UNIVERSITY OF CAPE COAST

PSYCHOLOGICAL DISTRESS AND WELL-BEING OF HEALTHCARE WORKERS AMID COVID-19 PANDEMIC: THE MODERATING ROLE OF COPING MECHANISMS

KOJO BIJOBU

2021

UNIVERSITY OF CAPE COAST

PSYCHOLOGICAL DISTRESS AND WELL-BEING OF HEALTHCARE WORKERS AMID COVID-19 PANDEMIC: THE MODERATING ROLE OF COPING MECHANISMS

BY

KOJO BIJOBU

Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Clinical Health Psychology

DECEMBER 2021

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature…… Date…….

Name……

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision laid down by the University of Cape Coast.

Supervisor's Signature…… Date……

Name……

ABSTRACT

Healthcare workers are amongst the high-risk group to acquire COVID-19 infection (Minder & Peltier, 2020). Therefore, they are vulnerable to complex emotional reactions and psychological distress (Bai, Yao, Wei, Tian, Jin, Chen & Wang, 2020). Using a positivist paradigm, the study examined the level of psychological distress and psychological well-being of healthcare workers amid the pandemic and the role of coping mechanisms as a moderator. A sample of 115 respondents was recruited for the study. The Kessler Psychological Distress Scale, Ryff's Scale of Psychological Well-being, and Brief-COPE were administered to participants in this descriptive survey. Data was analysed using frequencies and percentages, multivariate regression, independent samples t-test, Pearson product moment correlation coefficient and Hayes PROCCESS Approach. The study found that close to half of the respondents experienced psychological distress. Result also showed that healthcare workers had good psychological well-being amid the pandemic. Further analysis revealed no significant gender variation. The study concludes that some healthcare workers experienced psychological distress and that problem-focused coping is a good moderator. In view of this, it was recommended that Nkwanta South Municipal Health Directorate put in place mechanisms to address psychological issues confronting healthcare workers in the municipality. Besides, the study recommends that clinical health psychologists should educate their clients on various problem-focused coping strategies for appropriate usage.

KEYWORDS

COVID-19

Healthcare worker

Psychological distress

Psychological well-being

Coping mechanisms

ACKNOWLEDGEMENTS

I would like to convey my heartfelt gratitude to Dr. Kofi Krafona of the University of Cape Coast, Department of Education and Psychology for his expert advice, recommendations, and professional assistance. I am grateful to the Nkwanta South Municipal Health Directorate and the management of Nkwanta South Municipal Hospital for allowing me to conduct the research there. I wish to also express my sincere gratitude to Mr. and Mrs. Apostle Kopah, Professor Kofi Emmanuel Gyimah (UCC), Mr. Michael Deyegbe (USA) and Mr. Godwin Binlinla (CEO, WBI) for their immeasurable support. I am grateful to, Mr. Paul Mabru, Mr. Albert Waja, Miss. Millicent Obodai, Mr. Blankson Kuntu and my sisters especially Comfort Bijobu for their immense support. I sincerely salute my extended family members for their love and prayers. I am grateful also thankful to Mr. Noah Kofi Ujan, Elder Job Ntianam and Catechist Victor Okpei for their support.

DEDICATION

To Benedicta Suban (spouse), Favour Bijobu and Uwumborabiln Bijobu

(children)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

COVID-19-	Coronavirus Disease 2019
HCWs-	Healthcare Workers
PWB-	Psychological Well-Being
WHO-	World Health Organisation

CHAPTER ONE

Introduction

A unique viral disease known as coronavirus disease, which has been declared a pandemic by the WHO, has been on the rise since December 2019 (Bashar & Bammidi, 2020). Its transmission and mortality rates were higher than those of previous outbreaks, necessitating severe public health precautions across the globe (Docea, Tsatsakis, Albulescu, Cristea, Zlatian, Vinceti & Calina, 2020). Studies from previous SARS and H1N1 epidemics show that healthcare workers (HWCs) have a high psychological burden (Chong, Wang, Hsieh, Lee, Chiu, Yeh & Chen, 2004). A study assessing the frequency of psychological symptoms among HCWs during the COVID-19 pandemic found anxiety, depression, and sleeplessness to be pervasive among them (Ali, Uddin, Ahsan, Haque, Bairagee, Khan & Hossain, 2021). This is partly so because during such crisis many healthcare professionals are suddenly required to carry out unfamiliar tasks which are likely to be associated with elevated levels of psychological distress (Maunder, 2009). These aspects of an outbreak make it harder to access social support, such as that from coworkers and family, which has been shown in the past to lessen the detrimental effects of stress (Maunder, 2009). However, HCWs are crucial to the global reaction to COVID-19; for this reason, it is crucial to collect data on the psychological disturbance of this population. In light of this, the study looked at the psychological suffering and health of HCWs during the epidemic.

Background to the Study

In the past years, many new diseases have emerged in different geographical areas. These diseases included but not limited to Ebola, Zika, Nipah, and coronaviruses (CoVs). Recently, a new type of viral infection emerged in Wuhan City, China (Gorbalenya, Baker, Baric, Groot, Drosten, Gulyaeva & Penzar, 2020). However, the initial genomic analysis of the virus does not seem to match with previously sequenced CoVs, suggesting a novel CoV strain (2019-nCoV), CoV-2 is a virus that causes severe acute respiratory syndrome (Gorbalenya et al., 2020).

As previously noted, the Coronavirus Disease 2019 was first found in Wuhan City in December 2019, following which it spread throughout Hubei Province and other parts of China (Deng & Peng, 2020). After causing significant morbidity and mortality in China, by February 2020, the virus spread to numerous other countries, including the USA, Italy, Spain, Germany, France, and Iran (Holshue, DeBolt, Lindquist, Lofy, Wiesman, Bruce & Diaz, 2020). Globally, as of September 2021, there have been 218,946,836 confirmed cases of COVID-19, including 4,539,723 deaths (Galloway, Paul, McCannell, Brooks, MacNeil & Dugan, 2021).

The virus spreads primarily through small droplets from coughing, sneezing, and talking. People can potentially become infected by touching their face after contacting a contaminated surface. Aerosols, which can stay suspended in the air for prolonged periods of time in confined places, may also be a source of transmission (WHO, 2020). The virus is most infectious during the first three days after the onset of symptoms, according to Qaseem, Etxeandia-Ikobaltzeta, Yost, Miller, Abraham, Obley, and Humphrey (2020),

though spread can occur before symptoms appear, especially from asymptomatic patients.

Fever, cough, and exhaustion are prominent clinical symptoms of this virus, as are shortness of breath or breathing issues, and loss of olfaction. Pneumonia and acute respiratory distress syndrome are possible complications (Lawand & Al Tabbah, 2020). The incubation time is usually less than five days, although it can be anywhere from two and fourteen days.

In attempt to contain the virus authorities worldwide had responded by instituting travel restrictions, lockdowns, workplace hazard management, and facility closures to curb the spread of the pandemic. Many organisations had also worked hard to increase testing capacity and contact tracing of people suspected to be infected (Izzetti, Nisi, Gabriele & Graziani, 2020). COVID-19 has a natural origin, according to empirical evidence (Andersen, Rambaut, Lipkin, Holmes, & Garry, 2020), and probable bat-to-human infection occurred among persons who processed bat carcasses and guano in the preparation of traditional Chinese remedies (Wassenaar & Zou, 2020).

On March 12, 2020, Ghana received its first report of COVID-19, and this case was imported. Following this, the government implemented measures to stop the virus's importation and local spread, provide for the needs of the sick, and lessen its socioeconomic effects (Antwi-Boasiako & Nyarkoh, 2021).

By the end of June 2020, 10 HCWs had died after contracting COVID-19, and 779 others were unable to work due to isolation (Reuters, 2020). The Ghanaian government provided a 3-month tax-free pay relief in order to lessen the virus's impacts, including any detrimental psychological consequences on HCWs in particular. Additionally, frontline HCWs were promised an

allowance of 50% of their base pay, and life insurance coverage was put in place for those who would contract COVID-19 (Reuters, 2020).

After prohibitions on social gatherings, such as church services and funerals, were abolished in July 2020, the rate of infection in schools, businesses including commercial facilities, and hospitals increased. As a result, many frontline health care workers (HCWs) died (Khoo, 2020). Several politicians and officials, including ministers and judges, tested positive, and some of them passed away (Khoo, 2020). Following exposure to the virus, the President of Ghana spent a few weeks in self-isolation (Quakyi, 2020). The public health system in Ghana still struggles with HIV/AIDS infection, intermittent epidemics of H5N1, Lassa Fever, and Meningitis due to low funding and inadequate equipment (Mensah, Asampong, Amuna & Ayanore, 2020). The nation is already plagued by a number of serious public health issues, and COVID-19 is just one more. During the pandemic, people were afraid to seek help because they lacked faith and confidence in the nation's healthcare system. The terrible health conditions among the poor and the vulnerable in Ghana were made worse by people avoiding health services, especially in rural areas out of fear of contracting COVID-19 (Khoo, 2020).

Large-scale infectious disease outbreaks can result in sharp increases in morbidity and mortality over a wide geographic area, as well as significant social, political, and economic upheaval. According to Stawicki, Jeanmonod, Miller, Paladino, Gaieski, Yaffee, and Galwank (2020), COVID-19 social isolation prevention measures have had a long-term good impact on people's psychological and mental health across cultures and societies.

Studies showed that COVID-19 virus had dramatically increased the frequency of domestic abuse. For example, domestic abuse cases have increased by 32–36 percent in France, 21–35 percent in the United States, 25 percent in UK domestic abuse hotline calls, and 75 percent in Google searches for domestic abuse support (Holmes, O'Connor, Perry, Tracey, Wessely, Arseneault & Bullmore, 2020; Zhag, 2020).

Social-distancing and sheltering-in-place mechanisms that are critical for preventing COVID-19 from spreading are also likely to increase the probability of domestic and inter-family violence and conflicts (Usher, Bhullar, Durkin, Gyamfi & Jackson, 2020). Many of the projected outcomes of COVID-19 isolation measures, according to John, Eyles, McGuinness, Okolie, Olorisade, Schmidt, and Moran (2020), are important risk factors for mental health difficulties such as suicide, self-harm, substance abuse, and domestic and child molestation.

It is worth mentioning, however, that the general public is not the only ones who are vulnerable to psychological discomfort during pandemics. For example, HCWs expressed emotions of severe vulnerability, perplexity, and threat to life, as well as bodily and cognitive symptoms of anxiety, during the early rapid spread stage of the SARS outbreak (Chong et al., 2004) which is comparable to the current trajectory of COVID-19. Moreover, more than half of HCWs reported moderately high anxiety and associated psychological discomfort during the 2009 H1N1 pandemic (Goulia, Mantas, Dimitroula, Mantis & Hyphantis, 2010).

According to a poll of 775 persons in the United States, 55 percent felt that COVID-19 had harmed their mental health, whereas 71 percent were

concerned about the potential harmful impact and dysfunctionality of self-isolation measures on their mental health (WHO, 2020). Hopkins and Russell (2020) noted that the true impact of COVID-19's mental health burden was yet to be determined; nonetheless, they emphasized that the burden's consequences are expected to linger long after the pandemic was over.

