

FEAR AND STRESS REGARDING COVID-19
AMONG NURSING STUDENTS IN
UNIVERSITI SAINS MALAYSIA

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by

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ABSTRAK

Kemunculan COVID-19 telah mengakibatkan peningkatan kes kematian telah mewujudkan ketakutan dan stres global dalam kalangan pelajar kejururawatan yang lebih mudah dijangkiti virus. Kajian ini bertujuan untuk mengenal pasti ketakutan dan stres terhadap COVID-19 dalam kalangan pelajar kejururawatan di Universiti Sains Malaysia (USM). Kajian keratan rentas ini telah dijalankan dalam kalangan 125 pelajar sarjana muda kejururawatan di USM dan diambil menggunakan persampelan rawak mudah. Soal selidik kajian dalam talian ini mengumpul data tentang ciri sociodemografi peserta, ketakutan dan stres terhadap COVID-19. Purata umur peserta yang terlibat (\pm SD) ialah 22.51(\pm 3.378) tahun, dan 88.8% daripadanya adalah perempuan. Lebih separuh daripada pelajar melaporkan tahap ketakutan sederhana (66.4%) and tinggi (28.8%). Keputusan menunjukkan bahawa 51.2% mempunyai tahap tekanan sederhana, dan 12% mempunyai tahap stres tinggi COVID-19. Jantina dan etnik dikaitkan secara signifikan dengan ketakutan dan stress ($p < 0.05$). Disamping itu, kolerasi ditemui antara ketakutan dan stres mengenai COVID-19. Kajian ini menyimpulkan bahawa ketakutan dan stres terdapat dalam kalangan pelajar kejururawatan. Oleh itu, sokongan kesihatan mental adalah penting untuk mengatasi ketakutan dan stres dalam kalangan pelajar kejururawatan yang disebabkan oleh pandemik itu.

ABSTRACT

COVID-19 has resulted in a rise in mortality cases and has created a global fear and stress among nursing students who are more susceptible to being infected by the virus. This study aimed to determine the fear and stress regarding COVID-19 among nursing students at Universiti Sains Malaysia (USM). A cross-sectional survey was conducted among 125 undergraduate nursing students from USM and recruited using a simple random sampling approach. An online survey questionnaire collected data on participants' sociodemographic characteristics, fear, and stress of COVID-19. The nursing students' mean age (\pm SD) was 22.51(\pm 3.378) years, and 88.8% were female. More than half of the students reported moderate (66.4%) and high (28.8 %) fear. Findings show that 51.2% had a moderate stress level, and 12% had a high level of stress of COVID-19. Gender and ethnicity were significantly associated with fear and stress ($p<0.05$). In addition, a correlation was found between fear and stress regarding COVID-19. This study concludes that fear and stress are present among nursing students. Therefore, we propose mental health support is imperative to overcome the fear and stress among nursing students caused by the pandemic.

CHAPTER 1 INTRODUCTION

1.1 Introduction

The emergence of the coronavirus (COVID-19) presented a serious threat to millions worldwide (Mizanur Rahman et al., 2021). However, fear regarding COVID-19 is not exclusive to the general population. For example, nursing students are the future frontline healthcare professionals among the populations most vulnerable to the COVID-19 infection. In addition, some authors have noted that fear and stress could impact mental health and have created challenges during the unprecedented COVID-19 pandemic (Orellana et al., 2020; Ornell et al., 2020; Rodríguez-Rey et al., 2020).

The present study determined the fear, stress, and associated factors among nursing students in the School of Health Sciences, Universiti Sains Malaysia (USM), following the COVID-19 pandemic. The background of the study, problem statement, research questions, research objectives (which shows the general and specific research objectives), research hypotheses, and significance of the study were included in the first chapter of this thesis dissertation. Finally, the significance of the study was discussed, as well as the conceptual and operational definitions of key terms employed in this thesis dissertation.

1.2 Background of the Study

Coronavirus disease, commonly known as COVID-19, is an infectious illness caused by the SARS-CoV-2 virus (World Health Organization, 2020). As of September 26, 2021, the COVIDNOW statistics for Malaysia revealed a total of 2,193,434 local cases, including 183,289 active cases. COVID-19 has already claimed the lives of 25,437 people, with 99 of them being brought in dead (BID). With the emergence of COVID-19,

Malaysian lived in fear, stress and anxiety for over two years as the daily incidence increased in COVID-19 (The Star, 2021).

