

The Mediating Effect of Perceived Social Support on the Relationship between COVID-19 Anxiety and Psychological Distress of Medical Frontliners

Myrachelle Joyce C. Cornelio, R^Pm¹

Abstract

This study determined the Mediating Effect of Perceived Social Support on the Relationship between COVID-19 Anxiety and Psychological Distress of Medical Frontliners. Utilizing a descriptive-correlational research design, data were obtained from 300 medical frontliners who are active in clinical duties during the COVID-19 outbreak in a Northern Mindanao City, Philippines. The researcher utilized a stratified sampling technique in selecting qualified respondents. Moreover, a combination of online surveys and physical surveys were used to obtain the data. The researcher utilized the mean and correlation coefficient and Sobel Z test for mediation in analyzing the data. The researcher adapted the COVID-19 Anxiety Scale, Multidimensional Scale of Perceived Social Support (MSPSS), and Kessler Psychological Distress Scale (K10) as research instruments. It was found that there is a moderate level of mean scores for Psychological Distress and COVID-19 anxiety and a high level of perceived social support among Medical Frontliners. Also, results revealed that there are significant relationships between COVID-19 anxiety and Psychological Distress, between COVID-19 anxiety and Social Support, and between Social Support and Psychological Distress. Further, it was revealed that there was a significant partial mediation of perceived social support on the relationship between COVID-19 anxiety and Psychological Distress.

Keywords: COVID-19 anxiety, psychological distress, social support, mediation, medical front liners, Philippines

1. INTRODUCTION

COVID-19 has been a health burden globally. This pandemic has affected various areas of human existence especially the economical, physical, mental, and emotional states of the Philippines (Labrague & De los Santos, 2020, Silva et al., 2020). In the Philippines, 1,455,585 Filipinos have been infected by the virus and 25,650 deaths were reported as of July 9, 2021 (World Health Organization, 2020). Such an outbreak spurred anxiety from patients, frontliners, and citizens (Maben & Bridges, 2020; Labrague & De los Santos, 2020; Silva et al., 2020). It has been acknowledged that health institutions are high-risk workplaces (Mekonen et al, 2020). The COVID-19 pandemic has contributed to additional workloads and high risks to our health professionals.

Being exposed to many hazards has placed a lot of burdens and is regarded to inflict a profound mental impact on medical frontliners (Wang et al, 2020; Kafle et al., 2021; Mazza et al, 2021). Moreover, anxiety and psychological distress were present in both health workers and patients as seen in other countries like Albania and Germany in previous pandemic outbreaks (Mohammed et al., 2015; Brunette, et Al., 2017; Kong et al., 2020; Labrague et al, 2020; Sanchez - Garcia et al., 2020). Also, this has urged the healthcare systems to identify the immediate psychological needs of the patients (Solomou & Constantinidou, 2020; Wang et al., 2020).

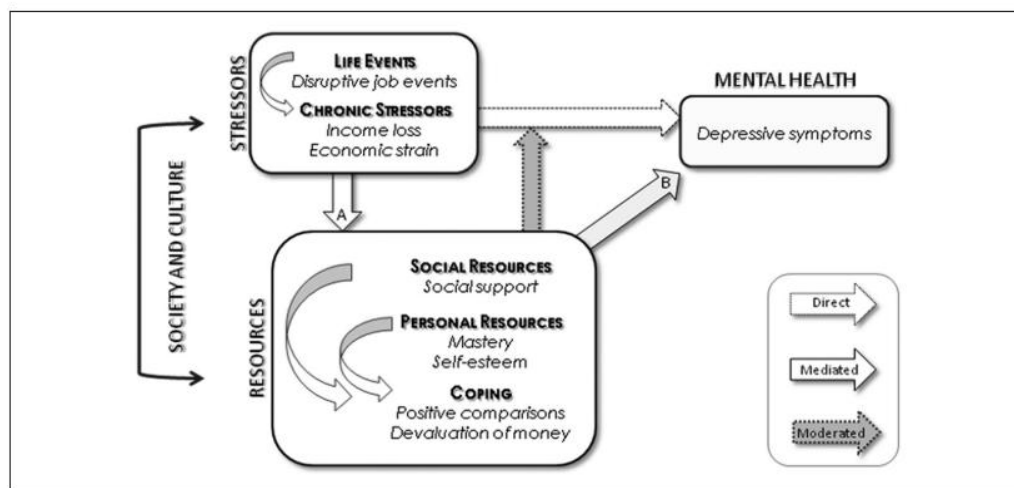
In the Philippines, health workers have been acknowledged to be the key to battling the pandemic. Some studies have confirmed rising cases of psychological distress during the pandemic (Biana & Joaquin, 2020; Sadang, 2021) however, COVID-19 anxiety has not been explored. One study has found that those who have active clinic duties during a pandemic are more at risk for psychological distress (Wang et al., 2020). Psychological Distress experienced by clinicians and other healthcare providers will recur in future health crises (Heath et al, 2020).

¹ North Cotabato, Philippines, corneliomjc@gmail.com

In the Philippines, less is still known about COVID Anxiety, Psychological Distress, and Social Support. In addition, few healthcare providers acknowledge the value of mental health (Solomou & Constantinidou, 2020). One positive result of this study may be the development of mobile or modular social support for medical frontliners. This is to address the call of medical frontliners to give interventions due to the various job disruptions battling COVID-19 e.g. being underpaid, and having a heavy workload (Biana & Joaquin, 2020).

Leonard Pearlin's Psychological Distress Theory (see Figure 1) states that humans are constantly evolving due to various situations that come with stress. Acute or chronic life changes are equally given value as it both contributes as stressors to individuals. The COVID-19 pandemic has been one such situation that has contributed to great psychological distress (Casagrande et al., 2020; El-Zoghby et al., 2020). Accumulated anxiety can raise levels of psychological distress. Anxiety, particularly COVID-19 anxiety has emerged from life events such as the pandemic that had disrupted the jobs and routines of everyone globally, especially our healthcare workers; thus, this leads to psychological distress (Aneshensel & Avison, 2015; Shultz et al,2019; Brooks et al., 2020). In support, people who have high anxiety contribute to the psychological distress of the significant people around them (Segrin et al, 2007). According to Pearlin, social network support is needed after the coping process. This could come from family, friends, and youth groups. Moreover, social support paired with coping strategies reduces the experience of psychological distress ([Centers for Disease Control and Prevention, 2020](#); Akbar & Aisyawati, 2021). The higher the anxiety, the higher chances of coping according to the behavioral theory of depression. The restrictions of movement from the lockdown have marked people that they have less environmental rewards and high environmental suppressors such as social support; thus, physical social support was not accessible (McPhee et al, 2020). Because of this constant instability of the situation and various appearances of new variants of the virus, humans are experiencing various anxiety and further develop symptoms of psychological distress if not prevented. (Aneshensel & Avison, 2015). Accumulated anxiety from the changes in the workload and the environment leads to psychological distress and is mediated by social support as a coping strategy (Karasek,1979; Galehdar et al.,2020).

Figure 1. Pearlin's original stress model (1981)



COVID - related distress has been associated with anxiety symptoms as time progress (Adams et al., 2021). Coping strategies paired with social support are significantly correlated to a decrease in psychological distress (Akbar & Aisyawati, 2021). Moreover, social support from families has been evident in Filipinos since the Philippines practices close family ties; Thus, facilitating cooperation to make the atmosphere less stressful (Andres,1994; Saito, 2010).

Figure 2 shows the independent variable, COVID- 19 Anxiety, defined as the extreme apprehension about being infected with COVID-19, or the possibility of the idea of death when infected with COVID-19 (Pakpour & Griffiths, 2020). COVID-19 anxiety has been linked to producing psychological distress (Hijazi et al, 2022). As time progresses, the threat has decreased; however, the appearance of a new variant of the virus has been sending other countries to another wave of battling the pandemic. Coping strategies were found to mediate psychological distress ([Centers for Disease Control and Prevention, 2020](#); Akbar & Aisyawati, 2021).