Healthcare workers (HCWs), according to Wang, Liu, Hu, Zhang, Du, Huang, and Yue (2020), are concerned about becoming ill and infecting their family members. They are predisposed to varying degrees of psychological suffering as a result of their fears and anxieties. Psychological distress, according to Krause and Corts (2012), refers to unpleasant thoughts and emotions that have a detrimental impact on a person's ability to perform. Psychological discomfort is caused by a wide range of symptoms, including depression, general anxiety symptoms, personality features, ambiguous emotions, hallucination, functional limitations, and behavioral difficulties (Drapeau, Marchand, & Beaulieu-Prevost, 2012).

Psychological distress in people is frequently brought on by environmental pressures or stimuli. The prior severe acute respiratory syndrome infection, which happened in 2003, left the healthcare professionals emotionally exhausted, anxious, depressed, and burned out (Chan & Huak, 2004). In the same way, during the current COVID-19 pandemic, studies on healthcare professionals in China and Italy discovered stress-related anxiety and depression among HCWs (Rossi, Socci, Pacitti, Di Lorenzo, Di Marco, Siracusano, & Rossi, 2020).

For example, according to Preti, Di Mattei, Perego, Ferrari, Mazzetti, Taranto, and Calati (2020), between 11% and 73.4% of HCWs, primarily

doctors, nurses, and auxiliary staff, reported post-traumatic stress symptoms during outbreaks, with symptoms lasting 1–3 years in 10–40 percent of those who reported symptoms. Depressive symptoms are reported by 27.5–50.7 % of people, sleeplessness symptoms by 34–36.1%, and severe anxiety symptoms by 45%, according to the study Preti et al. (2020).

Past infectious epidemics such as SARS-CoV-1, H1N1 influenza, and Ebola, according to Bai, Yao, Wei, Tian, Jin, Chen, and Wang (2020), had a substantial immediate and long term psychological impact on frontline and HCWs in general. They claimed that the first wave of COVID-19 infection cases among HCWs accounted for 29% of all COVID-19 patients admitted to hospitals. HCWs, according to Bai et al. (2020), are prone to a wide range of complicated emotional reactions and psychological suffering.

Minder and Peltier (2020) claimed that HCWs are among the high-risk category of people to contracting this virus. Campbell (2020) ascribes the impact of the pandemic on HCWs' well-being to a number of factors, including escalated social pressures, a lack of adequate safety provisions such as personal protective equipment, and working in an emotionally taxing environment with many patients dying.

Campbell (2020) asserted that the rise in anxiety, sadness, and self-reported stress was linked to sleep disruption, which has a significant negative influence on workers' well-being, particularly as shifts become longer and more exhausting. Furthermore, a study of 996 HCWs in the UK indicated that 50% of respondents admitted having a deteriorating mental condition, with 21% of HCWs more likely to abandon their employment (Campbell, 2020).

This issue, according to Alradhawi, Shubber, Sheppard, and Ali (2020), could result in the loss of about 300,000 HCWs in England.

In addition, 53 of 230 healthcare personnel who completed the mental health evaluation measures in response to the COVID-19 crisis experienced psychosocial issues. More females (90.57%) than males (9.43%) and more nurses (81.13%) than physicians (18.9%) suffered from mental health disorders as a result of the infectious outbreak among these 53 medical personnel (Huang, Han, Luo, Ren & Zhou, 2020). Overall anxiety, severe anxiety, moderate anxiety, mild anxiety, stress disorder, depression, and sleeplessness were among the symptoms that had a psychological influence on healthcare professionals (Lai, Ma, Wang, Cai, Hu, Wei & Tan, 2020). Females had higher anxiety levels than males, while nurses had higher anxiety levels than doctors (Huang et al., 2020). Frontline healthcare personnel who provided direct COVID-19 patient care were more likely to have psychological problems like depression, anxiety, insomnia, and distress (Lai et al., 2020).

In addition, a study of HCWs in the People's Republic of China found that the risk of the pandemic was linked to working in high-risk departments like infectious disease and pulmonology, having a diagnosed family member, insufficient hand hygiene, suboptimal hand hygiene before and after contact with patients, improper PPE, close proximity to victims, long daily working hours, and unchecked exposure (Ran, Chen, Wang, Wu, Zhang & Tan, 2020).

Again, a study showed that COVID-19 infected 30 medical personnel in a hospital, including 20 doctors and 8 nurses. Twenty-six had a mild infection and four had a severe infection (Liu, He, Liu, Wang, Li, Chen & Li,

2020). A case report from Singapore, assessing the outcomes of 41 HCWs who were exposed to COVID-19 patient before the patient was diagnosed found none of them to be infected. This was because all the 41 HCWs were wearing surgical masks at the time of exposure; none of them acquired COVID-19 (Ng, Poon, Kiat, Puar, Shan Quah, Loh, Wong & Raghuram, 2020).

During the MERS pandemic, a Saudi research found that nearly two-thirds of HCWs felt at danger of acquiring MERS CoV and reported feeling scared at work (Abolfotouh, AlQarni, Al-Ghamdi, Salam, Al-Assiri & Balkhy, 2017). HCWs reported high degrees of dread of infection and infecting family members, emotional disturbance, disorientation, and social stigma just as in past SARS scenarios (Maunder, Lancee, Balderson, Bennett, Borgundvaag, Evans & Hall, 2006). All these psychological issues can impact psychological well-being of HCWs amid this pandemic.

During a pandemic like COVID-19, the psychological well-being (PWB) of HCWs is critical in the fight against escalation. Psychological well-being, as per Dodge, Daly, Huyton, and Sanders (2012), is accomplished through reaching a state of balance that is influenced by both demanding and rewarding life events. Positive interpersonal relationships, personal mastery, autonomy, a sense of purpose and meaning in life, and personal growth and development are all elements of psychological well-being (Ryff, 1989).

There are two major aspects underlying psychological well-being. The first refers to how much individuals are impacted by favourable emotions and sentiments of satisfaction. Subjective well-being refers to this component of psychological well-being (Diener, 2000). To genuinely feel good, then, we

must have a sense of meaning and significance in addition to pleasurable emotions (Ryff, 1989). The subjective feelings of enjoyment induced by what we enjoy, as well as the feeling that what we are doing with our life is relevant and purposeful, are the two necessary aspects in PWB (Diener, 2000).

The idea of feeling good, according to Diener (2000), encompasses not just certain positive emotions of happiness and contentment, but also emotions such as interest, engagement, confidence, and affection for oneself and others. Additionally, maximizing one's potential, having some control over one's personal life, having a strong sense of purpose (e.g. working toward preferred goals), and encountering positive connections are all examples of effective functioning in the psychological sense.

In light of this, WHO (2006) defines health as a condition of total physical, mental, and social well-being, not only the absence of disease or disability. However, the WHO recently defined positive mental health as a state of well-being in which a person recognises his or her own abilities and capabilities, can cope with daily stresses, work productively and fruitfully, and effectively contribute his or her quota to community (WHO, 2001).

According to Ryan and Deci (2001), individuals with higher levels of happiness or subjective well-being exhibit more self-enhancing and enabling attributional styles than those with lower levels of subjective well-being. Positive emotions, it is suggested, can lead to happy thinking, which can translate to better emotional responses.

Positive mood states have been shown to improve attention and other cognitive processes in studies that have used mood induction approaches (Fredrickson & Branigan, 2005). Subjects in a high mood state have a wider

focus of attention that generate more ideas than those in a negative or neutral mood state (Fredrickson et al., 2005), and are more innovative and flexible in their thought processes (Nadler, Rabi & Minda, 2010).

It has been observed in experimental social psychology that positive emotional experiences or states have beneficial effects on how people perceive, evaluate and interpret social behaviours and how they initiate social interactions (Forgas, 2001; Isen, 1987). It has also been discovered that persons who are experiencing happy emotions have a more favourable opinion of themselves and others, make more forgiving attributions, and behave in interpersonal settings with greater confidence, enthusiasm, and giving (Forgas, & George, 2001).

Furthermore, a substantial body of empirical research has found that active involvement in social activities and full community engagement are positively connected to better levels of pleasure and life satisfaction (Helliwell, 2003). According to Fredrickson and Joiner (2002) positive cognitions, positive behaviours, and higher cognitive capability are all linked to positive emotions whilst pleasant cognitions, behaviours, and capacities are all good drivers of positive emotions.

However, it is worth mentioning that critical life events can cause profoundly severely psychological distress thereby exert a toll on the psychological well-being (Folkman & Moskowitz, 2004). When this happens people employ amalgamation of thinking, and emotion to cope with stress, depending on the scenario, and this is termed as coping mechanisms (Folkman et al., 2004). Coping entails making a conscious effort to address personal and

interpersonal issues in order to overcome, limit, or tolerate tension and anxiety (Weiten, Dunn & Hammer, 2014).

Coping, according to Folkman et al. (2004), is the mobilization of psychological processes to handle challenging situations both internally and externally. The phrase refers solely to the conscious and intentional mobilization of actions, as opposed to 'defense mechanisms,' which are instinctual or intuitive adaptive responses aimed at reducing or mitigating stress (Venner, 1988).

Statement of the Problem

Recently, worldwide communities have been greatly impacted by infectious pandemics, both in terms of physical health and psychological well-being. Multiple nations and communities have been affected by outbreaks including the COVID-19 pandemic, the Middle East respiratory syndrome (MERS), the H1N1 influenza pandemic, the SARS outbreak in 2002/2003, and the H1N1 influenza pandemic in 2009 (Ting, Carin, Dzau, & Wong, 2020). The general populace is still dealing with the psychological impacts of earlier pandemics (Taha, Matheson, Cronin, & Anisman, 2014), which can be attributed to a variety of events such disruptions in daily life (Chan, Leung, Chui, Tiwari, Wong, Wong & Lau, 2007), bereavement, and losses endured (Matua, & Van der Wal, 2015).

HCWs frequently exhibit tenacity and act as the first line of defense in the event of a pandemic (Ho, Chee & Ho, 2020). Even though they are tenacious in the struggle, they are typically prone to anxiety, fear of contracting an infectious disease, and the possibility of an impending catastrophe (Ho, et al., 2020).

It is crucial to note that HCWs worldwide were already dealing with a number of challenges in their healthcare delivery systems before the recent epidemic, as demonstrated by empirical and anecdotal evidence (Rossi et al., 2020). According to Adae (2021), COVID-19 has compounded the effect of the shortfall in healthcare systems, making HCWs in sub-Saharan Africa unable to adequately carry out their mandate.

Even before this pandemic, Ghana's urban and rural communities experienced extreme economic disparities (Khoo, 2020). The healthcare industry, the educational system, and other sectors of the economy all exhibit these discrepancies. The gap has grown wider due to the pandemic. For instance, a large number of individuals were evaluated, and more facilities were available and easily accessible in large cities (Khoo, 2020).

More than 2000 medical professionals, nurses, and other healthcare workers have contracted COVID-19 in Ghana (Ashinyo, Dubik, Duti, Amegah, Ashinyo, Larsen-Reindorf & Kuma-Aboagye, 2020). The virus, according to Khoo (2020), has brought Ghana's public health system to the verge of collapse.

Although the number of COVID-19 cases in Africa has not been as concerning as it has been elsewhere in the world (Johns Hopkins Coronavirus Resource Center, 2020), the pandemic has exposed HCWs to a number of stressful situations that have predisposed them to a variety of mental health issues, including depressive symptoms and emotional problems (Preti et al., 2020).

Frontline employees experienced more severe mental health symptoms than those in subordinate roles, according to research in China (Lai et al.,

2020). More than half of the HCWS in Nepal had had mild-to-severe psychological distress as a result of the pandemic, according (Kafle, Shrestha, Baniya, Lamichhane, Shahi, Gurung & Budhathokim, 2021).

