Measuring the Level of Stress and Fear among Registered Nurses during the Covid-19 Pandemic in Zamboanga Sibugay

Kailla Louise Portia M. Vios, Sheirweena D. Sheik, Johanesa F. Barisa, Aiman L. Esmael, Jeah Nicole E. Bunyi, and Tashmera D. Laranjo

Nursing Department, College of Arts and Sciences, Mindanao State University – Buug Campus, Buug, Zambonga Sibugay, Philippines
Email:tashmera.laranjo@msubuug.edu.ph

ABSTRACT

COVID-19 is a newly emerged infectious disease and because of its rapid spread throughout most countries across the globe, World Health Organization (WHO) declared the disease as a pandemic on March 11, 2020. The pandemic has been causing threats not just among people and among health care workers, specifically among nurses. This study used a descriptive –quantitative research method aimed to measure the level of stress and fear among nurses who attends covid affected patients in the province of Zamboanga Sibugay. It was conducted to randomly selected hospitals of Zamboanga Sibugay namely: Malangas Emergency Hospital, Lanceta Medical Hospital, Ipil Doctors Hospital and Zamboanga Sibugay Provincial Hospital. Questionnaires were sent to the respondents who gave their consent to participate in the study. Nurses had displayed moderate level of stress and fear and researchers were able to identify factors that might have influenced the nurses experience of stress and fear, namely marital status and attendance to formal orientation and training about COVID 19 infection. 36% of the respondents agreed that their level of stress and fear might affect their performance towards quality patient care and safety. The results of the study clearly demonstrate that the nurses in Zamboanga Sibugay Province are experiencing moderate level of stress and fear. Therefore, organizations, managers and health administrators should take measures in establishing structured policies and actions to control stress in the hospital staff.

Keywords: COVID-19, registered nurses, stress and fear, patient care

1. INTRODUCTION

The coronavirus disease 2019 (COVID-19) outbreak had brought a considerable burden around the globe. Among public health threats, an infectious disease outbreak is one of the most imminent emergencies (Fahad et al., 2021). Disease causing microorganisms spread disease resulting in minor illnesses to pandemic crisis.

Labeled as a global crisis, efforts around the globe are focused primarily on limiting the transmission and reducing the impact of corona virus (World Health of Organization, 2019). It has created a climate of uncertainty and turmoil in all cultures as a public health emergency (Nyblade et al., 2019). It is critical to regard that when the treatment and cure of the disease are already known, it is relatively easier for the health professionals to manage the disease. However, with a least known disease, like the COVID 19, health care professionals face multiple challenges because of the limited evidence-based information, circulating myths, and stigma developed by society (Zarci et al., 2018).

As a result, health care's capacity to address the pandemic threats plays a vital role in disease management. Simultaneously, when discussing COVID-19 problems and transmission, health care workers' mental health and approach are equally important.

Psychological distress, burnout, and psychosomatic symptoms were reported by health care providers especially those physicians, nurses, and other members of the covid19 health care team (Barello et al., 2020; Giusti et al., 2020). The rising number of patients with COVID 19 has had a significant influence on health care workers, notably nurses, who make up most health care providers (Fernandez et al., 2020). Nurses have manifold functions in this outbreak such as dealing with suspected patients, triaging patients, detecting suspected cases with infections, and providing fundamental treatment to patients with Covid19 (Baskin et al., 2021). Moreover, the lengthy working hours and extra shift to meet the covid19 patients' challenging and unique needs as well as of their family pose a huge health risk to nurses (Nie et al., 2020). As a result, nurses who are actively involved in treating COVID-19 patients are under a lot of pressure and stress.

Nurses must face this critical situation and unfavorable conditions that increase their risk of negative consequences such as psychological distress. The obstacles that nurses face in this crisis may not only damage them, but also jeopardize their work and the quality of care they provide to their patients (Penwell-Waines et al., 2018). Nurses' multiple roles are critical in the fight against the COVID-19 epidemic. In this way, both hospital administrators and policymakers face a tremendous challenge in safeguarding nurses'.