Furthermore, the lockdown contained us for a long amount of time with our family members; however, it also fed us information that increased our anxiety about the virus (Brooks et al, 2020). Psychological distress as the dependent variable is described as the inability to concentrate and becoming restless (Mohammed et al., 2015). Visiting loved ones who are infected with the virus was prohibited hence coping using social support is only through the online platform available. Therefore, psychological distress developed in individuals, and some of the family members have experienced discrimination among acquaintances who have been infected, especially among medical frontliners (Silva et al., 2020; Zhang et al., 2020). Social support could be a mediating factor for COVID anxiety and Psychological Distress and is used as a coping strategy to combat the psychological distress brought by the anxiety. It is innate in Filipinos to have a sense of camaraderie and neighborliness (Palispis, 1995). To identify the relationship between COVID – anxiety and Psychological Distress, Correlation Coefficient was utilized, and the Sobel Z test was used to identify the relationship between the variables and the mediating effect of social support.

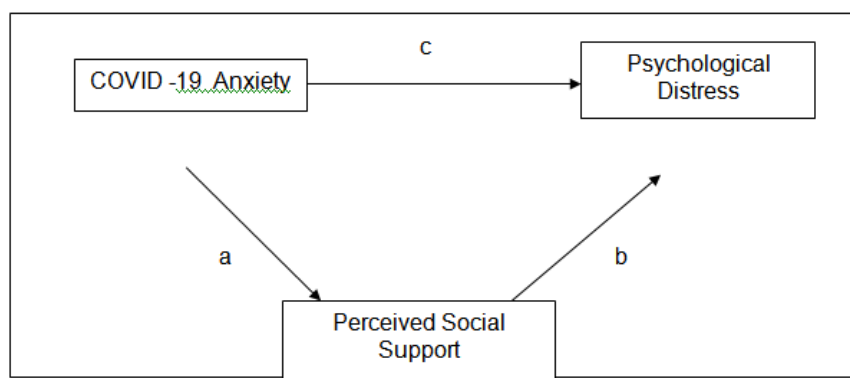


Figure 2. Conceptual Framework showing the relationship of the variable

This study about COVID-19 Anxiety, Psychological Distress, and Perceived Social Support is believed to be a contributory factor to the healthcare system of the Philippines. This is helpful to various healthcare servicing companies to equip their healthcare workers in maintaining their mental health. Moreover, the rise of the disruption of mental health could give the opportunity for mental health care practitioners to respond to calls in global crises such as COVID-19 pandemic. Moreover, mental health will be more valued, and an increase in performance may also be a possibility. The integration of the findings will also lessen the turnover of employees due to psychological distress during health crises such as pandemics. Furthermore, this increases the awareness of researchers on the levels of anxiety and psychological distress in Mindanao, specifically in a Northern Mindanao City. Researchers can compare the levels of anxiety, psychological distress, and social support from various countries through the data collected. Lastly, it will lead to the development of a mobile social support program or a modular program for those who are battling COVID-19, especially mental health care providers such as those with the Department of Social Welfare and Development and other private mental health providers. The development of mobile social support programs could help us prepare for another pandemic with a similar case in the future.

This study defines COVID-19 Anxiety as the anxiety symptoms that are focused on COVID-19 as the source of anxiety. This was measured by the COVID Anxiety Scale which is composed of 7 items (Silva et al, 2020). Anxiety was found prevalent among medical frontliners (Labrague & De los Santos, 2020; Kong et al., 2020). Generally, it has been found that there is a moderate-severe anxiety symptom found in civilians (Solomou & Constantinidou, 2020). Among Chinese medical frontliners amidst the COVID-19 outbreak, women were reported to have severe symptoms of anxiety (Lai et al., 2020). To add, this resulted in various inflictions to the psychological well-being and quality of life (Kong et al., 2020; Silva et al., 2020).

In the Philippines, long months of community quarantine were implemented due to the high levels of citizens infected with COVID-19. (Yee, 2020). Hence, prolonged isolation resulted in an increase in mental health problems such as anxiety in Filipinos. (Benke et al, 2020; Talidong & Toquero, 2020; Tee et al., 2020). In support, the pandemic is known to produce negative effects on mental health such as impairment in performance.

During the SARS epidemic in 2003, elevated levels of anxiety and depression were present and have persisted 3 years later (Liu et al., 2012; Qiu et al., 2020). Anxiety, pressure, emotional exhaustion, and physical illness could contribute to losing frontliners (Vungkhanching et al, 2016; Giorgi et al.,2020; Magnavita et al, 2021). A study in Italy (Casagrande et al., 2020) supports that there are symptoms of post-traumatic stress disorder, general anxiety, psychological distress, and sleep disorder during the pandemic. Thus, there are expected short and long-term consequences due to the COVID outbreak (Casagrande et al., 2020). Rumination about this subject could affect the psychological functioning of people (Wang et al., 2020). High mortality rates, morbidity, resource instability, and morbidity rates have also contributed to the levels of anxiety at the start of the pandemic (El-Zoghby et al., 2020)

In addition, the social distancing that is infused with the protocols during this pandemic has contributed to the disturbance of psychological well-being (Silva et al., 2020). Symptoms of anxiety were also present in those who struggled in facing the present COVID outbreak. Furthermore, an increase in acute anxiety levels has been reported by 30.6% compared to 2019.

In contrast, anxiety in a qualitative study was evaluated in various categories. As a result, it was found that such anxiety has multiple sources of reasons. Thus, a blurred line between anxiety, fear, and ignorance has been drawn (Galehdar et al., 2020). Anxiety might also be due to the change of lifestyle, and social relationships due to all the restrictions incorporated with the lockdown. In Italy, sleep quality was affected and can cause anxiety and other psychological conditions (Brooks et al., 2020; Casagrande et al., 2020). High levels of anxiety were specifically focused on worrying about the family getting COVID-19 and not about having symptoms of COVID (Wang et al., 2020). It was found that people who are not yet included in the pandemic have higher anxiety than those who are battling it like the frontliners and the patients who have severe acute respiratory syndromes (Prout et al., 2020). However, parents and those who have social roles are more likely to develop stress and anxiety due to the consequences of being locked down or quarantined. One of these problems is being economically restrained for 14 days. Acute and chronic changes to one's life routine equally contribute to the stressor of the individual. (Aneshensel & Avison, 2015)

Social Support is the protection from an emotional breakdown that is received from family, friends, or significant others (Kim & Park, 2017; Labrague, et al., 2018) This was measured through the Multidimensional Scale of Perceived Social Support which is composed of 12 items (Zimet, Dahlem, Zimet & Farley, 1988) in this study. During the pandemic, implicit emotion regulation processes have been predictive of psychological distress (Prout et al., 2020). However, social support was found less in patients compared to the frontliners where 33.9% were found to have anxiety symptoms. (Li et al., 2021) . Psychological well-being is preserved when there is online social support (Yu et al., 2020). Moreover, Psychological Distress had a negative relationship with Social Support (Sánchez-Moreno et al., 2014)

In the study of Albanian Cancer caregivers (Burnette et al.,2017), they found that social support has mediated psychological distress and quality of life. The nature of their job such as long-term monitoring of financial, emotional, and personal care has decreased their quality of life, health, and mental health. The participants found that they have a high level of distress, moderate social support, and a poor quality of life. Though social support was less found in patients than in frontliners, this study suggested that caregivers still have high levels of distress. This displayed contradicting results (Burnette et al., 2017, Solomou & Constantinidou, 2020) Moreover, it was found that the less social support, the more anxiety patients experience. Thus, mental health interventions were found essential for hospitalized COVID-19 patients (Kong et al., 2020). In Egypt, stress increase has been coming from different settings like work at home. A lot also felt the financial stress contributing to the anxiety. Support coming from varied people has also increased: 40.6% comes from family members, 24.2% from friends, and 34.5% is shared with others. Though feelings of anxiety have increased, social support is also evident. The COVID-19 pandemic had affected both psychological and social well-being among Egyptian adults (El-Zoghby et al., 2020). Social support has been regarded as key to coping with stress and anxiety throughout the pandemic or any crisis. It is said to be the protection from emotional breakdown (Kim & Park, 2017; Labrague, et al., 2018). Family income stability, living with parents, and overall social support were protective factors against anxiety (Solomou & Constantinidou, 2020) Social Support has a weak significant correlation with anxiety in the study of Jordanian healthcare workers (Alnazly et al., 2021).