The Ghana Medical Association and its affiliated organizations raised concern in a joint press release on July 9, 2020 on the rate of infection among HCWs and its detrimental effects on the country's healthcare service (Graphic.com.gh, 2020). Over 40% of HCWs in Ghana experienced fear, while 21.1%, 27.8%, and 8.2% of them felt sadness, anxiety, and stress, respectively (Ofori, Osarfo, Agbeno, Manu & Amoah, 2021).

Since COVID-19 is a pandemic that is still emerging, addressing the problems it presents to healthcare professionals requires a wealth of scientific data. According to Petzold, Plag, and Ströhle (2020), policymakers require data to address the issue of the psychological discomfort and mental health of HCWs because they face considerable challenges in coping with the pandemic across all professions (Preti et al., 2020).

Although the virus has been the subject of numerous investigations throughout the African continent, few HCW studies have been conducted in Ghana. The little studies on the virus with respect to HCWs in Ghana focused on the psychological issues healthcare providers face whereas little is known about the role of coping mechanisms.

Purpose of the Study

The purpose of the study was to examine the level of psychological distress and psychological well-being of HCWS amid COVID-19 pandemic. The study also explored the moderating role of coping mechanisms in the

relationship between psychological distress and psychological well-being among HCWs in Nkwanta South Municipal Hospital.

Specifically, the study sought to:

1. Investigate the level of psychological distress among HCWs in the face of COVID-19 crisis in Nkwanta South Municipal Hospital.
2. Investigate the level of psychological well-being among HCWs amid COVID-19.
3. Investigate the influence of psychological distress on psychological well-being of HCWs amid the pandemic.
4. Investigate gender differences in psychological distress among HCWs amid COVID-19 crisis.
5. Investigate the relationship between coping mechanisms and psychological distress
6. Investigate the relationship between coping mechanisms and psychological well-being.
7. Determine the moderating role of coping mechanisms in the relationship between psychological distress and psychological well-being.

Research Questions

The following research questions were developed as a guide for the investigation.

1. What is the level of psychological distress of healthcare workers in Nkwanta South Municipal Hospital amid COVID-19?
2. What is the level of psychological well-being of HCWs amid COVID-19 pandemic?

Research Hypotheses

The hypotheses were:

1. H_1: There is a significant impact of psychological distress on the psychological well-being among healthcare workers amid COVID-19.
2. H_1**:** There is a significant gender difference in psychological distress among healthcare workers amid COVID-19.
3. H_1: There is a significant relationship between coping mechanisms and psychological distress of healthcare workers amid Covid-19.
4. H_1**:** There is a significant relationship between coping mechanisms and psychological well-being of healthcare workers amid Covid-19.
5. H_1**:** Coping mechanisms moderate the association between psychological distress and psychological well-being of HCWs.

Significance of the Study

This disease is having far-reaching consequences for people's psychological well-being all around the world. HCWs that are at the forefront of the fight against this new pandemic are not immune to psychological anguish and its consequences for their mental health (Ho, et al., 2020).

In view of the above, the study provides useful information on the level of psychological distress and its implications on the psychological well-being of healthcare workers to augment the existing literature. This would better inform stakeholders such as Nkwanta South Municipal Health Directorate and the Municipal Assembly to find appropriate and effective ways of helping the vulnerable groups to effectively deal with the psychological issues that accompany the pandemic.

The study also provides information on the appropriate and effective coping mechanisms in dealing with psychological concerns relating to the pandemic and the moderating role of these strategies. This knowledge would help HCWs and the general public to successfully cope with the psychological effects of the pandemic and ultimately improves health outcomes.

The study also provides policymakers especially government with adequate information in developing responsive policies and programmes in providing timely or spot-on interventions to the afflicted population or vulnerable.

The findings of the study provide information to be added to the existing knowledge base, thereby expanding the boundaries of knowledge. By this, the study plays a complementary role in terms of knowledge extension on psychological issues as well as health outcomes of HCWs in the wake of the novel virus, and proffer appropriate information on the moderating role of coping mechanisms. This would provide information to empower healthcare workers and the general public on non-pharmacological options of dealing with the outbreaks.

Delimitation

This study focused on examining the psychological distress and well-being of HCWs during COVID-19 outbreak. The research was delimited to only the psychological distress and psychological well-being of HCWs. The study was also delimited to only problem-focused, emotion-focused and avoidant coping mechanisms. The study was delimited to descriptive survey design using closed-ended questionnaire and administered to only doctors, physician assistants, nurses, lab technicians and pharmacy staff in the facility.

Geographically, the study was delimited to HCWs in the Nkwanta South Municipal Hospital in the Oti Region of Ghana.

Limitations

The research study only included studies published in English language, leaving out potentially useful data published in other languages. The study also faced limitation in the nature of participants' biases. This happened as respondents might have over- or under-rated their comments. These biases are more likely to compromise the research findings.

Definition of Terms

COVID-19: COVID-19 is a new coronavirus, now known as severe acute respiratory syndrome coronavirus.

Psychological distress (PD): It is a mental illness characterized with depression and anxiety.

Psychological well-being (PWB): It is a mixture of positive feelings such as happiness.

Coping mechanisms: Coping mechanisms refer to methods that people adopt to assist them cope with painful situations.

Healthcare workers (HCWs): Healthcare workers are people who provide direct or indirect services to the sick. For purposes of this study, HCWs refer to only doctors, physician assistants, nurses, lab technicians and pharmacy staffers.

Organisation of the Study

The study research encompasses five chapters. The first chapter gave a broad overview of the topic under study from different perspectives and gave justification on why it was imperative to conduct this study with statistics and

research findings. Chapter two, dealt with the review of related literature. It presented what authors or researchers from different disciplines had written about psychological distress and its implications on the PWB of HCWs in a pandemic situation. It also presents theoretical, conceptual and empirical reviews on psychological distress, its impact on the PWB of HCWs and the moderating role of coping mechanisms. The third chapter presents the research methodological procedure employed to conduct the study. This consists of the research design, population, sample and sampling procedure, data collection instruments, and data collection procedure and data analysis. The presentation of the results from data collected from the field is found in the Chapter four. This is where the data gathered was subjected to analysis and discussion in relation to the literature reviewed. The final chapter contains a summary, conclusions, and recommendations based on the research findings, as well as proposals for further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter examined important literature pertaining to the topic under study. It primarily looked at the theoretical reviews, conceptual framework and empirical studies that underpin this study. The scope of the review includes:

1. **Theoretical Review**
    a. Positive Psychology (Seligman & Csikszentmihalyi, 2000)
    b. Transactional Model of Stress and Coping (Lazarus & Folkman, 1984)
    c. Biopsychosocial (Spiritual) Model (Engel, 1977)
2. **Conceptual Review**
    a. COVID-19
    b. Psychological distress
    c. Psychological well-being
    d. Coping Mechanisms
    e. Conceptual Framework
3. **Empirical Review**
    a. Psychological distress among HCWs during the COVID-19.
    b. The level of psychological well-being among HCWs amid COVID-19 pandemic
    c. Influence of psychological distress on the psychological well-being of HCWs amid COVID-19 pandemic.

d. Gender differences in PD amid COVID-19 pandemic.
e. Coping mechanisms as a moderator in the relationship between PD and PWB.
f. Relationship between coping mechanisms and PD
g. Relationship between coping mechanisms and PWB

Theoretical Review

This review focused on theoretical perspectives that formed the underpinnings of this study.

Transactional model of stress and coping

Stress was regarded as a critical life event or change that required response, adjustment, or adaptation when the theory of stress as a stimulus was proposed in the 1960s. As a result, Rahe and Holmes (1967) used to think of humans as passive receivers of stress who had no say in the degree, intensity, or expression of the stressor. However, the researcher later suggested that an event in life could be evaluated and interpreted as a positive or negative experience based on some cognitive and emotional variables (Rahe & Arthur, 1978).

So, in attempt to elucidate the concept of stress as more of a dynamic process, Richard Lazarus developed the transactional theory of stress and coping, which views stress as the byproduct of a transaction or interplay between a person and his or her sophisticated environment (Lazarus et al., 1984).

It is a framework used for assessing the processes of stress coping. This paradigm can be used for health Researchers have tried to expand and

categorise many components in the stress-as-transaction model in order to account for the complicated processes involved in perceiving a stressor (Werner, 1993). Lazarus et al. (1984) expanded on the notion of interpretation in the stress appraisal model by incorporating primary, secondary, and reappraisal components. The primary assessment entails determining if the stressor represents a threat. A primary appraisal is an assessment of the situation's meaningfulness, and whether it has a good or negative impact on one's well-being (Wood, Wood & Boyd, 2007).

In the person–environment interaction, Krohne (2002) identifies two processes as crucial mediators: cognitive assessment and coping. Appraisal refers to a person's assessment of a stimulus, whereas coping refers to a person's endeavor to deal with specific demands through both thinking and behaviour (Lazarus, 1993). Primary assessment, according to Lazarus (1993), consists of three different elements: goal applicability, goal congruence, and the sort of ego-involved.

A stressful situation could involve danger or loss, as well as intimidation and difficulty (Lazarus et al., 1984). The psychological hurt which had transpired could be referred to as harm. Threat on the other hand, could be perceived to be a situation that is taxing and will put one at great risk of damage. People experience nervousness, fear, anger, and resentment when they regard a situation as painful, threatening, damaging, or involving loss (Lazarus et al., 1984).

Secondary assessment is the evaluation of an individual's capabilities or adaptive skills to cope with any risk perceptions. Secondary appraisal simply entails coping alternatives that are readily available to the individual.

According to Krohne (2002) there are three distinguished components of secondary appraisal: Guilt or gratitude, coping abilities, and future projections. When presented with a problem, a person performs analysis whether the issue is frightening or not, and whether he or she has the resources to properly act. If the person feels weak and does not believe he or she has the necessary ability to react appropriately to the problem, he or she is more inclined to utilise an emotion-focused coping skills such as wishful thinking, distancing, stressing the positive, and so on (Lazarus & Folkman, 1987). If the person has the capacity to deal with the difficulty, he or she would most likely develop a problem-focused coping response, such as analysis. The secondary appraisal is a determinant of one's coping techniques (Lazarus et al., 1987).

It is an encompassing model that recognises the interactional role between man and his complex environment as cause of stress. So, the contribution of this model to the understanding of the concept of stress cannot be overemphasised. However, according to Cohen (1991), there are two major problems identified in the model. To begin with, multiple assessments of human perceptions and experiences and coping mechanisms have been developed as a result of extensive use of the model, but there is no universally agreed standard. Furthermore, some experts contend that the transactional approach is not comprehensive and hence fails to explain people's choice of coping techniques (Suls, David & Harvey, 1996).

Positive Psychology

During the second half of the twentieth century, psychology's focus was mostly on depression, discrimination, and violence; self-esteem management, irrationality, and human misfortune; and virtues, strong

character, and the conditions that guarantee recommendable levels of happiness or civic participation (Seligman et al., 2000). Thus, since Second World War, psychology was primarily concerned with healing and or restoring the worst. In fact, it focused mainly on repairing damage in the pathological theory of human functionality (Seligman, 2012).

In fact, Seligman et al. (2000) contended that psychology was not churning out substantial expertise. So, they defined positive psychology as the scientific study of good human functioning and thriving on numerous levels, including biological, personal, relational, institutional, cultural, and worldwide dimensions of existence. According to Gable and Haidt (2005), it is concerned with the factors and processes that contribute to the flourishing or maximum functioning of people, groups, and systems.