health and well-being throughout the COVID-19 pandemic. Previous research has shown that nurses' psychological health is strongly linked to their work performance (Fronteira et al., 2011; Oyama and Fukahori, 2015). During the COVID-19 outbreak, psychological discomfort, including dread and anxiety, was documented among health care personnel (Amin et al.,2020; Du et al., 2020). Fear, worry, and exhaustion are likely to lead to suboptimal clinical decisions and results because of this psychological burden. Nurses have been linked to a higher rate of medical errors because they impair cognitive functioning and clinical decision-making, putting patients at risk (Zhu et al., 2020). Acute stress can also cause resignation thoughts, which can exacerbate nursing shortages. According to previous research, nurses' psychological health is strongly linked to their work performance (Fronteira et al., 2011; Oyama et al., 2015). Nurses must maintain their psychological and emotional health in order to efficiently deliver high-quality treatment and play their part during an outbreak. The impact of the COVID19 outbreak on nurses' psychological well-being should be examined and monitored. Understanding and analyzing these consequences is critical for nurses' well-being and emotional resilience, both of which have a direct impact on the quality of health-care delivery. Existing epidemiological data on nurses' psychological health and its associated determinants is still scarce. Thus, the main purpose of this study was to measure the extent of fear and stress among register nurses in Zamboanga Sibugay Province who had direct experience of attending COVID-19 patients during the COVID-19 outbreak. Because of this, the findings of this study will help to improve our knowledge about the impact of an outbreak on nurses, especially at a time when they are in high demand. Developing future workforce policy and institutional response to further waves of this epidemic will also be easier for hospital administrators.

1.1 THEORETICAL FRAMEWORK

This study was based on the theory of Ursin and Eriksen (2004) namely the Cognitive Activation Theory of Stress (CATS), and the theory of Betty Neuman namely the Neuman Systems Model. We used these theories to better understand the challenges that covid nurses in Zamboanga Sibugay are facing as a result of the COVID-19 pandemic. The COVID-19 outbreak has caused widespread public stress as people face a slew of physical and mental challenges both inside and outside the home, all of which affect their subjective assessments.

Ursin and Eriksen (2004) provide further explanation on how people go through stress during a crisis. The authors used the term "stress" to denote four different views, namely "stress stimuli," 'stress experience," and "non-specific general stress response," and "experience of the stress response". People learn information when dealing with adversities, according to the Cognitive Activation Theory of Stress (CATS) theory, and a normal, well-balanced stress should be typical in such situations. Response to stress is vital since this supplies the energy that

enables them to battle against the odds. However, when there is a disparity between the expected and actual circumstance, the stress response mechanism parts struggling. While the stress response is essential to face challenges, higher levels of sustained stress can lead to physical and mental disorders.

According to the Neuman Systems Model by Betty Neuman, this theory revolves around the structure of stressors, the emotional response to these stressors, and the corresponding interventions. This theory establishes a holistic approach which incorporates five major factors which include, physiological, psychological, socio-cultural, spiritual, and developmental (Kerime et al., 2017). This combination will help you organize intra-personal, interpersonal, and extra-personal pressures. By arranging how various stressors influence an individual, it will be easier to identify and analyze the primary source of stress. A person's assessment of the situation, how they see it, and what can be done to alleviate the problem, whether internally or externally, can be done with the help of this model.

The theory of stress and coping established by Lazarus is congruent with Neuman's Systems Model. The underlying concept that stress is a personal perception is a feature that is common to both perspectives. The tension of a circumstance that is extremely upsetting for one person may not be so for another. Having a strong person-environment connection is the second major consensus. Strain, according to Lazarus and Folkman (1984), can only be detected by considering their relationship and cannot be determined by examining either the person or the ambient encounter According to Neuman, a person is an open system in constant reciprocal interaction with the environment, and this is consistent with his theory.

1.2 STATEMENT OF THE PROBLEM

This study aims to assess the perceived level of stress and fear, of the COVID-19 pandemic on nurses in Zamboanga Sibugay.

Specifically, this study seeks to answer the following:

1. What are the demographic profile of the respondents in terms of:
   1.1 Age
   1.2 Marital status
   1.3 Years of work experience
   1.4 Length of experience of caring for patients with COVID-19
   1.5 Attended formal training or orientation about COVID-19 and COVID-19 patient care?
2. What are the perceived levels of fear among registered nurses during the COVID-19 pandemic in Zamboanga Sibugay?
3. Is there a significant relationship between the demographic profile and perceived level of stress and fear among registered nurses during the COVID-19 pandemic?