Psychological Distress is defined as not being able to concentrate, losing much sleep over worry, and being unhappy or depressed (Mohammed et al., 2015). This was measured with the Kessler Psychological Distress Scale (K10) which has 10 questions about emotional states, each with a five-level response scale (Kessler et al., 2003). In this study, medical frontliners were challenged due to the COVID outbreak in 2019 in Sichuan, China. Due to the surge of COVID patients, graduating health professional students have been forced to combat the pandemic along with the professionals and 84% of the participants have high psychological distress (Li et al., 2020). In the Philippines, frontline nurses who were not equipped with COVID-19-related training and those who worked part-time have higher levels of fear of COVID-19. Moreover, an increase in the level of fear was associated with job dissatisfaction and increased psychological distress (Labrague & De los Santos, 2021). In addition, the lack of guidelines and Personal Protective Equipment (PPE) contributes to the psychological distress of medical frontliners (Shechter, 2020).

In the Philippines, it has been reported that people in Mindanao have lower psychological distress and 52.1% didn't feel distressed (Marzo et al., 2020). Many factors were found to be associated with psychological distress such as sex (Solomou & Constantinidou, 2020). Females and young ages were reported to be a factor of psychological distress. Women compared to men had higher GAD scores amidst the pandemic in Cyprus, Europe. Moreover, students have a higher GAD score compared to those who are employed thus students are highly affected by the COVID-19 pandemic. Although employees are exposed to the virus, students got higher GAD scores (Prout et al., 2020; Shevlin et al., 2020; Solomou & Constantinidou, 2020). Anxiety was not regarded as a predictor of Psychological distress (Prout et al., 2020). Resilience and financial restraints strongly influence psychological distress (Aruta, 2021).

Psychological distress may be due to other factors rather than lack of anxiety or social support such as discrimination from neighbors, being infectious towards other family or close contacts, frustration, staying in quarantine, boredom, or feeling of possessing inadequate supplies and financial loss (Zhang et al., 2020). Filipino nurses who perceived higher social support were less likely to showcase COVID-19 anxiety (Labrague & de los Santos, 2020). However, the frequency of social interactions or social support is also considered when it comes to its role in the COVID-19 pandemic (Galatzer-Levy et al., 2012; Tindle & Moustafa, 2021). Lack of a partner or significant other was also a factor in limiting the social support that an individual might have (Lahav, 2020). Thus, the lower the contact, the higher the risk of having COVID-19 anxiety (Glowacz, & Schmits, 2020).

Informal social support from family and friends was known to preserve the psychological health and mental well-being of medical front liners during the COVID-19 pandemic. Furthermore, Filipinos with high social support were less likely to have stress and had improved self-efficacy (Xiao et al., 2020). The COVID-19 pandemic has forced people to isolate and social distance thus, social support has been hindered or challenged. However, it was found out that face-to-face contact isn't necessary to be credited as social support (Tindle & Moustafa, 2021). In support, isolation or the lack of social support is one of the strongest predictors of psychological distress (Brooks et al., 2020). This implies that a mobile social support program may be possible.

In contrast, social support, specifically from friends and family has no association with psychological distress in Filipino immigrants (Singh et al., 2015). Moreover, it is reported that single people are more likely to have less family social support compared to married people or people in non-marital romantic relationships (Adamczyk & Segrin, 2015).

It has been expected that Psychological Distress increases during the COVID-19 pandemic (Tindle & Moustafa, 2021; Abdul Latif et al., 2022). The level of psychological distress is found out to be linked to COVID-19-related stressors such as being diagnosed and belonging to a group of positive patients. Moreover, those who have COVID-19-related anxiety are found to have past experiences of trauma and have suffered from clinically significant depression. Thus, Psychological distress might be a trigger prior to COVID-19 anxiety (Lahav, 2020). It was found that the pandemic was associated with various mental health problems such as anxiety and psychological distress (McPhee et al., 2020). Few pieces of research concerning medical frontliners about their mental health conditions and some are just exclusive to nurses (Labrague et al., 2020). Moreover, in the Philippines, it is more focused on the citizens and the patients. Furthermore, the medical frontliners have been asking for psychological interventions. In other countries, psychotherapy and counseling are provided however, in the country, few organizations have acknowledged providing such interventions (Biana & Joaquin, 2020). The social support of frontliners concerning anxiety and psychological distress has not been explored as to their association with each other. Moreover, anxiety particularly in COVID-19 anxiety has been found to increase along with psychological distress. Therefore, this study seeks to explore the mediation of perceived social support in the relationship between COVID-19 anxiety and Psychological Distress.

The objective of this study is to identify the levels of COVID-19 anxiety, psychological distress, and social support of Medical Frontliners and to establish the mediation effect of perceived social support on the relationship between COVID-19 Anxiety and Psychological Distress. The study will describe the level of COVID-19 anxiety of the medical frontliners. It will also ascertain the level of Psychological Distress and measure the level of Perceived Social Support. Moreover, it will establish the significance of the relationship between COVID-19 Anxiety and Psychological Distress, Psychological Distress, and Perceived Social Support, and COVID-19 Anxiety and Perceived Social Support. Lastly, this will determine the mediating effect of perceived Social Support on the relationship between COVID-19 anxiety and Psychological Distress.

This study assumes the null hypotheses, and this is tested at 0.05 level of significance. First, there is no significant relationship between Psychological Distress and Perceived Social Support. Second, there is no significant relationship between Covid Anxiety and Perceived Social Support. Third, there is no significant relationship between Psychological Distress and Covid Anxiety. Lastly, perceived Social Support has no mediating effect on the relationship between COVID-19 anxiety and Psychological Distress.

2. METHOD

This section contains the participants, material/Instruments, and the design and procedures that were employed in this study.

2.1 Research Respondents

The respondents of the study were medical frontliners in a Northern Mindanao City. This study was conducted among medical frontliners from different hospitals. The city has an area of 358.47 km² (138.41 sq mi) and is located in Region XII (SOCCSKSARGEN) on the Island of Mindanao, Philippines. It has currently 8 hospitals and has more or less 420 medical frontliners including private establishments in the vicinity. The 300 participants are employed in different hospitals and private organizations in the city who were surveyed. The sampling technique that was used was stratified random sampling in order to select the participants. The distribution of the participants is as follows: seventy (70) from Cotabato Provincial Hospital, fifty (50) from Madonna Hospital, fifty (50) from Kidapawan Doctors Hospital Inc., forty (40) from City Hospital, thirty (30) from Kidapawan Medical Specialist Center Inc., thirty (30) from Midway Hospital and twenty (20) from other private health providers such as pharmacies and private swabbing facilities. The researcher surveyed 300 respondents because out of a total population of less than 1000. It covers thirty (30) percent to ensure that the samples are correctly represented (Newman, 2007).

The inclusion criteria were as follows: ages 21 years or older, medical frontliner, and active clinical duties during the pandemic as a medical frontliner. The participants were all graduates of the medical field and active in battling the COVID pandemic (Hilton et al, 2019). A medical frontliners may be a pharmacist, medical laboratory scientist, nurse, doctor, or radiologic technologist as long as he/she meets the criteria above mentioned. For the exclusion criteria, the participants should not be accounting staff or anyone who is not medically involved in catering to COVID-19 patients. The participants of the study have the right to choose whether or not to participate in research studies voluntarily and declining to participate in any research will not affect their access to current or future care in any way.

2.2 Materials and Instruments

The researcher used three standardized, contextualized questionnaires to measure the variables that were studied. The researcher used the following instruments to measure the variables of the study. First, COVID-19 Anxiety is the anxiety symptom whereas COVID-19 is the source of anxiety. A COVID-19 Anxiety Scale is composed of 7 items to measure COVID Anxiety, and thus obtained a Cronbach's alpha of 0.877 (Silva et al, 2020). The participants have indicated how much they felt about each statement recently regarding COVID-19, using a 5-point scale (1 = strongly disagree and 5 = strongly agree).