Positive psychology is concerned with desirable subjective feelings such as well-being, fulfillment, and satisfaction in the past; hopefulness in the future; and flow and happiness in the present (in the present). The capacity for love and passion, courage, interpersonal skill, aesthetic sensitivity, tenacity, forgiveness, originality, future mindedness, spirituality, high talent, and knowledge are all beneficial individual attributes at the individual level. At the group level, it's about the civic qualities and institutions that encourage people to become better citizens: responsibility, nurturing, generosity, decency, reasonableness, tolerance, and a strong work ethic (Seligman et al., 2000).

Although, positive psychology came to existence only in 2000 (Seligman, 2003), its core ideas have been discussed in religious and philosophical circles for several millenniums (Christopher & Hickinbottom,

2008). The goal of positive psychology is to figure out what makes us happy. It focuses on moving psychology away from merely fixing the negative aspects of life toward developing positive attributes (Seligman et al., 2000).

However, it is important to note that positive psychology is not about denying unpleasant or bad parts of life or trying to perceive them through rose-tinted spectacles (Gable et al., 2005). Taylor, Kemeny, Reed, Bower, and Gruenwald (2000) found that positive attitudes and feelings of personal mastery are protective variables for psychological and physical health. In summary, positive psychology hinges on the notions of happiness, hope, drive, sensitivity, and self-esteem, which jointly work together towards enhancement of one's well-being (Slade, 2010).

Biopsychosocial (Spiritual) model

The Biopsychosocial model was propounded in 1977 by George Engel. The model is a contemporary humanist approach to understanding human being (Engel, 1977). The Biopsychosocial model is an interdisciplinary in nature and recognises the link amongst biological, psychological, and socio-environmental elements (Santrock, 2007).

According to this model, illness or dysfunctionality is caused by a combination of biological factors (physical problems with the body, particularly the brain, and genetic factors present at birth), cognitive factors (psycho), which include our beliefs, lifestyle choices of thought, and psychological mechanisms that may influence behavior, and external factors (social), which include what we learn from our surroundings, cultural traits, and how other people treat us (Santrock, 2007).

The biopsychosocial model is both a therapeutic theory and a clinical guide. It is a philosophical means of understanding how various structures effect misery, disease, and illness. This is relevant because understanding of patient's subjective experiences is vital to correct diagnosis, health outcomes, and humane care (Borrell-Carrió, Suchman, & Epstein, 2004). The model is an offshoot of biomedicine and views disease as caused by pathogens which have invaded the body and must be fought. The approach confines disease to solely biological variables such as pathogens, genetics, or bodily irregularities, leaving no room for social, psychological, or behavioural elements (Engel, 1977).

Many authors view the Biopsychosocial model in terms of causation (Santrock, 2007). For example, biological factors seek to unravel how the cause of an illness can be linked to the dysfunctionality of a person's body and biological processes. The psychological component looks for psychological factors such as low self-esteem, emotional turmoil, negative thinking among other self-defeating tendencies and its association with quality of life. Whereas environmental factors investigate the extent to which varied societal factors such as socioeconomic class, culture, technologies, and religion impact well-being (Santrock, 2007).

However, in recent times, many researchers are of the opinion that the model be broadened to include spiritual aspects. This is because the model believes that every person has a spiritual history. For many people, this spiritual past manifests itself in the context of a religious tradition. Regardless of how it has played out, each patient's spiritual background contributes to who he or she is as a whole person, and when life-threatening affliction

strikes, it strikes each individual in his or her entirety (Sulmasy, 2002). This entirety encompasses not just a person's biological, psychological, and social characteristics, but also their spiritual aspects (Engel, 1992). It has been established that spiritual manifestations and their interactions are crucial in evaluating health results (Katerndahl, 2008). A fully holistic health care system, according to Sulmasy (2002), must respond to the totality of a client's interpersonal life. This stance sought to give justification to the expansion of biopsychosocial–spiritual model.

Although, spirituality has become one of the major factors in the totality of human health, the concept "spiritual" is presently open and fluid. It involves a variety of topics, spanning from non-religious and non-theistic features (such as the power of imagination) to religious experiences on a deeper level (Saad, De Medeiros & Mosini, 2017).

The modern society has varied interpretations about the concept "spiritual". Spirituality is "the search for ultimate meaning, purpose and significance, in relation to oneself, family, others, community, nature, and the sacred, expressed through beliefs, values, traditions and practices" (Puchalski, Ferrel, Virani, Otis-Green, Baird, Bull & Sulmasy, 2009).

Biopsychosocial-Spiritual paradigm is not a form of "dualism" in which a "soul" occupies a body by chance. Rather, under this concept, the biological, psychological, social, and spiritual aspects of a person are all distinct pieces of that person, and no one feature can be separated from the total. A person's background and sickness can influence each component differently, and each aspect can interact and affect other parts of the person (Sulmasy, 2002).

Application of the Biopsychosocial(S) model

The model is in part based on social cognitive theory (Santrock, 2007). Therefore, the level of psychological distress HCWs will experience and its consequent influence on their well-being as well as their coping styles will be traceable to diversity of factors. For example, biological constitution of a healthcare worker, societal perception of HCWs amid COVD-19, belief systems and the level of spirituality may influence how much they experience psychological distress. Purdy (2013) stated that psychosocial variables might have a biological influence on a patient by predisposing them to increased risk.

Conceptual framework

The conceptual framework explained the interconnectedness among variables in this study. The predictor variable in this study is psychological distress (PD) while the criterion or outcome variable is psychological well-being (PWB). Coping mechanism is not a primary variable in the study but suppose to have an influence on both the predictor variable (PD) and outcome variable (PWB), thus, primarily functions in this study as a moderator variable. Moderation is a technique for determining whether a third variable changes the strength or direction of a relationship between two independent variables. Moderation happens in regression analysis when the connection between two variables is influenced by a third variable. As a result, the third variable is known as the moderator variable or simply the moderator (Cohen, Cohen, West & Aiken, 2013). Simply, the combined effect of two variables on other is known conceptually as moderation, and statistically termed as interaction effect. The conceptual framework is depicted in figure 1.

Conceptual Framework

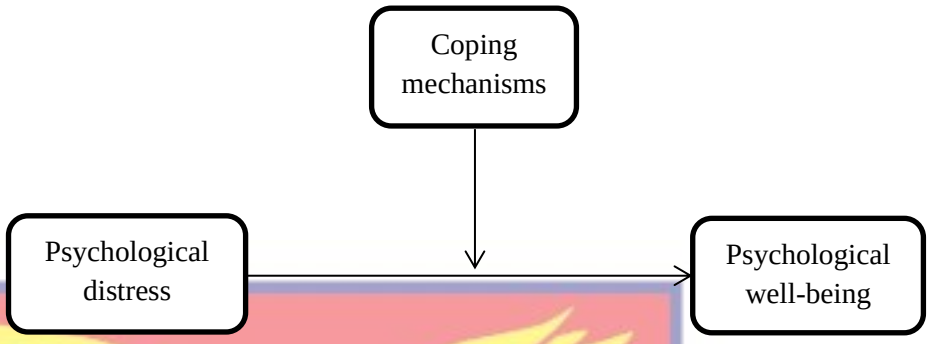

Figure 1: Interaction among psychological distress, psychological well-being and coping mechanisms.

Source: Researcher construct; 2020.

From figure 1, the study conceptualised the impact of psychological distress on psychological well-being HCWs during the COVID-19 pandemic, as well as the moderating role of coping mechanisms.

Coronavirus disease 2019

Coronaviruses are encapsulated, positive single-stranded big RNA viruses which can infect both humans and animals. SARS-CoV-2 is a new coronavirus that causes sickness (Centers for Disease Control and Prevention, 2020). Tyrell and Bynoe (1966) were the first to discover the viruses, which they cultivated from patients with common colds. Because of their shape as spherical virions with a core shell and surface projections that mimic the solar corona, the viruses have been dubbed coronaviruses (Latin: corona = crown).

The Ro COVID-19 estimation is 1.4 to 2.5, which means that any person who contracts the virus has a chance of infecting between 1.4 and 2.5 persons who come into touch with them. Measles had a RO of 12-18, but SARS had a RO that was equivalent to the 2019-nCoV. Authorities in China

claim that the incubation period could be prolonged (up to 14 days). However, current evidence suggests a median incubation duration of three days (range: 0–24 days) (Guan, Ni, Hu, Liang, Ou, He & Zhong, 2020) and a mean incubation period of five days (Bai et al., 2020).

Clinical symptoms of COVID-2019 pandemic

Pneumonia was the initial symptom of the SARS-CoV-2-related COVID-19 sickness that allowed for case identification. Recently, research has revealed that gastrointestinal symptoms, as well as silent infections, are clinical signs in young infants (Russell, Millar & Baillie, 2020). In symptomatic patients, manifestations usually begin in a week and include fever, cough, fatigue, difficulty breathing, or other upper respiratory tract disease symptoms. The infection can proceed to severe disease in around 75% of patients, causing dyspnoea and severe chest symptoms that are similar to pneumonia (Alhazzani, Mller, Arabi, Loeb, Gong, Fan, & Du, 2020). It causes severe breathing problems in roughly 20% of persons who contract it, with a case-fatality rate of about 2.35 (Zhang, Zhu, Xie, Wang, Wang, Chen & Zhou, 2020).

Mode of transmission

The coronavirus ailment 2019 is zoonotic, which means that animal coronaviruses, including MERS, SARS, and 2019-nCoV, can infect people and spread between them. Human-to-human transmission has been confirmed, and asymptomatic persons may transmit the virus during the gestation period. Person-to-person transmission of SARS-CoV-2 occurs mostly by respiratory droplet and tactile infection. Aerosol and faecal contamination transmissions

are two further putative pathways for SARS-CoV-2 infection yet to be proven (Shi, Wang, Cai, Deng, Zheng, Zhu & Chen, 2020).

Prevention

Strictly following the preventative precautions below, spread of the virus can be controlled.

- ✓ Washing hands with detergent and water or alcohol-based hand sanitizer
- ✓ Hands should not be used to touch your eyes, nose, or mouth if not properly washed.
- ✓ Avoid close keeping contact with sick people.
- ✓ When coughing or sneezing, use a tissue to cover your mouth and then throw the tissue away.
- ✓ Cleaning and sanitizing touched objects and surfaces on a regular basis (Hadaway, 2020).

Risk factors

COVID-19 can cause respiratory distress, renal issues, liver harm, abrupt myocardial infarction, septicemia, and multiple organ failure, among other things. Although the exact risk factors for the virus's progression are obscure, preliminary research suggests that advanced age, male sex, and people with underlying health issues are all at higher risk (Williamson, Walker, Bhaskaran, Bacon, Bates, Morton & Goldacre, 2020). A person's underlying physical health can also be a risk factor. For instance, a study revealed that nearly 23% of viral patients had one or more underlying health disorders, such as chronic obstructive pulmonary disease, hypertension, diabetes and liver (Alhazzani et al., 2020).

Psychological distress

Oncological nursing defined PD as a generic concept of maladaptive psychological functioning in the face of stressful life events (Ridner, 2004). According to WHO (2001) PD is a widespread mental health issue in society today. Psychological distress is a generic phrase that refers to uncomfortable thoughts and emotions that have a detrimental impact on a person's ability to function (Sue, Sue & Sue, 2006).

