during

working hours or my supervisor.

Sicerely,

Mohamad Sharie bin Mohd Nor

Student researcher,

Department of Nursing,

Faculty of Medicine and Health Science,

Universiti Putra Malaysia,

43400 UPM Serdang, Selangor

Phone : (+60) 17-784792

Email : 192947@student.upm.edu.my

Dr. Ruthpackiavathy D/O Rajen Durai

Supervisor,

Department of Nursing,

Faculty of Medicine and Health Science,

Universiti Putra Malaysia,

43400 UPM Serdang, Selangor

Phone : (+60) 19-3883844

Email : ruthpackiavaty@upm.edu.my

*Please initial here if you have read and understood the contents of this page*_____

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9. CONSENT

I …… Identity Card No. …… address…… ……... ……..hereby voluntarily agree to take part in the research stated above *(clinical /drug trial/video recording/ focus group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible adverse effects and complications (as written in the Respondent's Information Sheet). I understand that I have the right to withdraw from this research at any time without giving any reason whatsoever. I also understand that this study is confidential and all information provided with regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature ……..…… Signature ……..…….
(Respondent) (Witness)

Date :…….….. Name :…….…..

I/C No. :…….…..

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned research.

Date ……..…… Signature ……..…….
(Researcher)

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APPENDIX 3: APPROVAL LETTER FROM ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS (JKEUPM)

Ref. no: UPM/TNCPI/RMC/JKEUPM/1.4.18.2 (JKEUPM)
Date: 31 December 2021

Dear Prof./Dr./Mr./Ms.,

APPLICATION FOR JKEUPM ETHICAL CLEARANCE: APPROVED

With reference to the above, I am pleased to inform you that your application for ethical clearance for the research project entitled **'LEVEL OF STRESS OF E-LEARNING AND SATISFACTION REGARDING CLINICAL PRACTICE AMONG NURSING STUDENTS DURING COVID-19 IN UPM**' has been approved.

Please note that the official letter of approval will be issued as soon as possible. However, the ethical clearance is considered effective from the date of this email, and you may now proceed with your research.

Kindly remind the ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

Researchers should also complete a Study Final Report upon study completion. The form can be obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM) website (http://www.tncpi.upm.edu.my/faildokumen).

If you have any enquiries, please contact Ms. Nurulhasanah Ishak (03-97691605) or En. Fahrul Asmady bin Yunus (0397691272)

Note: Please use this reference number for any transaction:- **JKEUPM-2021-776**

Thank you.

Yours faithfully,

Prof. Dr. Zamberi Sekawi
Chair
Ethics Committee for Research Involving Human Subjects
Universiti Putra Malaysia

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APPENDIX 4: GANTT CHART

Project	2020		2021												2022
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan
Discussion with supervisor regarding progress of study															
Identify the research problem															
Reviewing of literature review															
Proposal progression															
Formulating questionnaire and conduct pre-test questionnaire															
Ethic approval															
Data collection															
Typing research report															
Submit research report															

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