Second, Psychological Distress refers to the inability to focus, experiencing less sleep because of worry, and being unhappy or depressed (Mohammed et al., 2015). Kessler Psychological Distress Scale (K10) is a five-level response scale that is composed of 10 questions (Kessler et al., 2003). The questionnaire obtained a Cronbach's alpha of 0.91 indicating a high level of internal consistency of the K10 (Sampasa-Kanyinga, 2018).

Lastly, Social Support is the protection from an emotional breakdown that comes from the following indicators; family, friends, or significant others (Kim & Park, 2017 Labrague, et al., 2018). The Multidimensional Scale of Perceived Social Support (MSPSS) is composed of 12 items to measure perceived Social Support with a Cronbach's alpha of 0.758 (Zimet, Dahlem, Zimet & Farley, 1988).

In evaluating the level of the variables measured, the following five orderable gradations with their respective range of means and descriptions are considered; With a mean ranging from 4.20-5.00, a very high descriptive level is associated. This means that the measures of COVID-19 anxiety, perceived Social Support, and Psychological Distress are always manifested and/or observed. With means ranging from 3.40-4.19, a high descriptive level is associated. This means that the measures of COVID-19 anxiety, perceived Social Support, and Psychological Distress are often manifested and/or observed. Means ranging from 2.60 – 3.39, a moderate descriptive level is associated and it means measures of COVID-19 anxiety, perceived Social Support, and Psychological Distress are sometimes manifested and/or observed. For means ranging from 1.80-2.59, a low descriptive level is associated, and this implies that the measures of COVID-19 anxiety, perceived Social Support, and Psychological Distress are seldom manifested and/or observed. Lastly, means ranging from 1.00-1.79 is associated with a very low descriptive level and this means the measures of COVID-19 anxiety, perceived Social Support, and Psychological Distress are almost never manifested and/or observed.

The researcher had the adapted questionnaires validated by four (4) experts to ensure validity garnering the result of 5.0 for Clarity of Directions and Items with a description of excellent, 5.0 for Presentation and Organization of items with a description of excellent, 5.0 for Suitability of items with a description of excellent, 5.0 for Adequateness of Items per category or indicator with a description of excellent, 5.0 for Attainment of Purpose with a description of excellent, 5.0 for Objectivity with a description of excellent and 5.0 for Scale and Evaluation with a description of excellent. Hence, garnering an overall rating of 5.0 with a description of excellent. Thus, the instrument that was used is valid.

2.3 Design and Procedure

The study used a non-experimental descriptive-correlation research design. To assess the level of COVID-19 anxiety, Perceived Social Support, and Psychological Distress. This design showcases the correlation between the variables. Pearson Correlation Coefficient was utilized to determine the relationship between variables. A mediation technique was also applied to determine the mediating effect of perceived social support in the relationship between COVID-19 anxiety and Psychological Distress. The mediation study will showcase the process of how COVID-19 anxiety affects Psychological Distress (Wall, 2012). Hence, the research design is sufficient in addressing the research objectives.

The data collection commenced around the first week of May 2022 and ended the second week of June 2022. The researcher gave a letter of permission to conduct from the target hospitals attached with the letter of intent and the sample questionnaires with the consent form to gain access during the clinical hours of the respondents. Then, an agreement between parties was done to ensure data privacy and other ethical concerns, specifically with the officers in charge. Some hospitals have strict research requirements and documentation, so the researcher also must comply with rules such as not leaving the questionnaires, courtesy calls with the department heads, and adhering to the research protocols. Upon gaining permission, the researcher started the data collection. The data was collected through physical forms and via google forms. This was to cater to the flexible schedules of medical frontliners since some hospitals have two (2) to three (3) working schedules. The researcher has catered to both day and night shifts to maximize the data collection.

After data gathering, the researcher adhered to protocol by partnering with a university statistician to assure the accuracy and appropriateness of the statistical tool used to address the objectives of the study. To answer the describe the level of COVID-19 anxiety, Perceived Social Support, and Psychological Distress, the mean was found to be the best tool due to the normal distribution of data. As for the mediation analysis, the researcher used the Sobel Z test. This is in consideration of a large number of samples. Sobel Z test is used to determine the perceived Social Support's mediating effect on the relationship between COVID-19 anxiety and Psychological Distress (Özdil & Kutlu, 2019).

The procedure adhered to the research ethics applied by the UM Ethics Review Committee. The respondents' participation was voluntary. No coercion was executed for the purpose of the study. Moreover, the respondents may refuse or quit participating at any time during the study. The identity of the respondents was preserved through anonymity and personal information was kept in utmost confidentiality. The researcher included informed consent that would inform the respondent about the purpose, risks, and benefits of participating in the study.

The researcher ensured that all respondents were medical frontliners. The study did not involve any high-risk situations that will neglect the physical, psychological, and socioeconomic aspects of the participants as the study only focused on their experiences. Also, the researcher made sure that minimum health protocols were followed. The given information would help human resource personnel and mental health professionals in improving mental health programs. Proper referencing was observed using American Psychological Association (APA) format. Moreover, the manuscript was processed through the Turnitin application to assure that the referencing is properly attributed to the authors. Grammarly application was also utilized to ensure proper grammar. There was no manipulation of data. All documents included in the appendices are authentic and no forgery or any form of fabrication was executed. The execution of this study was for educational attainment and development. There will be no overclaiming or exaggerations that would be included. Only the collected data is presented. No deception took place during the process of the study. There was no coercion of the respondents in participating in the said study. A letter was also prepared and distributed addressed to the President and Human Resource Personnel of participating hospitals to ensure permission to conduct the study. The researcher ensured that the platform that was used for acquiring the data online will be safe from threats of confidentiality. To assure security, the researcher used google forms as its online platform and linked the form to an email address that was created solely for the purpose of the research. The form was not linked to the researcher's personal email to avoid a mix of incoming data or communications.

No copyright law was violated, and the researcher is willing to publish the study if advised and owns authorship of the study along with her co-author.

In addition, to ensure that the researcher has followed the protocols, all procedures underwent the process as presided by the UM Ethics Review Committee and is evident in the Certificate of Approval with a UMERC Protocol No. UMERC-2022-184.

3 Results And Discussion

The results from the gathered data are presented in this section. The order of the presentation is based on the objectives of the study.

3.1 COVID-19 Anxiety

Table 1

Level of COVID-19 anxiety of medical frontliners

Indicators	Mean	SD	Descriptive Level
overall COVID-19 Anxiety	3.04	1.037	Moderate

The data presented in Table 1 is the level of COVID-19 anxiety of medical frontliners in a Northern Mindanao City. With a standard deviation of 1.037 and a mean of 3.04, this showed that the medical frontliners have a moderate level of COVID-19 anxiety. This was acquired using the COVID-19 anxiety scale.

According to Pearlin's Theory, humans constantly evolved during a situation to cope. During the peak of the COVID-19 pandemic, there were high cases of COVID-19 worry or anxiety that led to various behavioral and psychological changes however as they were continually exposed and are currently caring for infected COVID-19 patients a moderate amount of COVID-19 anxiety is shown (Aclon et al., 2022; El-Zoghby et al., 2020).

Generally, the medical frontliners have a moderate level of fear of getting infected with COVID-19. Though medical frontliners have been exposed to COVID-19 patients for a long time, there are still remnants of fear of having an infected family member (Lai et al., 2020, Wang et al., 2020). In support, medical frontliners are concerned more about the assurance of their families in case they fell ill or are infected with COVID-19 (Newman & Majumder, 2022). Those nurses who are worried that they could be the ones infecting their family members have a higher risk of developing anxiety (Cui et al., 2020). Currently, it is not to the point of feeling physical reactions such as feeling their heart racing when reading about COVID-19.

3.2 Psychological Distress

Table 2

Level of psychological distress of medical frontliners

Indicator	Mean	SD	Descriptive Level
overall Psychological Distress	3.31	.530	Moderate

The data presented in Table 2 shows the level of psychological distress of medical frontliners. With a mean of 3.31 and a standard deviation of .530, this meant that the level of psychological distress is moderate. Medical frontliners have responded that they were tired for no good reason, and they also felt they need a significant amount of effort to do their job. The underlying factors were physical discomfort, emotional distress, and mental strain (Real et al., 2022). Also, wearing Personal Protective Equipment and long working hours without a day off due to turnover and lack of manpower might be contributors to being distressed (Cabanguing et al., 2022).