Some mental health practitioners use the phrase to describe a set of symptoms and feelings that are usually abnormal in an individual's internal state (Goldberg, 2000; Drapeau et al., 2012; Arvidsdotter, Marklund, Kylén, Taft & Ekman, 2016). According to Massee (2000), psychological discomfort can present itself as a shift from a steady baseline emotional state to anxiety, sadness, demoralization, impatience, aggression, and self-depreciation.

Cimprich (1999) discovered a high level of clinical depression among distressed American women who had been screened with breast cancer while Uchitomi, Mikami, Nagai, Nishiwaki, Akechi and Okamura (2003) observed that depression was associated with psychological discomfort in Japanese cancer patients. Anguish, suffering, and misery are used to describe mental discomfort that is tied to distress (Spraycar, 1995; Lazarus, 1998).

Discomfort is a less subjective concept that accurately depicts the change in emotional comfort that occurs with mental distress (House, 1998). PD is primarily an emotional condition marked by lost interest; sadness, hopelessness, restlessness and feelings of tension. These symptoms could be classified as somatic and are culturally variable (Mirowsky & Ross, 2020).

Psychological distress becomes a medical concern, particularly when it is accompanied by other symptoms that, when added together, meet the diagnostic criteria for a mental disease (Kalueff, Wheaton & Murphy, 2007). It is seen as a temporary occurrence, according to the stress-distress framework. Horwitz and Wakefield (2007) backed up this claim by citing a series of research conducted among adolescents that revealed significant fluctuations in depression symptoms.

However, Kalueff et al. (2007) debunked the fleeting character of distress after following their investigations. They discovered among other things that psychological anguish was pretty stable although were unable to account for personality in the relative consistency of psychological distress across time (Jorm & Duncan-Jones, 1990). PD is often known as a generalized mental health issue (Dohrenwend & Dohrenwend, 1982). However, Kalueff et al. (2007) believe that the lack of clarity should be stated since it is clearly identified by depressive symptomatology. They claimed that the measure used to evaluate PD, depression disorders, and GAD has certain similarities. As a result, PD and these mental diseases are discrete phenomena that are not completely separate from one another (Payton, 2009).

There is history to psychological distress. Inanimate objects do not have the ability to experience psychological anguish, distress must be experienced by a living, conscious wholistic being (Ridner, 2004). A stressful event is a second precondition; a trigger that causes either eustress or distress when it is experienced by an organism (Murray & Huelskoetter, 1987).

Psychological Well-being

Psychological well-being is very comparable to other phrases that suggest good mental states, such as happiness or satisfaction. There are two fundamental aspects of psychological well-being. The first of these pertains to how much happiness and pleasant emotions are experienced by individuals. This element of psychological well-being is often called subjective well-being (Diener, 2000).

Types of PWB

1. 1. Hedonic well-being is a phrase that relates to a person's subjective sensations of happiness. It consists of two parts: an affect (high positive affect and low negative affect) and cognitions (satisfaction with life). It is claimed that a person is happy when their positive affect and life satisfaction are both substantial (Carruthers & Hood, 2004).
2. Eudaimonic well-being is a term for the purposeful part of PWB that is less well-known. Carol Ryff devised a simple model that divided Eudaimonic well-being into six categories: self-acceptance, feelings of competence, healthy social interactions, self-development, view of life, and autonomy (Seifert, 2005).

Coping mechanisms

Coping is regarded as the mobilization of ideas and behaviours in order to deal with stressful conditions both internally and externally (Folkman et al., 2004). It is a term used distinctively to consciously and voluntarily mobilise acts, but different from ‘Protective factors’ that are instinctual or unintentional adaptive responses, although both aim at reducing or tolerating stress (Venner,

1988). Coping is a collection of stress management skills that can be used to meet individual conditions, rather than a style or personality attribute that persists across contexts (Moos, 1974).

When people are faced with an adversity, they use a variety of stress management skills known as 'coping mechanisms' (de Boer, Koolhaas, Buwalda, and de Boer, 2017). Problem-focused, emotion-focused, support-seeking, and meaning-making coping techniques were identified by Folkman and Lazarus (Harrington, 2012). Weiten and his partner also discovered four different types of coping styles: appraisal-focused (adaptive cognitive), problem-focused (adaptive behavioral), emotion-focused and occupation-focused coping (Weiten & Lloyd, 2008). Avoidance coping was added to the list of emotion-focused coping methods by Billings and Moos (1981).

Problem-Focused Coping

Problem-focused coping entails attempting to change the problem at hand, and often includes elements such as generating problem-solving alternatives, weighing the benefits and drawbacks of various options, and taking measures to fix the problem (Lazarus et al., 1984). In general, problem-focused coping is thought to be the best since it eliminates the stressor, addresses the core of a problem, and so provides a long-term treatment. It helps people manage with stresses like bigotry (Pascoe & Richman, 2009), Human immunodeficiency virus (Moskowitz, Hult, Bussolari, & Acree, 2009), and mellitus (Duangdao & Roesch, 2008).

However, because problem-focused solutions do not work for everyone, it is not always viable to adopt them. This is due to the fact that not

everyone is capable of perceiving a situation as controllable (Lazarus et al., 1984). For example, hopeful people are more likely to employ problem-focused techniques, whilst pessimistic individuals are more inclined to utilise emotion-focused tactics (Nes & Segerstrom, 2006).

Emotion-focused coping

Emotion-focused coping is generally defined as attempting to manage the emotional suffering brought on by the circumstance (Lazarus et al., 1984). Denial, focusing on and venting pent-up emotions, favourable reinterpretation of situations, and seeking out social support are just a few of the emotion-focused treatments available (Lazarus et al., 1984). Other ways of emotion-focused coping include:

- ✓ Distractions
- ✓ Emotional transparency
- ✓ Praying for wisdom and strength.
- ✓ Meditation
- ✓ Using narcotics.
- ✓ Keeping records
- ✓ Reappraisal of the mind
- ✓ Suppressing negative thoughts (Petrie, Booth & Pennebaker, 1998).

In terms of health outcomes, a study found that emotion-focused solutions were generally less efficacious to problem-focused skills (Penley, Tomaka & Weibe, 2002). There have also been reports of gender gaps. Women employ more emotion-focused techniques than males (Billings et al., 1981). In summary, problem-focused coping tactics can help people regard

their difficulties as manageable, whilst emotion-focused skills can sometimes result in the loss of control (Zakowski, Hall, Klein & Baum, 2001).

Avoidant Coping

Avoidance coping, also known as avoidant coping, avoidance behaviours, and escapism, is a type of unhealthy coping in which a person modifies their behaviour to escape rumination, experiencing, or doing painful things (Holahan, Moos, Holahan, Brennan & Schutte, 2005). Attempting to escape stressful stimuli instead of dealing with them is known as avoidance coping. Avoidance coping is considered maladaptive because it frequently aggravates stress without aiding a person in dealing with the stimuli (Dijkstra & Homan, 2016). It is defined as a person's implicit or explicit attempts to avoid a stressor in order to protect themselves from the difficulties that it brings (Gámez, Chmielewski, Kotov, Ruggero, & Watson, 2011). Avoidance coping can lead to substance misuse, social disengagement, and other types of escapism (Weinbrecht, Schulze, Boettcher &Renneberg, 2016).

Level of Psychological Distress

According to a study conducted by Kafle et al. (2021) to assess the presence of psychological distress among health service providers during the COVID-19 pandemic in Nepal, more than half of HCWS experienced mild-to-severe distress as a result of the pandemic. More than two-thirds (87.4%) of the respondents were tensed and agitated. Similarly, 74.8 percent of respondents said they felt nervous and bought more facemasks, prescriptions, hand sanitisers, gloves, and other household items. Furthermore, nearly half of

the participants (47.2%) always expressed sympathy to COVID-19 patients and their families, while nearly a third (86, 33.9%) of the respondents believed COVID-19 information from all sources without any verification. Again, over two-thirds (66.9%) refused to believe unfavourable news regarding COVID-19 and were confident in the good news (Kafle et al., 2021).

Furthermore, Sharma, Saxena, Magoon, and Jain (2020) found that 18 percent of management staff felt anxious, 8% were stressed, and 22.0% were distressed when compared to HCWs, who had a significantly higher prevalence of anxiety (56.7 %), stress (54.7 %), and depression (22.0 %). Besides, a study assessing the psychological effect of the COVID-19 on anaesthesiologists, found majority of experienced anxiety and sleep difficulties. The study found 39.5% of respondents reporting signs of insomnia and 31.8 %, 23.2 % as well as 5.5 % reporting symptoms of sub-threshold insomnia, moderate insomnia, and severe insomnia respectively (Jain et al., 2020).

In addition, an electronic study conducted to assess the frequency of psychological symptoms among HCWs during the COVID-19 pandemic reported anxiety, depression, and sleeplessness symptoms as 20.7 %, 26.55 %, and 44.25 %, respectively. The researchers attributed the high prevalence to heightened mental strain (Ali et al., 2021). Similarly, a study looking into the prevalence of insomnia among healthcare workers during the COVID-19 plague from January 2020 to January 2021 showed evidence of a significant presence of insomnia among HCWs (Sahebi, Abdi, Moayedi, Torres & Golitaleb, 2021).

Furthermore, a study that investigated religious coping, depression, and anxiety among HCWs during the COVID-19 crisis from a Malaysian viewpoint, revealed a considerable level of psychological suffering among them. The average anxiety (6.77) and depression (5.20) ratings of doctors were higher than the average anxiety (6.50) and depression (5.20) scores of nurses, hence physicians were more likely than nurses to experience depression and anxiety (Chow, Francis, Naim, Beh, Ariffin & Sulaiman, 2021).

Kwobah, Mwangi, Patel, Mwogi, Kiptoo, and Atwoli (2021) conducted survey to determine the frequency and factors associated with worry, GAD, depression, PTSD, and poor sleep quality among Kenyan HCWs. According to the findings, 66.7 % of the subjects experienced anxiety, 32.1 % had depression, 36 % had generalized anxiety, 24.2 % had sleeplessness, and 64.7 % was prone to PTSD. Again, an internet poll done around April and May 2021 in 31 jurisdictions, including Kenya, found that sixty percent of HCWs had anxiety and fifty-three percent had mild to moderate depression (Htay, Marzo, AlRifai, Kamberi, El-Abasiri, Nyamache & Abas, 2020). According to an evaluation of COVID-19's immediate impact, up to thirty-five percent of HCWs were projected to experience severe stress manifestations (Benfante, Di Tella, Romeo & Castelli, 2020). In the present outbreak, studies in Asia have found that the prevalence of anxiety and depression symptoms among HCWs were 8.7–44.6 % and 5.3–50.6 %, respectively (Huang & Zhao, 2020; Pappa, Ntella, Giannakas, Giannakoulis, Papoutsi & Katsaounou, 2020). Also, an online survey by Aly, Nemr, Kishk, and Elsaid (2021) found that approximately 9.5% of participants did not have

generalized anxiety, while the remaining 90.5 % had varying degrees of anxiety.

However, researchers think that increased manpower, recognition of work, and projection as role models could benefit stressed HCW (Mohindra, Ravaki, Suri, Bhalla & Singh, 2020; Bhatnagar, Mehdiratta & Karthik, 2020). Aside from compulsory insurance policy and a good nutrition, sufficient relaxation could also be useful in the fight against psychological perturbation among HCWs (Gupta, Bajwa, Malhotra, Mehdiratta & Kakkar, 2020). Similarly, Sirois and Owens (2021) claim that having a strong support network at home and work, feeling in control, having positive work attitudes, having enough information about the pandemic and sufficient protection, skills, and resources are all linked to decreased psychological suffering.