Malaysians were subjected to various security measures imposed by the government, including total lockdown, Movement Control Order (MCO), Conditional Movement Control Order (CMCO), prolonged MCO, social distance, and the requirement to wear face masks in public (Shah et al., 2020). Other security and safety measures include the closure of national borders and the usage of the MySejahtera application before entering any business premises to decrease the spread of the disease. In addition, on February 24, 2021, the government started a national COVID-19 vaccine immunization campaign (Sipalan, 2021). As a result, as of September 27, 2021, 19,753,742 Malaysian citizens have received both doses of vaccination and are fully vaccinated (COVIDNOW, 2021). Through this vaccine immunization campaign, the country has reached 60.6 per cent of the adult population and 1.0 per cent of the country's adolescent population (COVIDNOW, 2021).

Current cases in Malaysia continue to reach 1,000 per day, pestering individuals and causing ongoing fear and stress. Vulnerable groups such as health care front liners and students are the most affected by this pandemic (O'Byrne, Gavin, Adamis, Lim, & McNicholas, 2021). Given the COVID-19 spreads, control, and treatment, the sense of danger, and the possibility of death, including concern of contracting this deadly disease and epidemiological change still not under control, it is imperative to study the fear and stress in nursing students (Aslan & Pekince, 2021; Fernández et al., 2021).

1.3 Problem Statement

The psychological impact of COVID-19 not only affects society as a whole, but

the student population also faces greater challenges of fear and stress (Mizanur Rahman et al., 2021). The closure of universities and the potential extension of studies and clinical attachments at hospitals and other health care centres would likely disrupt the students' daily activities and plans. The imposed restrictions would likely add to the fears and stress pressure of the nursing students whose academic sessions were postponed until further notice. Furthermore, nursing students must immediately acclimate to online learning, which differs significantly from traditional face-to-face and bedside learning in hospitals and health care settings. Another element that may impact the nursing students is living away from home, contributing to their fear and stress (Mizanur Rahman et al., 2021).

COVID-19 is an infectious disease that has affected virtually every nation in the world. However, research has focused on addressing the general population's well-being, with little attention to nursing students' psychological distress. Therefore, this study determined the fear and stress regarding COVID-19 and the associated factors among nursing students in the School of Health Sciences, Universiti Sains Malaysia (USM). Also, the impact of socio-demographic characteristics on these variables was determined in this study.

1.4 Research Questions

Generating research questions is important as the research question gives focus, sets boundaries, and provides direction (Polit & Beck, 2020). For this research study, the following research questions as a guide to achieving the research study's objectives are as follows:

- i. What is the fear and stress level of COVID-19 among nursing students in USM?
- ii. Is there any association between socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for

COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and fear regarding COVID-19 among nursing students in USM?

- iii. Is there any association between socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and stress regarding COVID-19 among nursing students in USM?
- iv. Is there any correlation between fear and stress regarding COVID-19 among nursing students in USM?

1.5 Research Objectives

Research objectives describe concisely what the research is trying to achieve (Polit & Beck, 2020).

1.5.1 General Objective

The general objective of this study was to determine the nursing students' fear and stress regarding COVID-19 in USM.

1.5.2 Specific Objectives

- i. To determine the fear and stress level of COVID-19 among nursing students in USM.
- ii. To determine the association between socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status

related to COVID-19, and any family members been infected with COVID-19) and fear regarding COVID-19 among nursing students in USM.

- iii. To determine the association between socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and stress regarding COVID-19 among nursing students in USM.
- iv. To determine the correlation between fear and stress regarding COVID-19 in nursing students in USM.

1.6 Research Hypotheses

A research hypothesis is a statement of expectation or prediction that research will test (Polit & Beck, 2020). Following are the alternative and null research hypotheses of this study:

Hypothesis 1 : There is a significant association between selected socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and fear regarding COVID-19 among nursing students in USM. (H_A)

: There is no significant association between selected socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for

COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and fear regarding COVID-19 among nursing students in USM. (H_0)

Hypothesis 2 : There is a significant association between selected socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and stress regarding COVID-19 among nursing students in USM. (H_A)

: There is no significant association between selected socio-demographic characteristics (age, gender, ethnicity, year of nursing education, types of family, number of times tested for COVID-19, history of a positive COVID-19 test, quarantine status related to COVID-19, and any family members been infected with COVID-19) and stress regarding COVID-19 among nursing students in USM. (H_0)

Hypothesis 3 : There is a correlation between fear and stress regarding COVID-19 among nursing students in USM. (H_A)

: There is no correlation between fear and stress regarding

1.7 Significance of the Study

COVID-19 has impacted every aspect of life worldwide, including nursing students. Undoubtedly, the COVID-19 pandemic has been stressful for nursing students (Majrashi et al., 2021). As a result, nursing education has moved classes online, and clinical attachment to hospitals and healthcare centres is deferred to the current COVID-19 situation. Furthermore, the COVID-19 has significant negative impacts on health care professionals, fostering issues such as fear and stress. However, fear and stress regarding COVID-19 are not exclusive to the general population. Like healthcare professionals and medical students, nursing students were also vulnerable to the COVID-19, particularly those spending clinical attachment in the patient's environment. Given the novelty of COVID-19, and the scant information the local context still has about its spread, control, and treatment, health professionals, particularly nursing students in general, have situations of fear and stress regarding COVID-19. Fear, as an unpleasant mental state produced by the perception of danger, has been documented in situations of a pandemic; particularly in COVID-19, related suicide attempts have been documented (Bhuiyan et al., 2020).