It was also found that medical frontliners have very low levels of feeling restless and feeling worthless based on their response to statements on the psychological distress scale. The recognition of the experiences of health workers has been emphasized during the COVID war. It was generally acknowledged that being a medical frontliner is a heroic job and is rewarding to Filipino frontliners (Tutor et al., 2021; Real et al, 2022). The influence of time and familiarity with handling COVID-19 patients may have influenced the level of psychological distress (Van der Goot et al., 2021).

3.3 Perceived Social Support

Table 3

Level of perceived social support among medical frontliners

Indicator	Mean	SD	Descriptive Level
Significant Others	4.29	.821	very high
Family	4.24	.824	very high
Friends	4.03	.731	high
Overall	4.19	.609	High

The data presented above shows the perceived social support of the medical frontliners. The minimum score obtained by a participant is 1 and a maximum of 5. Significant Others had a mean score of 4.29 with a standard deviation of .821 which means a very high level of social support is received. Constant communication or interactive communication coming from significant others which occurs daily creates personal relationships that help during crises (Ko et al.,2013). Moreover, general commitment or having a partner was found to have an indirect effect on their mental health, and was reported to enjoy more social support (Adamczyk & Segrin, 2015).

Perceived social support from the family had a mean score of 4.24 and a standard deviation of .824 thus, presented at a very high level in medical frontliners. When workload and stress rise, most likely employees demand more attention from the family. The family, in the phase of growth, has shared common norms and values that have developed empathy among the family members. So, when one of the members of the family is in a state of distress, immediate support is provided; thus, being able to provide social support to one another (Habibie et al., 2020).

Social Support from friends as shown in the table had a mean score of 4.03 with a standard deviation of .731 which signifies a high level. This suggests that medical frontliners have friends available in his/her proximity (Baig & Chang, 2020). Moreover, work-related problems are often disclosed to those who can understand what they are going through such as friends (Lashari & Awang-Hashim,2018; Baig & Chang, 2020).

Overall, the perceived social support of medical frontliners had a mean score of 4.19 and a standard deviation of .609 which means they have a high level of perceived social support. Thus, medical frontliners are most likely to receive high social support from significant others, family, and friends (Vadi et al., 2022). This suggests that Filipino medical frontliners have available social support in times of crisis. It may come from family, friends, or significant people in their lives.

3.4 Correlation between variables

Table 4

Correlation matrix of the variables

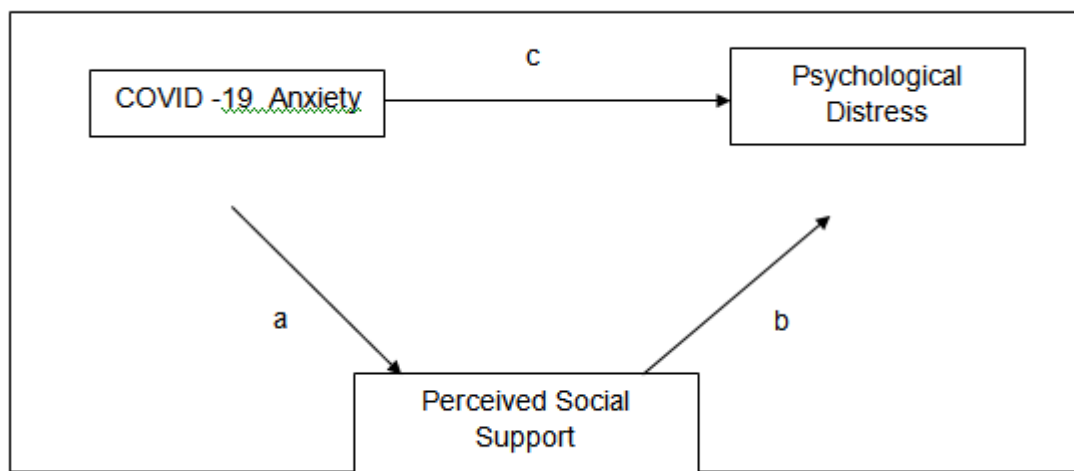
Pair	Variables	Correlation Coefficient	p-value	Decision on Ho
IV and DV	COVID-19 anxiety and psychological distress	0.233	<0.001	Reject
IV and MV	COVID-19 anxiety and perceived social support	0.123	0.033	Reject
MV and DV	perceived social support and psychological distress	-0.309	<0.001	Reject

The data displayed in Table 4 showcases the relationship between the variables using Pearson Correlation Coefficient. The independent variable which is COVID-19 anxiety and the dependent variable which is psychological distress, had a correlation coefficient of 0.233 and a p-value of <0.001; thus, rejecting the Ho1. Hence, having a positive correlation. In the third wave of COVID-19, high psychological distress is highly associated with anxiety (Hijazi et al., 2022). Some studies suggest that it is not the COVID-19 anxiety that was associated with psychological distress but the quarantine procedure (Liu et al., 2012; Wang et al., 2020). Belonging to the official list of confirmed cases caused a high risk for anxiety (Benke et al., 2020). This is because being included in confirmed COVID-19 cases is associated with cases of discrimination (Zhang et al., 2020). Medical frontliners are more equipped and knowledgeable about handling COVID-19 therefore moderate distress might be more associated with other reasons rather than COVID-19 anxiety (Prout et al., 2020; Shevlin et al., 2020; Solomou & Constantinidou, 2020).

COVID-19 anxiety and perceived social support had a correlation coefficient of 0.123 and a p-value of 0.033; thus, rejecting the Ho2. This suggests a positive correlation between the variables (Alnazly et al., 2021). Medical frontliners during the pandemic had long hours of work; therefore, this has limited the contact of medical frontliners to receive social support (Mekonen et al., 2020; Silva et al., 2020). In support, being quarantined and having to adhere to the lockdown procedures limits social contact (Benke et al., 2020). COVID-19 anxiety is present in medical frontliners; the level of social support is also high as presented in Table 3 (El-Zoghby et al., 2020). However, the results contradict the limitations of the situations because as the COVID-19 anxiety increases the Social Support also increases. This might be because medical staff who exhibit anxiety reported having reduced levels of this as social support is provided by friends and family (Xiao et al., 2020). Moreover, the frequency of social interactions may also be a key factor because the higher the frequency of communication, this lowered the level of psychological distress (Galatzer-Levy et al., 2012).

Perceived social support and psychological distress have a correlation coefficient of -0.309 and a p-value of <0.001. Therefore, as psychological distress increases, perceived social support decreases and vice versa (Sánchez-Moreno et al., 2014, Singh et al, 2015). Thus, the Ho3 is rejected. Probably, perceived social support should be paired with coping strategies to minimize psychological distress ([Centers for Disease Control and Prevention, 2020](#); Akbar & Aisyawati, 2021) This suggests that perceived social support contributes as a protective barrier to psychological distress (Singh et al, 2015). Social Support is also known to be a buffer against psychological distress. This signifies that medical frontliners are loved, cared for, and respected (Abu-Kaf et al., 2022). Thus, clinicians may incorporate strategies that promote social support to deal with psychologically distressed medical frontliners.

3.5 Mediation Analysis



Mediation Analysis

Sobel z	-2.031979, $p < 0.05^*$
Percentage of the total effect that is mediated	-18.115031%
Ratio of the indirect to direct effect	-0.153368

Effect Size Measures

Unstandardized Coefficients	
Total:	.225
Direct:	-.564
Indirect:	.072
Ratio Index:	.320

Figure 3. Medgraph showing the variables of the study

The data in figure 3 shows the mediation path analysis using the Sobel Z test. Thus, we can employ the Sobel Test to gauge the statistical significance and magnitude of Perceived Social Support as the mediating factor. Between COVID-19 Anxiety and Psychological Distress, the Sobel test for mediation is significant (-2.031979 , $p < 0.05^*$) (Özdil & Kutlu, 2019). Thus, there is an indirect effect of -18.115031% through the mediation of Perceived Social Support.