Psychological well-being of HCWs

During an outbreak, the expectations of healthcare workers are tremendous and endure for a long time. Workplace stress affects HCWs (Russell, Maître, Watson, & Fahey, 2018) and is tied to work overload, operating in emotionally charged settings, and being in environments where need exceeds capacity (Shanafelt, Mungo, Schmitgen, Storz, Reeves, Hayes & Buskirk, 2016). Clinicians in Ireland, for example, feel a lack of leadership and state support, coupled with relatively high expectations and skepticism about the possibility of change (McNicholas, Sharma, Oconnor & Barrett, 2020) aggravated their predicament. In addition, greater patient safety incidents, medical errors, substandard service delivery, staff turnover issues,

and illness or disability are among the primary causes of HCWs' discomfort (McNicholas et al., 2020).

Similarly, half of healthcare personnel had psychological discomfort during SARS in 2003 (Tam, Pang, Lam, & Chiu, 2004). Risk factors were quarantine, personal confinement, treating infected peers, dread of infection, job strain and concerns about familial well-being (Maunder, Lancee, Balderson, Bennett, Borgundvaag, Evans & Wasylenki, 2006).

A study to examine the lived experiences of HCPs in Northern Ireland found healthcare providers reporting feelings of anxiety, despair, anxiousness, as well as bodily weariness (McGlinchey, Hitch, Butter, McCaughey, Berry & Armour, 2021). In addition, Singh, Bajpai, and Kaswan (2021) survey to estimate PWB from an Indian perspective found stress to be 60.7 % in nine studies, 32.7 % of depression in eight studies, anxiety was 34.1 % in six studies, and sleep disturbances were 26.7 % in six studies. The survey found HCWs to have a higher prevalence of stress, anxiety and depression than the general population.

Furthermore, psychological impact of the COVID-19 on the general public in China was investigated using DASS-21 during the early phases of the pandemic, and findings revealed that 16.5 %, 28.8 %, and 8.1 % reported moderate to severe depressed mood, anxiety and stress respectively (Wang, Pan, Wan, Tan, Xu, Ho & Ho, 2020).

Similarly, Shah, Monroe-Wise, Talib, Nabiswa, Said, Abeid and Ali (2021) conducted a cross-sectional study between August and November 2020 among HCWs from three major hospitals in Kenya to explore mental illnesses among health workers during the outbreak. A total of 433 (65.2% response

rate) individuals participated in the survey, 58.4% were females and 68.8% were front-line workers. The survey revealed depression, anxiety, insomnia, distress and burnout to be 53.6%, 44.3%, 41.1%, 31.0% and 45.8% respectively with forefront HCWs, especially females and doctors being at higher risk of dysfunctionality.

Shahrour and Dardas (2020) survey of 73 % female nurses to determine the prevalence of ASD and predictor variables of PD among HCWs in Jordan found 64 % nurses suffering from ASD as a result of the pandemic (Shahrour et al., 2020). Actually, ASD was linked to emotional problems, such as depression, anxiety, and somatoform disorder, in people who have been subjected to a harrowing ordeal (Benight & Harper, 2002).

The influence of psychological distress on psychological well-being

Psychological distress, on the other hand, is classified as a form of anxiety, melancholy, irritability, self-consciousness, or emotional fragility which is strongly linked to physical morbidity, diminished quality of life, and elevated healthcare utilisation (Lahey, 2009).

There are controversies about the relationship between PD and PWB. Some scholars claimed that positive and negative effects of PD and PWB are independent of each other (Larsen, McGraw & Cacioppo, 2001; Warr, Barter & Brownbridge, 1983). According to Huppert (2009), PD and PWB share a number of common drivers, however, Keyes (2005) held that PD and PWB were different although connected axes of depression and other psychiatric illness.

A study by Winefield, Gill, Taylor, and Pilkington (2012) investigating the relationship between PD and PWB found that variables positively associated with PWB were negatively associated with PD and vice versa. The researchers came to the conclusion that PWB is not the polar opposite of psychological distress.

Similarly, a study that looked at the reciprocity between PD and subjective well-being, as well as the role of changes in psychosocial resources in the mutuality, found that distress and well-being predict each other throughout cancer adaptation; though change in perceived collective control mediated the prospective relationship (Hou & Lam, 2014). Also, a study by Gray, O'Connor, Knowles, Pink, Simkiss, Williams and Snowden (2020) to look into the PWB and mental suffering of the Welsh during the pandemic lockdown from April 2018 to March 2019 found a significant drop in PWB in the people of Wales in the 11–16 weeks of lockdown measures.

Gender differences in psychological distress

Women HCWs account for a larger proportion of COVID-19 infections than men in various countries (Miyamoto, 2020). There are numerous empirical researches on gender differentials in PD during disease outbreaks or general health complications. For example, during the COVID-19 outbreak, Garca-Fernández, Romero-Ferreiro, Padilla, David López-Roldán, Monzó-Garca, and Rodriguez-Jimenez (2021) study investigating differences in the presence of anxiety, depression, and acute stress symptoms between

men and women; found women reporting more severe anxiety, depression, and acute stress symptoms than men.

According to Pappa et al. (2020), being a female nurse has been linked to a higher presence of sadness and anxiety than other healthcare employees. Similarly, Liu et al. (2020) looked at the presence and predictors of posttraumatic stress symptoms in China's hardest-hit districts during this outbreak, with a particular focus on the gender gap in PTSS, and found that female HCWs had greater rates of PTSS. Also, a survey conducted by Kwobah et al. (2021) to assess the prevalence and associated factors of worry, GAD, depression, PTSD, and insomnia among Kenyan healthcare workers found higher depression among females than males.

Furthermore, survey that was undertaken between Jan. 29, 2020, and Feb. 3, 2020 to investigate gender differences in mental health illnesses among HCWs found that depressive mood; anxiety, stress, and insomnia symptoms were higher in females than men (Liu, Yang, Zhang, Xu, Cai, Ma & Zhang, 2021). Also, Blanchard, Keefer, Galovski, Taylor, and Turner (2001) investigated gender differences in PD among irritable bowel syndrome patients, and results showed that females had considerably higher scores than males on the Beck Depression Inventory (BDI), State–Trait Anxiety Inventory (STAI), and Scales 2 and 3 of the Minnesota Multiphasic Personality Inventory (MMPI).

Again, a study that looked at gender differences in response to emotional stress found that women experienced more grief and anxiousness after being stressed than men. According to the findings, men and women react to stress in different ways, with women experiencing more melancholy

and anxiety while men displaying a higher craving for rewards and emotional stress systems (Chaplin, Hong, Bergquist & Sinha, 2008). Furthermore, a study including 470 Spanish university lecturers found that females had considerably greater levels in perceived stress, emotional tiredness, and neuroticism than males. As a result, the researchers came to the conclusion that female had higher degrees of burnout, emotional tiredness, and emotionality than males (Redondo-Flórez, Tornero-Aguilera, Ramos-Campo, & Clemente-Suárez, 2020).

In a study conducted by Starrenburg, Pedersen, Van den Broek, Kraaier, Scholten, and Van der Palen (2014) to examine gender bias in PD and QoL among patients with an artificial heart defibrillator 1-Year Postimplant, found that women reported elevated anxiety. In contrast, a meta-analysis to assessing gender differences in mental health reactions of HCWs during COVID-19 pandemic found no significant differences in gender (Fresna, Atikah, Salsabila, Pusparini, Purnasari, Anisa & Puspitasari, 2021). However, Ali et al. (2021), maintain that female HCWs are more prone to mental health symptoms as compare to their male counterparts.

Relationship between coping mechanisms and psychological distress

Study by Morris, Moghaddam, Tickle, and Biswas (2018) identified moderate-to-high relationships between disengagement coping methods and psychological distress in adults with head and neck cancer. Furthermore, the findings revealed that engagement coping methods were not always linked to psychological distress. Similarly, Goldman (2021) looked into the relationships between coping skills and stress among Portland State University

students during covid-19, and found a positive correlation between avoidant coping and stress, and a negative correlation between adaptive coping and stress.

Furthermore, in assessing the relationship between the coping styles of carers of patients with neurological disorders and distress, results showed that beside confrontative coping and reappraisal, all coping strategies showed positive relationships with the carers' subjective burden, anxiety and depression. The data added that using "problem-solving" approaches had a negative association with carers' subjective load and despair (Kausar & Powell, 1999). In addition, a study to establish whether coping strategies (problem-focused, emotion-focused, avoidant, and supportive) were linked to: (1) better mental health as lockdown was implemented and (2) faster recovery over 21 weeks of COVID-19 lockdown, found that people who used more problem-focused, avoidant, and supportive coping had more mental health symptoms than those who employed emotion-focused coping techniques (Fluharty, Bu, Steptoe & Fancourt, 2020). However, a study by Tancherla, Celine, Dharmaraja, Natalie, Putri, Nathania and Kurniawan (2019) to examine the relationship between coping mechanisms and psychological distress in breast cancer patients revealed no significant association.

Relationship between coping mechanisms and psychological well-being

Managing life's stresses can have an influence on one's mental health and well-being. For example, a study by Blalock, DeVellis, and Giorgino (1995) assessing the relationship between coping styles and PWB in people with osteoarthritis found that the coping strategies people used at Time 1

significantly predicted PWB after six months of measuring positive, negative, and depressive symptoms. Similarly, researchers found substantial relationships between PWB and coping techniques among parents of Down syndrome children. Findings showed that parents who employed active avoidance coping skills had lower levels of PWB than those who utilised problem-focused coping strategies (Hayat & Zafar, 2015).

Furthermore, a research evaluating the influence of coping strategies on students' PWB in Nigeria found a substantial combined effect of coping strategies. Therefore, the researchers concluded that coping mechanisms could either improve or worsen PWB (Ukeh & Hassan, 2018). Gustems-Carnicer and Calderón (2013) investigated the link between coping methods and PWB among teacher trainees and found that while approach coping methods improved symptoms of depression and phobic anxiety, behavioural avoidance strategies were linked to poor mental health.

Again, Loukzadeh and Bafrooi (2013) found a significant negative relationship between emotion-focused coping style and some dimensions of PWB, such as purpose in life, personal development as well as a significant positive relationship. Similarly, Gholamzadeh, Hamid, Basri, Sharif, and Ibrahim (2014) discovered a strong link between positive religious coping and caregivers' PWB in a study to explore this relationship. Besides, a study exploring the influence of coping strategies on nurses' well-being and practice revealed that more approach-oriented coping strategies and fewer avoidant coping strategies predicted PWB (Lee, Tzeng & Chiang, 2019).

Coping mechanisms as a moderator

Literature on the moderating role of coping mechanisms between psychological distress and well-being is generally unknown. However, the influence of coping styles on psychological well-being cannot be disputed. For example, a study conducted by Kim, Shim, Choi, and Choi (2021) to examine the influence of coping strategies in maintaining well-being during the outbreak in South Korea discovered that different coping strategies moderated the rate of change in well-being. According to this study, while preventive measures were linked to a lower level of well-being, cognitive evaluation and behavioral interventions predicted stable well-being.