2. METHODOLOGY

2.1 RESEARCH DESIGN

This study used a descriptive-quantitative research method. Data were collected through convenience sampling from 27 November to 11 December 2021 during the COVID-19 pandemic. The quantitative method was used to assess the psychological effects, represented by stress and fear resulted from COVID-19 pandemic among the nurses in Zamboanga Sibugay.

2.2 RESEARCH INSTRUMENT

The researchers used adapted questionnaire as the instrument of this study. The participants were asked to report their level of stress and fear regarding the COVID-19 pandemic. The questionnaire was divided into four sections: demographic characteristics, COVID-19 Stress Scale, Fear of COVID-19 Scale, and subjective assessment. These questionnaires were approved first by the MSU thesis committee before administration. The original English versions of the scales were used in this study as nurses in the province are proficient in the English language.

2.3 DATA GATHERING PROCEDURE

For the initial conduct, the researchers visited the four hospitals to ask permission and state and explain our research goals and procedures to the nurse executives few days prior to the conduct of the study. The researchers then asked for qualified respondents who met the inclusion criteria and invited them to participate in the study. An informational document that provided details (i.e., the title of the study, the purpose and significance of the study, privacy information, and researchers' contact information) regarding the study was distributed to prospective respondents. The questionnaires were distributed after written consents were secured from the nurses who agreed to participate in the study. Participants were asked to complete the questionnaire during their break time so as not to disrupt their work Data gathering was completed within the period of November 27 to December 11, 2021 with a 100% response or completion rate.

3. RESULTS

Based on the data collected and the analyses performed, the following findings were drawn:

Out of 44 respondents, majority of 18 respondents are 27 years to 31 years old (40.9%). Then, there are 14 respondents (or 31.8%) that belong to 22 years to 26 years old; 9 respondents (or 20.5%) that belong to 32 years to 36 years old; 1 respondent (or 2.3 %) that belong to 37 years to 41 years old; 2 respondents (or 4.5%) that belong to 42 years to 47 years old.

Majority of the respondents are singles, 24 respondents (or 54.54%). Then, there are 18 respondents (or 40.9%) who are married, 2 respondents (or 4.54%) who are separated, and 0 respondent in widowed.

Out from 44 respondents, 26 respondents have maximum four years of work experience (or 59.1%). Then there are 11 respondents (or 25%) who had within 5 years to 9 years of work experience; 6 respondents (or 13.63%) has a clinical experience of 6 years, and 1 respondent (or 2.27%) that belong to 20 years to 24 years of work experience. Thus, the data revealed that more than half of the total number of nurses who attend patients with Covid Infection in Zamboanga Sibugay Province had a 0-4years of work experience.

Out of 44 respondents, majority or 17 respondents are 0-4 months of length of experience with caring for patient with COVID-19 (38.6%) followed by 13 respondents (or 29.54%) that belong to 20 months to 24 months; 7 respondents (or 15.90%) that belong to 5 months to 9 months; 5 respondents (or 11.36%) that belong to 15 months to 19 months; and 2 respondents (or 4.54%) that belong to 10 months to 14 months. The data showed that majority of the nurses assigned to covid units has 0-4 months caring for affected patients.

Majority of the respondents with a total number of thirty-five (35) registered nurses (79.54%) had a response of "no" while there were only nine (9) registered nurses who had a response of "yes". This only implies that nearly all covid nurses did not undergo formal orientation and training which are vital to be able to deliver efficient and effective nursing care management among covid patients.

The nurses in Zamboanga Sibugay who attended patients admitted in COVID19 Units has moderate level of stress with a weighted mean of 3.28 described as neutral interpreted as moderate level of stress.The nurses in Zamboanga Sibugay who attended patients admitted in COVID19 Units has moderate level of fear with a weighted mean of 3.36 described as neutral.

There is no significant relationship between age of the respondents and their perceived level of stress and fear, the marital status showed a significant relationship to the respondents' perceived level of stress and fear. Years of work experience showed no significant relationship to the respondents' perceived level of stress and fear so with the respondents' length of experience of caring for patients with Covid-19. Finally, Training/orientation showed significant relationship to the respondents' perceived level of stress and fear.