This suggests that the effect of COVID-19 anxiety on Psychological Distress shrinks as mediated by perceived social support. This indicates that the H_04 is rejected. This implies that if there is COVID-19 anxiety that contributes to the psychological distress of the medical frontliner, social support may lessen the effect of COVID-19 anxiety. This may also be incorporated into the programs of hospitals to lessen turnover due to psychological distress.

CONCLUSIONS AND RECOMMENDATIONS

Pearlin's Theory proves that Perceived Social Support can mediate between COVID-19 Anxiety and Psychological Distress. However, other factors must be added like mastery and coping strategies that might elevate the effect size of the mediating variable. Moreover, Medical Frontliners still have moderate COVID-19 anxiety and Psychological Distress; at the same time, there is a high level of Perceived Social Support coming from significant others, family, and friends. Since perceived Social Support has a mediating effect on the relationship between COVID-19 anxiety and Psychological Distress, healthcare providers such as hospitals and clinics may opt to strengthen the intervention programs to improve the mental health of their medical frontliners. Moreover, a conceptualization of a mobile or modular program for social support may also be beneficial for hospitals in the case when social distancing and other health protocols will be strictly implemented again.

The results showed moderate levels of psychological distress and COVID-19 anxiety; thus, these may be areas that need intervention. Moreover, future researchers may also explore the significance of age, gender, number of years of employment, and area of practice in relevance to psychological distress and COVID-19 anxiety. The role of time during the pandemic may also be a factor in the variables.

Comparative research between government hospital employees and private hospital employees may also be an avenue of discussion pertaining to the level of their involvement during the pandemic. Medical Institutions may initiate interventions that would foster the social support of their employees as it was found to have a mediating effect.

The relationship between COVID-19 Anxiety and Perceived Social Support is significant having a positive correlation (Prout et al, 2020; Shevlin et al., 2020; Solomou & Constantinidou, 2020). The relationship between COVID-19 anxiety and Perceived Social support also displayed a positive correlation thus as COVID-19 anxiety increases, perceived social support also increases (Alnazly et al., 2021). Moreover, the relationship between Perceived Social Support and Psychological Distress suggests that as perceived social support increases, psychological distress also decreases (Singh et al, 2015; Akbar & Aisyawati, 2021). Social support from family is a protective factor against psychological distress however, social support should extend beyond immediate family members hence being supported by people that surround us gives more support to distressing individuals (Prime et al., 2020). Being unable to care for and be physically present for loved ones or show social support during the COVID-19 war can be a source of psychological distress among family members (Montauk & Kuhl, 2020).

The present study shows the level of COVID-19 anxiety, Perceived Social Support, and Psychological Distress among Medical Frontliners. This also displays the mediating effect of Perceived Social Support between COVID-19 anxiety and Psychological Distress utilizing Sobel Z Test. Medical Frontliners have a high level of perceived Social Support. After three years of battling COVID-19, a moderate level of anxiety and Psychological Distress is presently experienced. This might be due to the mastery of handling the pandemic and the coping mechanism of medical frontliners throughout the years of exposure (El-Zoghby et al., 2020). Furthermore, the availability of health information and the supplication of face masks and other protective equipment has been provided hence, the results (Tee et al., 2020).

Using Sobel analysis, which indicates that Perceived Social Support can mediate the relationship between COVID-19 Anxiety and Psychological Distress indirectly. Thus, showing partial mediation. Since there is a partial mediation this signifies that there is not only a significant relationship between social support and psychological distress but also some direct relationship between COVID-19 anxiety and Psychological Distress.

REFERENCES

- Abdul Latif, N. I., Mohamed Ismail, N. A., Loh, S., Nur Azurah, A. G., Midin, M., Shah, S. A., & Kalok, A. (2022). Psychological Distress and COVID-19 Related Anxiety among Malaysian Women during the COVID-19 Pandemic. *International journal of environmental research and public health*, 19(8), 4590. <https://doi.org/10.3390/ijerph19084590>
- Abu-Kaf, S., Nakash, O., Hayat, T., & Cohen, M. (2022). Social Support and Psychological Distress among the Bedouin Arab Elderly in Israel: The Moderating Role of Gender. *International Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph19074358>
- Aclon, M. A. C., Perez-Ambray, M. C., Antiporda, M. C. P., Dizon, M. P. S., Garcia, P. R. B., Lapitan, M. A. A., ... & Ruiz, F. B. (2022). A Literature Review on the Mental Health and Coping Strategies of Healthcare Workers in This Time of Pandemic. *International Journal of Multidisciplinary: Applied Business and Education Research*, 3(1), 31-39.
- Adamczyk, K., & Segrin, C. (2015). Perceived social support and mental health among single vs. partnered Polish young adults. *Current Psychology*, 34(1), 82-96.
- Adams, R. E., Zheng, S., Taylor, J. L., & Bishop, S. L. (2021). Ten weeks in: COVID-19-related distress in adults with autism spectrum disorder. *Autism*, 25(7), 2140-2145.
- Akbar, Z., & Aisyawati, M. S. (2021). Coping Strategy, Social Support, and Psychological Distress Among University Students in Jakarta, Indonesia During the COVID-19 Pandemic. *Frontiers in Psychology*, 3409.
- Alnazly, E., Khraisat, O. M., Al-Bashaireh, A. M., & Bryant, C. L. (2021). Anxiety, depression, stress, fear and social support during COVID-19 pandemic among Jordanian healthcare workers. *Plos one*, 16(3), e0247679.
- Andres, T.Q.D. (1994) Dictionary of Filipino Culture and Values. Quezon City; Giraffe Books
- Aneshensel, C. S., & Avison, W. R. (2015). The stress process: An appreciation of Leonard I. Pearlin. *Society and Mental Health*, 5(2), 67-85.

- Aruta, J. J. B. R. (2021). Socio-ecological determinants of distress in Filipino adults during COVID-19 crisis. *Current Psychology*, 1-11.
- Baig, R. B., & Chang, C. W. (2020). Formal and informal social support systems for migrant domestic workers. *American Behavioral Scientist*, 64(6), 784-801.
- Benke, C., Autenrieth, L. K., Asselmann, E., & Pané-Farré, C. A. (2020). Lockdown, quarantine measures, and social distancing: Associations with depression, anxiety and distress at the beginning of the COVID-19 pandemic among adults from Germany. *Psychiatry research*, 293, 113462.
- Biana, H. T., & Joaquin, J. J. B. (2020). COVID-19: the need to heed distress calls of healthcare workers. *Journal of Public Health*.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The lancet*, 395(10227), 912-920.
- Burnette, D., Duci, V., & Dhembo, E. (2017). Psychological distress, social support, and quality of life among cancer caregivers in Albania. *Psycho-oncology*, 26(6), 779-786.
- Cabaguing, A. M., Macawili, H. J., Pacoma, M. J., & Porton, A. S. (2022). Healthcare Frontliners Experiences during COVID-19 Pandemic: A Phenomenological Study. *Healthcare Frontliners Experiences during COVID-19 Pandemic: A Phenomenological Study*, 102(1), 13-13.
- Casagrande, M., Favieri, F., Tambelli, R., & Forte, G. (2020). The enemy who sealed the world: effects quarantine due to the COVID-19 on sleep quality, anxiety, and psychological distress in the Italian population. *Sleep medicine*, 75, 12-20.
- Centers for Disease Control and Prevention (2020). Stress and Coping. Retrieved from Centers for Disease Control and Prevention. Available online at: <https://www.cdc.gov/coronavirus/2019-ncov/prepare/managing-stress-anxiety.html> (accessed March 14, 2020)
- Cui S, Jiang Y, Shi Q, (2020) Impact of COVID-19 on the psychology of nurses working in the emergency and fever outpatient: a cross-sectional survey.
- El-Zoghby, S. M., Soltan, E. M., & Salama, H. M. (2020). Impact of the COVID-19 pandemic on mental health and social support among adult Egyptians. *Journal of community health*, 45, 689-695.
- Galatzer-Levy, I. R., Burton, C. L., & Bonanno, G. A. (2012). Coping flexibility, potentially traumatic life events, and resilience: A prospective study of college student adjustment. *Journal of Social and Clinical Psychology*, 31(6), 542.
- Galehdar, N., Toulabi, T., Kamran, A., & Heydari, H. (2020). Exploring nurses' perception about the care needs of patients with COVID-19: a qualitative study. *BMC nursing*, 19(1), 1-8.
- Giorgi, G., Lecca, L. I., Alessio, F., Finstad, G. L., Bondanini, G., Lulli, L. G., ... & Mucci, N. (2020). COVID-19-related mental health effects in the workplace: a narrative review. *International journal of environmental research and public health*, 17(21), 7857.
- Glowacz, F., & Schmits, E. (2020). Psychological distress during the COVID-19 lockdown: The young adults most at risk. *Psychiatry research*, 293, 113486.
- Habibie, M. R., Absah, Y., & Gultom, P. (2020). The Effect of Work Overload and Work Family Conflict Towards Work Stress with Family Social Support as Moderating Variables in Employees at PT. Bank Negara Indonesia Tbk., Branch of Universitas Sumatera Utara. *Bank Negara Indonesia Tbk., Branch of Universitas Sumatera Utara*, 7, 253-260.
- Heath, C., Sommerfield, A., & von Ungern- Sternberg, B. S. (2020). Resilience strategies to manage psychological distress among healthcare workers during the COVID- 19 pandemic: a narrative review. *Anaesthesia*, 75(10), 1364-1371.
- Hijazi, M. H. A., Jeffree, M. S., Pang, N. T. P., Rahim, S. S. S. A., Omar, A., Ahmedy, F., ... & Wider, W. (2022). Seroprevalence of COVID-19 and Psychological Distress among Front Liners at the Universiti Malaysia Sabah Campus during the Third Wave of COVID-19. *International Journal of Environmental Research and Public Health*, 19(11), 6840.
- Hilton, T. P. P., Fawson, P. R. P. M., Sullivan, T. J. P. M., & DeJong, C. R. A. M. (2019). *Applied social research : A tool for the human services*, tenth edition. Springer Publishing Company.
- Kafle, K., Shrestha, D. B., Baniya, A., Lamichhane, S., Shahi, M., Gurung, B., ... & Budhathoki, P. (2021). Psychological distress among health service providers during COVID-19 pandemic in Nepal. *PloS one*, 16(2), e0246784..
- Karasek, Robert A. 1979. "Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign." *Administrative Science Quarterly* 24:258-308.
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., ... & Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of general psychiatry*, 60(2), 184-189.