Also, a survey undertaken in Nigeria to see how coping strategies affected students' PWB revealed a substantial joint influence of coping strategies on PWB, hence the conclusion that coping mechanisms could either improve or worsen PWB (Ukeh et al., 2018). In addition, a study looking at the moderating effects of coping methods on self-discrepancy and psychological distress found that task-oriented and avoidance-oriented coping styles buffered the relationships between actual-ideal self-discrepancy and depressive symptoms, whereas the relationship between actual-ought self-discrepancy and anxiety was enhanced (Liw & Han, 2020).

Again, in order to determine if coping skills have a moderating effect on the relationship between stress and social support among teachers, Kamran and Sherazi (2020) found evidence to affirm the alternate hypothesis of the study.

Li, Ai, Gao, Zhou, Liu, Zhang and Fan (2017), also explored the moderating role of coping skills between work stress and job performance for nurses in China and found evidence that positive coping strategies moderated patient care and job performance while negative coping strategies moderated workload and time and performance, and between working environment and resources and performance. The researchers therefore concluded that positive coping skills reduce or buffer the negative effects of work stress on job performance whereas negative coping approaches increased the negative effects.

Chapter Summary

The chapter reviewed relevant literature that pertained to the present study. This chapter dealt with the theoretical review underpinning the study, emphasising the positive psychology, the transactional model of stress and coping, and the biopsychosocial (spiritual) model. The chapter also defined various variables in the study and their interconnections. The chapter further reviewed empirical studies that were relevant to the current study.

CHAPTER THREE

RESEARCH METHODS

Introduction

The chapter examined the methodological procedures used to conduct the research. The chapter basically looked at the research design, research population, sample and procedure of sampling. It also focused on ethical considerations and its implications, instruments used for data collection, consistency and accuracy of the instruments, procedures for data collection and methods for analysing data.

Research Paradigm

The positivist research paradigm is the foundation of the study. Positivism holds that reality exists apart from people. Additionally, that reality is unaffected by the senses of humans and is regulated by unalterable laws (Goduka, 2012). According to Gall, Borg and Gall (1996) positivists see the world is "out there" and can be studied in a more or less static manner. Positivists assert that by using scientific methods, it is feasible to construct the rules regulating social phenomena and portray them as true assertions. (Gall et al., 1996).

From a positivist perspective, data analysis takes a deductive method; first, a hypothesis is put out, and then, depending on the findings of statistical analysis, it is either affirmed or rejected. And the goal is to establish laws, manage processes, forecast outcomes, and assign causality(Cohen, Manion, Morrison & Wyse, 2010).

However, interpretivists and critical theorists have vigorously criticized the positivist paradigm (Richards, 2003). One of the most persistent critiques is that while scientific procedures are suitable for examining natural phenomena, they fall short when applied to examining people and social occurrences (Gage, 2000)

Research Approach

The researcher adopted quantitative research approach to carry out the study. In quantitative research, observations are numerically represented and altered in order to describe and understand the phenomena they reflect (Sukamolson, 2007). Numerous natural and social sciences, including physics, biology, psychology, sociology, and geology, employ it (Sukamolson, 2007).

According to Creswell and Creswell (2017) quantitative research uses mathematically based approaches to collect and analyze numerical data in order to understand phenomena. In order to investigate a phenomenon and its associations, this method focuses on numbers and other elements that may be quantitatively assessed in a systematic manner (Given, 2008).

It is used to uncover correlations between variables that may be measured in order to explain, forecast, and possibly even regulate a phenomenon (Mohajan, 2020). With a quantitative research approach, the researcher has the chance to gather a substantial and generalizing set of findings that can be concisely presented (Reio, 2016).

Research Design

A research design can be thought of as a blueprint outlining the procedures and methods to collect and analyze the necessary data (Coldwell & Herbst, 2004). It may also be considered as a strategy used by researchers to

test or respond to research questions (Polit, Hungler & Beck, 2001). Research design can be thought of as a strategy for directing a study and checking factors that might impair the validity of the findings (Vishnevsky & Beanlands, 1997).

The researcher employed descriptive survey for the study. Cross-sectional design in particular was employed since it employs both descriptive and inferential analytical methods for data analysis. This is due to the fact that a cross-sectional design collects information from a population at a certain time in order to explain the types of conditions that exist or to identify standards for making comparisons with conditions that are already present (Cohen et al., 2011). The cross-sectional design was chosen principally because it gives room for a large number of population representations (Creswell, 2013). According to Creswell (2013), cross-sectional research designs produce statistically significant results with greater validity and reliability values than other types of research designs due of their high representative nature. Bernard (2013) claims that because cross-sectional designs are so objective, it is possible to analyse several variables in a useful way. Cross-sectional design offers many benefits, but it also has drawbacks. For instance, respondents' or participants' prejudice in regard to their responses is a possibility (Grimes & Schulz, 2002). Furthermore, the cross-sectional design is constrained by weak control due to the huge sample size, which leads to dishonest responses from participants (Punch, 2013).

Study Area

The study was conducted in the Oti Region, specifically, Nkwanta South Municipal Hospital. The Nkwanta South Municipality is among the

eight governing centres in the Oti Region of Ghana. According to information from Ghana's 2010 population and housing consensus, the Municipality's population was 117,878. Males made up 58,482 (49.5%) of this total, while females made up 50.4%. The population count was 117, 878 people, and the population density was 43.13 people per square kilometre. The land surface area was 2,733 square km (Ghana Statistical Services, 2012).

The Municipality has sixteen (16) healthcare institutions, as follows: Two (2) hospitals are located in the Nkwanta Township, along with a health center at Tutukpene, two (2) clinics at Breweniase and Kecheibi, two (2) private clinics at Pusupu and Obanda, and nine (9) Community Health-Based Planning and Services (CHPS) facilities at Keri, Bonakye, Chaiso, Alokpatsa, Odumase, Abrubruwa, Pusupu, Dainkope. In the Municipality, the Nkwanta Municipal Hospital is the largest healthcare facility. The Konkombas, Ntrubos, Adeles, Atwodes, and Challas, as well as the Ewes, the Akans, the Kotokoli, and the Basaris, are the main ethnic groups that make up the 18 settlements that surround the Municipality, which is primarily an agricultural community (Ghana Statistical Services, 2012).

Nkwanta South Municipality has also reported cases of the pandemic since COVID-19 is contagious. The municipality documented 163 cases among the general population from the time it registered its first COVID-19 case until October 19, 2021. Out of this total, men made up 54% of the infections while women made up 46%.

It is important to note that the Nkwanta South Municipality's healthcare workers have experienced their fair share of illnesses; 15 of them had the virus as of October 19, 2021. The municipality had also noted some

COVID-19 fatalities among the general populace; as a result, the death toll in the municipality as of October 19, 2021, was at 6. However, it is crucial to note that as of October 26, 2021, there had been no case of COVID-19-related death among HCWs in Nkwanta South Municipal Hospital. (Www2.statsghana.gov.gh., 2020).

Population

A research's population consists primarily of the persons who are the subject of the study (Creswell, 2013). Most individuals or items under investigation share a similar quality or trait. There is a target population and an accessible population.

The group of persons or things the researcher wishes to study is known as the target population. Cohen et al. (2011) define target population as the group of people for whom a study's results are to be extrapolated. The population of target of this study included all (250) regular healthcare workers working at Nkwanta South Municipal Hospital.

The accessible population can be viewed as the population a researcher can actually investigate (Cohen et al., 2011). Thus, the accessible population of this study was 120 HCWs (2 Physicians, 4 Physician Assistants, and 95 Nurses, 9 Lab technicians and 10 Pharmacy staff) in Nkwanta South Municipal Hospital.

Sampling Procedures

No sampling was done since all the required healthcare workers at Nkwanta South Municipal Hospital of Oti Region were included in the study. Therefore, census technique was used to recruit 115 respondents (2

Physicians, 4 Physician Assistants, and 92 Nurses, 8 Lab technicians and 9 Pharmacy staff) for the study.

A census technique aims to identify all individuals or objects within a group so that one or more of their characteristics can be measured (Creswell, 2013). The census method may offer thorough data on most or all demographic components, hence allowing for large or uncommon population groups. There are many similarities between a census and a sample survey, such as the use of a survey to collect information, the requirement to process and amend data, and the sensitivity of various kinds of inaccuracy (Cohen et al., 2011). Contrary to sampling surveys, where just a subset of components are chosen for inclusion, censuses are typically not prone to sample error (Ballou & Lavrakas, 2008).

Criteria of Inclusion

HCWs at the Nkwanta South Municipal Hospital since the inception of the outbreak and had no any premorbid conditions. This is because HCWs who had been at the facility since the outbreak of the pandemic had better understanding of the dynamics of infection at the facility and responded to the questionnaire appropriately. Also, HCWs without premorbid conditions were psychologically functional and partook in the study.

Exclusion Criteria

HCWs that were unwell were exempted from the study. This was because they were not in good mental state to respond to the questionnaire.

Ethical Consideration

The researcher took ethical clearance from the Institutional Review Board, University of Cape Coast. Also, an introductory letter was sought from the Department of Education and Psychology of University of Cape Coast.

The researcher assured participants of confidentiality, anonymity as well as the prerogative to withdraw and decline participation.

Data Collection Instruments

A structured questionnaire was the method employed to collect the study's data. A questionnaire is a type of research tool that consists of a number of questions used to collect data. Howitt (2010) asserts that study participants are expected to read, evaluate, and answer to questionnaire items in a way that advances the study's goals. The questionnaire was chosen by the researcher due to its affordability and capacity to provide a high level of confidentiality and anonymity.

Despite its many advantages, the questionnaire has some odd restrictions on how data is collected. However, the questionnaire is still the best method for gathering data for this study (Sukamolson, 2007).

Kessler (K10) Psychological Distress Scale

Psychological distress was gauged by employing adapted version of K10. Ronald Kessler created the 10-item Kessler Psychological Distress Scale in 2001 with the goal of providing a comprehensive assessment of psychological distress (Kessler, Andrews, Colpe, Hiripi, Mroczek, Normand, Walter & Zaslavsky, 2002).

Respondents are asked to rate how frequently they encounter specific symptoms linked to distress using a five-point Likert scale. The Likert scale had responses that ranged from 1 to 5 (1 representing none of the time, 2 representing a little of the time, 3 representing sometimes, 4 is most times and 5 is all the time). The K10 scale has a maximum score of 50 (severe psychological distress), and a minimum value of 10. (low psychological distress). The following is how the test is scored:

1. 10 – 19: Well
2. 20 – 24: Mild disorder
3. 25 – 29: Moderate disorder
4. 30 – 50: Severe disorder

The instrument is well-known, extensively accepted, and utilised by both physicians and researchers worldwide. K10's Cronbach alpha ranges from 0.74 to 0.88 (Sampasa-Kanyinga, Zamorski, & Colman, 2018).

The Ryff's Scale of Psychological Well-being (Ryff & Keyes, 1995)

PWB was evaluated using a variant of PWB that was adopted. The 18-item self-reported questionnaire known as RPWB focuses on six facets of psychological functioning. Bradburn (1969) listed these qualities as: self-acceptance, good relationships with others, autonomy, having a purpose in life, environmental mastery, and personal development.

Ryff, Keyes and Hughes (2003) opined that the 18-item scale had been used worldwide. It is a seven point Likert scale and ranges from 1 to 7 (1 being strongly agree and 7 being strongly disagree). The internal consistency

coefficients range from 0.86 to 0.93 whereas test-rest reliability coefficient is 0.81 to 0.88.