Along with the disease's concerns and uncertainty, the presence of anxiety and fear of contracting COVID-19, and the ongoing epidemiological change, nursing students are also concerned about the ambiguity surrounding these new roles, which may limit learning opportunities, given the need to consolidate the abilities and skills required to make the transition (Carolan et al., 2020). Therefore, it is necessary to rule out possible concerns and related predictors to enhance evidence on COVID-19 in nursing students who are recognized as future front-line populations confronting it and its consequences

on fear and stress. Fear is an adaptive response in the presence of danger (Schimmenti, Billieux & Starcevic, 2020). Another potential psychological vulnerability factor is stress, typically grouped into academic pressure (Barker et al., 2018; Karaman & Watson, 2017), social and interpersonal pressure (Siegel et al., 2018), and environmental pressure (Campisi et al., 2017). Therefore, an assessment of concerns and predictors relating to the fear of coronavirus was set out in this study. This study could yield new information about fear and stress among nursing students during the COVID-19 epidemic. This study addressed several of the most plausible concerns and predictors based on prior research and provided valuable information for nursing educators, health practitioners, policymakers, and other researchers (Holmes et al., 2020). Therefore, to determine the fear and stress of the COVID-19 among nursing students in USM, a cross-sectional online survey was conducted between January 2022 and March 2022.

1.8 Conceptual and Operational Definitions

The following conceptual and operational definitions specific to this research study are as follows:

- | | |
|----------|--|
| COVID-19 | - Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. The virus leads to mild to moderate respiratory illness and usually will recover without specific treatment. However, a serious condition may require medical treatment (World Health Organization, 2020). |
| Fear | - Fear is an adaptive response in the presence of danger. Fear for the body, fear for significant others, fear of not knowing, and fear of inaction (Schimmenti et al., 2020). This study refers to |

the fear of the COVID-19 scale, which consists of seven items (e.g., "I cannot sleep because I am worried about getting coronavirus-19") (see section 3.6 Measurement of Variables). The higher the score, the higher the level of fear of COVID-19 (Ahorsu et al., 2020).

- | | |
|------------------|--|
| Stress | - Stress refers to a situation in which internal and external demands are appraised as taxing or exceeding an individual or group's adaptive or coping resources (Labrague et al., 2017). In this study, stress refers to 36-items questionnaires based on five different subscales, namely COVID danger and contamination, COVID socioeconomic consequences, COVID xenophobia, COVID traumatic stress symptoms and COVID compulsive checking. A total stress score was obtained by summing the responses to the individual questions. The higher the total score, the greater the perceived stress level among students (Taylor et al., 2020; Wu et al., 2020). |
| Nursing students | - A nursing student is an individual enrolled in a professional nursing educational program. This study refers to an undergraduate nursing student studying at the School of Health Sciences, USM, leading to a Bachelor of Nursing (Honours). |

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

Chapter 2 details the literature review on scholarly articles and other sources relevant to the research being investigated. COVID-19, fear, stress, nursing students, and Malaysia were the keywords used to find these articles. COVID-19 pandemic in Malaysia, COVID-19 pandemic, fear and stress, and COVID-19 pandemic, fear and stress in nursing are some of the subheadings in the literature study. The study's conceptual framework, which underpins the research investigation, was discussed in the final subheading.

2.2 COVID-19 Pandemic in Malaysia

After 118,000 individuals were infected and 4,291 people died from the COVID-19 virus, which was initially discovered at the end of 2019, the World Health Organization (WHO) declared it a pandemic on March 11, 2020. Many nations are experiencing a second or third-wave breakout, putting the country in an emergency (World Health Organization, 2020). In Malaysia, COVID-19 was first detected in January 2020. Cases recorded then were rather scarce and mainly limited to tourists. Local outbreaks started to appear in March 2020; the main cluster was connected to a spiritual gathering, Tablighi Jamaat, in late February and early March, culminating in a sudden and sharp upsurge in local cases and those exported to neighboring countries. Within weeks, Malaysia registered the highest number of COVID-19 contagions in Asia. The Malaysian government promptly took action to mitigate the pandemic. On March 18 2020, a nationwide "Movement Control Order" (MCO; i.e., lockdown) was declared, aimed at controlling the viral outbreak (Elengoe, 2020).