The results of the subjective assessment where they were asked on how they cope with their stress and fear related to the COVID-19 pandemic, and whether they believed that their level of stress and fear could affect the quality of their patient care and safety. They dealt with their stress and anxiety by self-care related practices (22.7%) like consumption of healthy diet, physical activities, and getting some good rest. 22.7% were focusing on positive thoughts, (37.5%) relaxing, and recharging as well as (13.6%) praying had helped them cope with their moderate level of fear and stress. Some (6.8%) have reported that managing their stress and fear is vital to not affect their nursing care performance while they are attending their patient's needs.

Majority (68.18%) of the nurses agreed that their level of stress and fear could affect the quality of patient care and safety by responding "*to able to give quality nursing care to patients, nurses must be mentally, emotionally, physically stable, as well as in other aspects, because certain emotions can influence how they provide health care to patients*." On the other hand, 35% of the nurses believed that their perceived stress and fear does not affect their task performance as covid nurses. Their explanations were: "*the Lord is my shepherd*", "*providing care and safety to the patient is a calling/passion of mine,*" "*because I am a nurse and I am flexible in any situation,*" and "*because I believe that if you know how to handle your stress and fear, it will not definitely affect the quality of patient care and safety,*" "*because I sincerely do my job for my patients with love and care.*"

4. CONCLUSION

Based on the findings, the researcher concluded that the nurses in Zamboanga Sibugay province who were tasked to attend patients infected with covid 19 virus are experiencing moderate level of stress and fear.

Moreover, the results signaled some predictive factors that may affect the experience of stress and fear among nurses, such as marital status and attendance to formal orientation and training about covid 19 and its management, which may influence the quality of patient care and safety.

Having to go to work during the COVID-19 pandemic has put nurses under enormous and unprecedented stress, jeopardizing their physical, emotional, and social health. Staff under excessive or prolonged stress becomes more prone to frequent absences from work or reduced productivity while at work, accidents and mistakes. In the COVID 19 pandemic, this may mean compromised quality and safety care, breach of protocols and guidelines, increased risk of infections, and compromised capacity of the health system and emergency response teams to fight the pandemic.

In line with this, the researchers understood that while nurses have the responsibility of caring for themselves and verbalizing their needs and concerns, many of the efforts to prevent and reduce stress and care for mental health of nurses must be made by organizations, managers, and health administrators.

5. IMPLICATIONS

Assessing the amount of stress and panic experienced by nurses working during the COVID-9 pandemic is a priority that nursing leaders should examine. Additionally, identifying the elements that contribute to fear and stress associated with caring for infectious patients or being exposed to information about outbreaks is critical for understanding the underlying reasons and developing interventions to address these contributing factors (e.g. coping measures, interventions to enhance emotional resilience).

6. RECOMMENDATIONS

Organizations, managers, and health administrators must show support and understanding to their nurses. They must establish structured strategies and actions as to how to reduce stress and build resilience during the pandemic. Preparing nurses for their job is one action administrators can take to help nurses cope with psychological threats during covid-19. Nurses must have a clear understanding of their own roles and responsibilities. Adequate training must be provided on occupational health and safety topics.

Protecting nurses from their job is also a primary responsibility of organizations, managers and health administrators. This can be shown by providing nurses with sufficient PPE and infection protection and control supplies to protect themselves from infection as well as giving them protection from incidents of harassment and violence, including physical and legal protection. Above all, caring for nurses can be done by protecting and upholding their rights.

Finally, organizations, managers and health administrators must make services available for nurses. Make sure that those who require additional mental health and psychological support services have access to them, and that they are aware that they can do so in confidence. And in times of crisis situation, they can access to mental health care facilities.

It is suggested that interviews be conducted with nurses to determine the factors that influence their level of stress and fear during such times. These studies will aid in the development of supportive intervention measures to reduce the psychological impact on registered nurses during an outbreak, thereby increasing patient safety and ensuring high-quality care.

REFERENCES

Alnazly E, Khraisat OM, Al-Bashaireh AM, Bryant CL (2021) *Anxiety, Depression, Stress, Fear and Social Support During COVID-19 Pandemic Among Jordanian Healthcare Workers*. Plos ONE 16(3): E0247679. Https://Doi.Org/10.1371/Journal.Pon e.0247679 (November 2020): Pages 4217-4226

Bademli K, Duman ZC (2017). *Conceptual Framework for Nurses in the Use of the Neuman Systems Model on Caregivers of People Suffering by Schizophrenia*. Int Arch Nurs Health Care 3:079. doi.org/10.23937/2469-5823/1510079

Barello Serena, Graffigna Guendalina (2020). *Caring for Health Professionals in the COVID-19 Pandemic*

Emergency: Toward an "Epidemic of Empathy" in healthcare. Frontiers in Psychology (09 June 2020).