- Kim, H. J., & Park, H. R. (2017). Factors affecting post-traumatic stress of general hospital nurses after the epidemic of Middle East respiratory syndrome infection. *Journal of Korean Clinical Nursing Research*, 23(2), 179-188.
- Ko, H.-C., Wang, L.-L., & Xu, Y.-T. (2013). *Understanding the Different Types of Social Support Offered by Audience to A-List Diary-Like and Informative Bloggers. Cyberpsychology, Behavior, and Social Networking*, 16(3), 194–199. doi:10.1089/cyber.2012.0297
- Kong, X., Zheng, K., Tang, M., Kong, F., Zhou, J., Diao, L., ... & Dong, Y. (2020). Prevalence and factors associated with depression and anxiety of hospitalized patients with COVID-19. *MedRxiv*.
- Labrague, L. J., & De los Santos, J. A. A. (2020). COVID- 19 anxiety among front- line nurses: Predictive role of organisational support, personal resilience and social support. *Journal of nursing management*, 28(7), 1653-1661.
- Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of Covid- 19, psychological distress, work satisfaction and turnover intention among frontline nurses. *Journal of nursing management*, 29(3), 395-403.
- Labrague, L. J., McEnroe Petite, D. M., Leocadio, M. C., Van Bogaert, P., & Tsaras, K. (2018). Perceptions of organizational support and its impact on nurses' job outcomes. *Nursing Forum*, 53(3), 339–347
- Lahav, Y. (2020). Psychological distress related to COVID-19—the contribution of continuous traumatic stress. *Journal of affective disorders*, 277, 129-137.
- Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., et al. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Netw. Open* 3:e203976. doi: 10.1001/jamanetworkopen.2020.3976
- Lashari, S. A., Kaur, A., & Awang-Hashim, R. (2018). Home Away from Home-The Role of Social Support for International Students's™ Adjustment. *Malaysian Journal of Learning and Instruction*, 15(2), 33-54.
- Li, Y., Wang, Y., Jiang, J., Valdimarsdóttir, U. A., Fall, K., Fang, F., ... Zhang, W. (2020). Psychological distress among health professional students during the COVID-19 outbreak. *Psychological Medicine*, 1–12. doi:10.1017/s0033291720001555
- Li, Z., Ge, J., Feng, J., Jiang, R., Zhou, Q., Xu, X., ... & Liu, C. (2021). Less Social Support for Patients With COVID-19: Comparison With the Experience of Nurses. *Frontiers in psychiatry*, 12, 44.
- Liu, X., Kakade, M., Fuller, C. J., Fan, B., Fang, Y., Kong, J., et al. (2012). Depression after exposure to stressful events: lessons learned from the severe acute respiratory syndrome epidemic. *Comp. Psychiatry* 53, 15–23. doi: 10.1016/ j.comppsy.2011.02.003
- Maben, J., & Bridges, J. (2020). Covid-19: Supporting nurses' psycholog- ical and mental health. *Journal of Clinical Nursing*, 29(15-16):2742- 2750. 2750. <https://doi.org/10.1111/jocn.15307>
- Magnavita, N., Soave, P. M., & Antonelli, M. (2021). Prolonged stress causes depression in frontline workers facing the COVID-19 pandemic—a repeated cross-sectional study in a COVID-19 Hub-hospital in central Italy. *International journal of environmental research and public health*, 18(14), 7316.
- Marzo, R. R., Villanueva III, E. Q., Faller, E. M., & Baldonado, A. M. (2020). Factors associated with psychological distress among Filipinos during coronavirus disease-19 pandemic crisis. *Open Access Macedonian Journal of Medical Sciences*, 8(T1), 309-313.
- Mazza, C., Colasanti, M., Ricci, E., Di Giandomenico, S., Marchetti, D., Fontanesi, L., ... Roma, P. (2021). The COVID-19 Outbreak and Psychological Distress in Healthcare Workers: The Role of Personality Traits, Attachment Styles, and Sociodemographic Factors. *Sustainability*, 13(9), 4992. doi:10.3390/su13094992
- McPhee, M. D., Keough, M. T., Rundle, S., Heath, L. M., Wardell, J. D., & Hendershot, C. S. (2020). Depression, environmental reward, coping motives and alcohol consumption during the COVID-19 pandemic. *Frontiers in psychiatry*, 11, 1128.
- Mekonen, E., Shetie, B., & Muluneh, N. (2020). The psychological impact of COVID-19 outbreak on nurses working in the Northwest of Amhara Regional State Referral Hospitals, Northwest Ethiopia. *Psychology Research and Behavior Management*, 13, 1353.
- Mohammed, A., Sheikh, T. L., Gidado, S., Poggensee, G., Nguku, P., Olayinka, A., ... & Obiako, R. O. (2015). An evaluation of psychological distress and social support of survivors and contacts of Ebola virus disease infection and their relatives in Lagos, Nigeria: a cross sectional study– 2014. *BMC Public Health*, 15(1), 1-8.
- Montauk, T. R., Kuhl, E. A. (2020). COVID-related family separation and trauma in the intensive care unit. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S96–S97. <http://dx.doi.org/10.1037/tra0000839>