The COVID-19 pandemic has caused many problems in the world and Malaysia. Education has been among these problems. Similarly, schools and universities were closed as a measure against COVID-19 in Malaysia. Many university students who remained on campus were sent home by their universities. However, some students stay on campus due to educational necessities such as internet access and the need to perform laboratory work to complete their practicals. The Ministry of Higher Education declared that no face-to-face classes would be held because of uncertainty about the pandemic. Therefore, distance education was put on the agenda in Malaysia (Shamsudin, 2020). During the pandemic crisis, to contain COVID-19, nursing students were required to postpone their clinical training. Hence, they experienced the most problems during the COVID-19 pandemic. The students experienced fear and stress because they could not perform clinical practices, and their classes and exams were carried out as distance education (Kürtüncü & Kurt, 2020).

2.3 COVID-19 Pandemic and Fear

Given the novelty of SARS-CoV-2 and the scant information the world still has about its spread, control, and treatment, health professionals generally have situations of fear and stress regarding COVID-19. Fear, as an unpleasant mental state produced by the perception of danger, has been documented in pandemic situations; particularly in COVID-19, related suicide attempts have been documented (Bhuiyan et al., 2020). However, despite the unpleasantness of the sensation, fear can be a protective factor, given that it moves humans toward prevention behaviours (Harper et al., 2020).

Concerning fear regarding COVID-19, Gritsenko et al. (2019) reported Russian and Belarusian female students to have higher fear than male students. (Oti-Boadi et al., 2021) study among university students in Ghana also found a similar result to Gritsenko

et al. (2019). Another similar study was reported by (Elsharkawy & Abdelaziz, 2021), where female Saudi students have a higher stress level due to family members who have previously been exposed to COVID-19. Another study found that undergraduate students have the highest level of fear (Bakioğlu et al., 2020). A study in the Philippines reported fear of COVID-19 ranging from moderate to high among nursing students (De Los Santos et al., 2021). First-year students had the highest apprehension related to preparation and enthusiasm for COVID-19 patients, followed by second-year students, third-year students, and fourth-year students (De Los Santos et al., 2021).

In the current crisis caused by the pandemic, the emerging literature is beginning to reveal certain differences based on gender and age. Women and younger people show higher depression, anxiety, stress, and fear of COVID-19 (Huang & Zhao, 2020b; Sandin et al., 2020). However, most of these studies were conducted on samples of health workers (Pappa et al., 2020), and much less is known about young people. Undergraduate students at university have been more fearful of COVID-19 than graduates (Konstantinov et al., 2020). In addition, according to some studies, the symptoms of anxiety and depression among these students are increasing due to social distancing and lockdown laws (Chen et al., 2020; Mazza et al., 2020; Santini et al., 2020).

Fear regarding COVID-19 in Mexico reported high fear among nursing students and recent graduates. Besides, the low level of knowledge indicates a need for interventions on the required knowledge, stress, and fear regarding COVID-19 in the population studied (Fernández et al., 2021).

Malaysia's higher education institutions and university students are most vulnerable to the COVID-19 epidemic. The pandemic profoundly influenced university students' ability to continue their studies while dealing with the catastrophe. In addition,

they have to deal with several changes, including online learning, tight social segregation on campus, and apprehension about returning to school to resume physical lessons. Thus, students developed fear and stress due to COVID-19, which altered their lifestyle and social environments. As a result, university students experience fear and stress regarding COVID-19 due to various factors that impact their mental health (Sundarassen et al., 2020).

2.4 COVID-19 Pandemic and Stress

In the first line of care, health workers have reported stress regarding COVID-19 in health workers, especially physicians and nurses. In addition, severe stress conditions with repercussions in mental symptoms were reported in a sample of health workers in Europe, observed as associated factors before mental symptoms and the proximity to infected patients (Bohlken et al., 2020). The principal causes of stress related to COVID-19 are the sense of danger, the possibility of self-inoculation of the virus, concern for the possibility of infecting relatives, and sleep alterations (Li et al., 2020).

In a Turkish study, nursing students reported increased stress levels related to the COVID-19 pandemic (Aslan & Pekince, 2021). A cross-sectional study found that Mexican nursing students and recent graduates had high levels of stress and a low level of knowledge. The presence of high stress and low knowledge predicted fear regarding COVID-19 (Fernández et al., 2021). Besides stress, Norwegian baccalaureate nursing students were found to have been affected by different degrees of restrictions depending on local and temporal variations in the incidence of infection. Hence, educational sessions have largely been converted to digital teaching to maintain academic progress during the pandemic's lockdown.