Emanuele Maria Giusti, Elisa Pedroli, Guido E. D'Aniello, Chiara Stramba Badiale, Giada Pietrabissa, Chiara Manna, Marco Stramba Badiale, Giuseppe Riva1, Gianluca Castelnuovo, & Enrico Molinari (2020). *Psychological Impact Of COVID-19 Outbreak on Frontline Nurses: A Cross-Sectional Survey Study*. Front Psychol. 2020; 11: 1684.

Faridah Amin, Salman Sharif, Rabeeya Saeed, Noureen Durrani and Daniyal Jilani (2020). *COVID-19 pandemic-knowledge, perception, anxiety and depression among frontline doctors of Pakistan.* BMC Psychiatry Part of Springer Nature (23 September 2020).

Fatih Ozbay, MD; Douglas C. Johnson Phd, (2007). *Social Support and Resilience to Stress*. National Center forBiotechnology Information, U.S National Library of Medicine (May 2007).

Ines Fronteira, Paulo Ferrinho (2011). *Do nurses have a different physical health profile? A systematic review of experimental and observational studies on nurses' physical health.* Blackwell Publishing Ltd, Journal of Clinical Nursing (2011).

Kang L, Liy, Hu S, Chen M, Yang C, Yang B, Wang Y, Hu J, Lai J, Ma X, Chen J, Guan L, Wang G, Ma H, Liu Z (2020). *The Mental Health of Medical Workers in Wuhan, China Dealing with the 2019 Novel Coronavirus.* National Center for Biotechnology Information, National Library of Medicine. DOI: 10.1016/S2215-0366(20)30047-X

Lauren Penwell-Waines, Wendy Ward, Heather Kirkpatrick, Patrick Smith, Marwan Aboujoud (2018). *Perspectives on Healthcare Provider Well-Being: Looking Back, Moving Forward.* National Library of Medicine (2018).

Nader Salari, Amin Hosseinian-Far, Rostam Jalali, Aliakbar Vaisi-Raygani, Shna Rasoulpoor, Masoud Mohammadi, Shabnam Rasoulpoor & BehnammKhaledi-Paveh (2020). *Prevalence Of Stress, Anxiety, Depression Among the General Population During The COVID-19 Pandemic: A Systematic Review and Meta-Analysis.* Springer Nature, Biomed Central Ltd (July 2020).

Na Zhu, Ph.D., Dingyu Zhang, M.D., Wenling Wang, Ph.D., Xingwang Li, M.D (2020). *A Novel Coronavirus from Patients with Pneumonia in China, 2019.* The New England Journal of Medicine (2020).

Nyblade Laura, Stockton Melissa, Giger Kayla, Bond Virginia Ekstrand Maria, Lean Roger, Mitchell Eleen, Nelson La Ron, Sapag Jaime, Siraprapasiri Taweesap, Turan Janet, Wouters Edwin (2019). *Stigma in health facilities: why it matters and how we can change it.* Springer Link (February 2019).

Ritin Fernandez, Heidi Lord, Elizabeth Halcomb, Moxham Lorna, Rebekkah Middleton, Ibrahim Alananzeh, Laura Ellwood (2020). *Implications for COVID-19: A systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic.* National Library of Medicine (2020).

Rong-Hui Du, Li-Rong Liang, Cheng-Qing Yang, Wen Wang, Tan-Ze Cao, Ming Li, Guang-Yun Guo, Juan Du, Chun-Lan Zheng, Qi Zhu, Ming Hu, Xu-Yan Li, Peng Peng, Huan-Zhong Shi (2020). *Predictors of mortality for patients with COVID-19 pneumonia caused by SARS-CoV-2: a prospective cohort study.* European Respiratory Journal (2020).

Yumiko Oyama, Hiroki Fukahori (2015). *A literature review of factors related to hospital nurses' health-related quality of life.* National Library of Medicine (2015)