- Neuman, W. L. (2007).** *Basics of social research: Qualitative and quantitative approaches* (2nd ed.). Boston, MA: Allyn and Bacon.
- Newman, K. L., Jevé, Y., & Majumder, P. (2022). Experiences and emotional strain of NHS frontline workers during the peak of the COVID-19 pandemic. *International Journal of Social Psychiatry*, 68(4), 783-790.
- Özdil, S. Ö., & Kutlu, Ö. (2019). Investigation of the mediator variable effect using BK, Sobel and Bootstrap methods (Mathematical literacy case). *International Journal of Progressive Education*, 15(2), 30-43.
- Pakpour, A. H., & Griffiths, M. D. (2020). The fear of COVID-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*, 2, 58–63 <http://irep.ntu.ac.uk/id/eprint/39561/>.
- Palispis, E.S. (1995) *Introduction to Values Education*. Quezon City; Rex Book Store, Inc
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631–643. <https://doi.org/10.1037/amp0000660>
- Prout, T. A., Zilcha-Mano, S., Aafjes-van Doorn, K., Békés, V., Christman-Cohen, I., Whistler, K., ... & Di Giuseppe, M. (2020). Identifying predictors of psychological distress during COVID-19: a machine learning approach. *Frontiers in Psychology*, 11, 3063.
- Real, J. A. B., Cortez, Y. C., Meñez, J. C. M., Avendaño, H. R. D., Maquinaña, H. G. B., Reyes, S. D. E., ... & Nonato, A. B. E. (2022). Behind the Masks of Bravery: A Phenomenological Study on the Challenges and Adjustments of Filipino Frontliners in Qatar. *Behind the Masks of Bravery: A Phenomenological Study on the Challenges and Adjustments of Filipino Frontliners in Qatar*, 93(1), 14-14.
- Sadang, J. M. (2021). The lived experience of Filipino nurses' work in COVID-19 quarantine facilities: a descriptive phenomenological study. *Pacific Rim International Journal of Nursing Research*, 25(1), 154-164.
- Saito, I., Imamura, T., & Miyagi, M. (2010). Filipino Personality Traits and Values for Social Support: FOW as human resources for work life balance in Japan (1).
- Sampasa-Kanyinga, H., Zamorski, M. A., & Colman, I. (2018). The psychometric properties of the 10-item Kessler Psychological Distress Scale (K10) in Canadian military personnel. *PloS one*, 13(4), e0196562.
- Sánchez-García, J. C., Cortés-Martín, J., Rodríguez-Blancue, R., Marín-Jiménez, A. E., Montiel-Troya, M., & Díaz-Rodríguez, L. (2021). Depression and anxiety in patients with rare diseases during the COVID-19 pandemic. *International journal of environmental research and public health*, 18(6), 3234.
- Sánchez-Moreno, E., de La Fuente Roldán, I. N., Gallardo-Peralta, L. P., & Barrón López de Roda, A. (2014). Burnout, informal social support and psychological distress among social workers. *The British Journal of Social Work*, 45(8), 2368-2386.
- Segrin, Chris, Terry Badger, Sybilla M. Dorros, Paula Meek, and Ana Maria Lopez. "Interdependent anxiety and psychological distress in women with breast cancer and their partners." *Psycho- Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer* 16, no. 7 (2007): 634-643.
- Shevlin, M., McBride, O., Murphy, J., Miller, J. G., Hartman, T. K., Levita, L., ... & Bentall, R. P. (2020). Anxiety, depression, traumatic stress and COVID-19-related anxiety in the UK general population during the COVID-19 pandemic. *BJPsych Open*, 6(6).
- Shultz, J., Rechkemmer, A., Rai, A., and McManus, K. (2019). Public health and mental health implications of environmentally induced forced migration. *Disaster Med. Public Health Prep.* 13, 116–122. doi: 10.1017/dmp.2018.27
- Silva, W. A. D., de Sampaio Brito, T. R., & Pereira, C. R. (2020). COVID-19 anxiety scale (CAS): Development and psychometric properties. *Current Psychology*, 1-10.
- Singh, S., McBride, K., & Kak, V. (2015). Role of social support in examining acculturative stress and psychological distress among Asian American immigrants and three sub-groups: Results from NLAAS. *Journal of Immigrant and Minority Health*, 17(6), 1597-1606.
- Solomou, I., & Constantinidou, F. (2020). Prevalence and predictors of anxiety and depression symptoms during the COVID-19 pandemic and compliance with precautionary measures: Age and sex matter. *International journal of environmental research and public health*, 17(14), 4924.
- Talidong, K. B., & Toquero, C. D. (2020). Philippine teachers' practices to deal with anxiety amid COVID-19. *Journal of Loss and Trauma*, 25, 573–579. <https://doi.org/10.1080/15325024.2020.1759225>.
- Tee, C. A., Salido, E. O., Reyes, P. W. C., Ho, R. C., & Tee, M. L. (2020). Psychological state and associated factors during the 2019 coronavirus disease (COVID-19) pandemic among Filipinos with rheumatoid arthritis or systemic lupus erythematosus. *Open Access Rheumatology: Research and Reviews*, 12, 215.
- Tee, M., Tee, C., Anlacan, J., et al. (2020). Psychological impact of COVID-19 in the Philippines. *Journal of Affective Disorders*, 277, 379–391. <https://doi.org/10.1016/j.jad.2020.08.043>.
- Tindle, R., & Moustafa, A. A. (2021). Psychological distress, social support, and psychological flexibility during COVID-19. In *Mental Health Effects of COVID-19* (pp. 89-101). Academic Press.

- Tutor, J., & Pascual, R. A. Q. (2021). The repercussions of the ongoing COVID-19 pandemic to the medical community. *Journal of Public Health*.
- Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., and Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen. Psychiatry* 33:100213. doi: 10.1136/gpsych-2020-100213
- Vadi, S., Shah, S., Bajpe, S., George, N., Santhosh, A., Sanwalka, N., & Ramakrishnan, A. (2022). Mental health indices of intensive care unit and emergency room frontliners during the severe acute respiratory syndrome coronavirus 2 pandemic in India. *Indian Journal of Critical Care Medicine: Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine*, 26(1), 100.
- Van der Goot, W. E., Duvivier, R. J., Van Yperen, N. W., de Carvalho-Filho, M. A., Noot, K. E., Ikink, R., ... & Bierman, W. F. (2021). Psychological distress among frontline workers during the COVID-19 pandemic: A mixed-methods study. *PloS one*, 16(8), e0255510.
- Vungkhanching, M., Tonsing, J. C., & Tonsing, K. N. (2017). Psychological distress, coping and perceived social support in social work students. *British Journal of Social Work*, 47(7), 1999-2013.
- Wall, J. A., & Dunne, T. C. (2012). Mediation research: A current review. *Negotiation Journal*, 28(2), 217-244.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International journal of environmental research and public health*, 17(5), 1729.
- Wang, H., Xia, Q., Xiong, Z., Li, Z., Xiang, W., Yuan, Y., ... & Li, Z. (2020). The psychological distress and coping styles in the early stages of the 2019 coronavirus disease (COVID-19) epidemic in the general mainland Chinese population: A web-based survey. *Plos one*, 15(5), e0233410.
- Wang, W., Xu, Y., Gao, R., Lu, R., Han, K., Wu, G., & Tan, W. (2020). Detection of SARS-CoV-2 in different types of clinical specimens. *Jama*, 323(18), 1843-1844.
- Wang, Y., Li, Y., Jiang, J., Feng, Y., Lu, D., Zhang, W., & Song, H. (2020). COVID-19 outbreak-related psychological distress among healthcare trainees: a cross-sectional study in China. *BMJ open*, 10(10), e041671.
- World Health Organization (2021), Retrieved from: <https://covid19.who.int/region/wpro/country/ph>
- Xiao, H., Zhang, Y., Kong, D., Li, S., & Yang, N. (2020). The effects of social support on sleep quality of medical staff treating patients with coronavirus disease 2019 (COVID-19) in January and February 2020 in China. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research*, 26, e923549–e923551.
- Yörük, S., & Güler, D. (2020). The relationship between psychol
- Yee, J. (2020). Longest lockdown, lost opportunities: PH COVID-19 cases go past 300,000. *Inquirer.Net*. Retrieved from <https://newsinfo.inquirer.net/1340659/longest-lockdown-lost-opportunities-300k-cases>
- Yu, H., Li, M., Li, Z., Xiang, W., Yuan, Y., Liu, Y., ... & Xiong, Z. (2020). Coping style, social support and psychological distress in the general Chinese population in the early stages of the COVID-19 epidemic. *BMC psychiatry*, 20(1), 1-11.
- Zhang, J., Lu, H., Zeng, H., Zhang, S., Du, Q., Jiang, T., & Du, B. (2020). The differential psychological distress of populations affected by the COVID-19 pandemic. *Brain, behavior, and immunity*, 87, 49.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, 52(1), 30-41.