Brief- COPE

For the purpose of measuring coping mechanisms, the researcher used the Brief-COPE. There are 14 subscales in this self-reported questionnaire, and they are all used to describe different coping mechanisms. Self-distraction, active coping, denial, substance abuse, behavioral disengagement, use of instrumental assistance, use of emotional support, planning, venting, positive reframing, humour, religion, acceptance, and self-blame are among the fourteen levels of this measure (Carver, Scheier & Weintraub, 1989).

There are two items on each subscale with verified psychometric properties (Carver, 1997). The Brief-COPE questionnaire comprises 28 total items that are designed to assess good and bad ways of handling stressful situations. The tool is mainly used in healthcare settings to gauge how emotionally responsive patients are to difficult situations (Carver, 1997).

It is also used to determine the severity of a person's many issues, such as a cancer diagnosis, heart failure, mental disease, etc. The scale is helpful for determining healthy and harmful ways that a person can react to challenges in life in counselling or therapeutic settings (Carver, 1997).

The scale can determine someone's basic coping styles on the following three levels:

- Problem- focused coping style
- Emotion-focused coping style
- Avoidant coping

The Cronbach apha ranged between .57 - .90.

Pilot-testing of Instrument

Pilot testing of the research instrument was done by the researcher to determine its dependability. According to Thabane, Ma, Chu, Cheng, Ismaila, Rios, and Goldsmith (2010), pilot-testing is a small-scaled trial research in which a limited number of respondents respond to a research test of an instrument so that the researcher may determine whether the research instrument is feasible.

A pilot-testing comprising 60 HCWs was done at St. Joseph's Municipal Hospital, Nkwanta South Municipality. These 60 participants were only used in the pilot-testing of the instrument and as such were from the study sample. The reliability analyses of various instruments used are presented in Table 1 below:

Table 1- *Reliability test of piloting-testing of research instruments*

Scale	**Cronbach alpha**
Kessler's Psychological distress scale (K10)	.770
Ryff's Scale of Psychological Well-being (RPWB)	.854
Brief COPE	.878

Source: Field survey, 2021

The results in Table 1 depict the reliability coefficient of various instruments used in the study. According to Nunnally (1994) a Cronbach alpha of .70 or above of an instrument indicates its reliability. The results of pilot-test showed that all the instruments had high internal consistency and thus reliable. Variations of psychometric properties of the instruments in terms of

pilot tested data; main data against the original psychometric properties of the original instruments are insignificant.

Procedure for Data Collection

Researchers must obtain authorization from institution officials before conducting their study there, according to Creswell (2017). Due to this, the researcher requested an introductory letter and an ethical clearance letter from the University of Cape Coast's Institutional Review Board (IRB) and Department of Education and Psychology, respectively (see appendices B and C). Additionally, the Nkwanta South Municipal Health Directorate was asked for a statement of consent (see appendix D).

The primary purpose of hiring two research assistants was data collecting. Research assistants were people with experience conducting research and gathering data. The primary responsibility of the research assistants was to accompany the principal investigator to different hospital wards and lay the groundwork for the prime investigator to develop relationships with the participants.

The lead researcher distributed questionnaires to the participants with the help of the two research assistants. The method of gathering data took around 8 weeks.

Data Processing and Analysis

The research used Statistical Package for Social Science (SPSS version 21) to run analysis. The composite scores of the inventory were calculated to aid parametric data analysis. Section A (The Demographic Data) of the questionnaire was analysed using descriptive analyses, specifically frequencies and percentages. The composite scores of the inventories used were calculated

to aid parametric data analysis. Section A (The Demographic Data) of the questionnaire was analysed using descriptive analyses. Similarly, research questions 1 and 2 were analysed by employing frequencies and percentages. Research hypotheses 1 and 2 were also tested using Multivariate regression and Independent samples t-test respectively. Furthermore, research hypotheses 3 and 4 were tested employing Pearson's Product Moment Correlation Coefficient whereas research hypothesis 5 was tested using Hayes PROCCESS Approach (2013).

Chapter Summary

The chapter looked at the research approach taken for this investigation. In this chapter, the research design, sample size, method of data collecting, and data analysis were examined. A descriptive research survey was used in the study. 120 healthcare professionals were estimated to be in the accessible population. There were 115 participants in the sample. The tool utilised was a questionnaire that consisted of number of psychological tests and inventories. Data were systematically gathered. Analysis of the data using descriptive techniques like mean, standard deviations, percentages, and frequencies. Additional statistical analysis included the use of inferential techniques such multivariate regression, independent samples t-tests, Pearson product moment correlation coefficients, and moderation analysis using Andrew Hayes's PROCESS.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The study focused on examining psychological distress and well-being of HCWs in the face of COVID-19. The study also explored the moderating role of coping mechanisms; specifically focusing problem-focused, emotion-focused, and avoidant coping styles. The previous chapter dealt with the research methodology that served as a guide to the study. This chapter presents the results of data obtained from the field. The findings were discussed in reference to the reviewed literature. Out of 120 questionnaires administered, 115 were duly completed and retrieved, putting the return rate at 95.8%. This is regarded as adequate for a study of this kind (Saunders & Thornhill, 2007). Results from the analyses are presented in four sections (A to D). Tables have been drawn to help analysis and results where necessary.

Section A: Demographic information

This section described the demographic information of the respondents included in the study. The demographic information included: age, gender, marital status, category of healthcare worker and work experience.

Descriptive

The demographic features of the respondents are represented in the tables below.

Section A: Demographic information

Table 2- *Demographic information*

	Value label	N= (115)	Percentage (%)
Gender	Male	66	57.4
	Female	49	42.6
		Mean (M)	Standard deviation (SD)
	Age	30.30	5.00
Marital status	Never married	59	51.3
	Married	45	39.1
	Divorced	10	8.7
	Widowed	1	.9
Healthcare workers	Lab technician	8	7.0
	Nurses	92	80.0
	Physician assistance	4	3.5
	Pharmacy staff	9	7.5
	Physician	2	1.7
Work experience		Mean (M)	Standard deviation (SD)
		4.46	4.06

Source: Field survey, 2021

The age of the respondents was considered to be relevant to the study thus, the researcher sought to establish their mean age. The mean age of the respondents shown in Table 2 shows that the average age of the respondents in the study is 30.30 years (SD = 5.00), with the age range being between 21 and 50 years. This is important because age plays a crucial role in the level of adjustment during a pandemic.

The gender distribution of respondents in the study is showed in Table 2. The results indicate that majority of the participants were males representing more than half of the sample. This information is significant because the study also focused on examining gender differences in PD among respondents.

Marital status of respondents shows that more than half of the respondents were never married. Whereas the distribution of respondents according to various categories revealed that nurses formed the highest respondents of 80% while physicians were the least (1.7 %) in the study.

The work experience of respondents in this survey had an average of 4.46 years of work experience (SD = 4.06), with a range of 1 year to 20 years.

Section B: Analysis of data on research questions

The section presents the analysis of data on research question one and two that guided this study.

Research question (1):

What is the level of psychological distress among healthcare workers amid COVID-19?

This research question intended to determine the amount of psychological distress among HCWs at Nkwanta South Municipal Hospital following the pandemic outbreak. This section of the questionnaire was scored on a five-point likert scale ranging from 1 to 5. Individuals must fall into one of the four classes: 10-19 (well), 20-24 (mild disorder), 25-29 (moderate disorder), and 30- 50 (severe disorder). The level of mental distress among HCWs at Nkwanta South Municipal Hospital is shown in Table 7.

Table 3- *Level of psychological distress experienced by HCWs.*

	Frequency	Percentage (%)
Well	61	53.0
Mild disorder	33	28.7
Moderate disorder	6	5.2
Severe disorder	15	13.1
	115	100.0

Source: Field survey, 2021

Table 3 revealed that 53.0 % had no signs of psychological distress, while 47.0 % had mild, moderate, or severe forms of psychological distress. Results showed that majority of the respondents did not experience PD. It is important to note that close to half of the population of the respondents experienced psychological distress. So, though 53% of the respondents reported no sign of psychological distress, however, it is not suggestive that HCWs in Nkwanta South Municipal Hospital did not experience psychological distress during COVID-19 era. Since 47% of the respondents reported psychological distress, it can be suggested that a good number (close to half of the sample population) of HCWs in Nkwanta South Municipal Hospital experienced PD during the pandemic.

Research question (2):

What is the level of psychological well-being of HCWs amid COVID-19?

The research question was intended to determine the level of PWB among HCWs at Nkwanta South Municipal Hospital. The questionnaire was rated on a six-point likert scale ranging from 1 to 6. The questionnaire consisted of six subscales: autonomy, environmental mastery, self-acceptance, life purpose, positive interpersonal relationships, and personal growth. The

scores on the scale were categorised as; low (3-8), moderate (9-13) and high (14-18). Table 4 below shows the level of PWB among HCWs in Nkwanta South Municipal Hospital during pandemic.

Table 4- *Level of PWB among HCWs*

Variable/ Rating	Frequency	Percentage
Autonomy		
Low	3	2.6
Moderate	41	35.7
High	71	61.7
	115	100.0
Environmental mastery		
Low	4	3.5
Moderate	57	49.6
High	54	47.0
	115	100.0
Positive relations with others		
Low	0	0
Moderate	27	23.5
High	88	76.5
	115	100.0
Personal growth		
Low	10	8.7
Moderate	57	49.6
High	48	41.7
	115	100.0
Sense of Purpose		
Low	11	9.6
Moderate	41	35.7
High	63	54.8
	115	100.0
Self-acceptance		
Low	6	5.2
Moderate	36	31.3
High	73	63.5
	115	100.0

Results on autonomy are; 2.6% (low score), 35.7% (moderate) and 61.7% (high score). High scorer is self-determining and independent and takes control over him or her environment whereas low scorer is concerned about the expectations and judgments of others to make important decision (Ryff et al., 1995). From the results, it can be concluded that the respondents had moderate to high level of autonomy. Also, on environmental mastery,

respondents reported 3.5% (low score), 49.6% (moderate score) and 47.0% (high score). A high scorer on this subscale has a sense of mastery and competence in managing the environment, as well as the ability to choose or create contexts that are appropriate for personal needs and values, whereas a low scorer has difficulty managing daily affairs and lacks a sense of control over the external world. The scores on this subscale, once again, reflect respondents who had some control over their surroundings. Furthermore, respondents scored 0% (low), 23.5% (moderate) and 76.5% (high) on positive relations with others subscale. On this subscale, a high scorer has warm, satisfying, trusting relationships with others and is concerned about others' well-being, whereas a low scorer has few trusting relationships with others, finds it difficult to be warm, open, and concerned about others, and is isolated and frustrated in interpersonal relationships. As a result, the data show HCWs who have a high degree of positive interpersonal relationships. Besides, scores on personal growth subscale were 8.7% (low), 49.6% (moderate) and 41.7% (high). A high score indicates a sense of personal growth and expansion, as well as openness to new experiences and a sense of reaching one's potential, whereas a low score indicates a sense of personal inertia. Respondents also, rated 9.6% (low), 35.7% (moderate) and 54.8% (high) on sense of purpose subscale. High scorer has goals in life and a sense of directedness; believes there is meaning to present and past life and cherishes beliefs that give life purpose and meaning while low scorer is the reverse. Finally, on the subscale od self-acceptance, respondents scored 5.2% (low), 31.3% (moderate) and 63.5% (high), with low score indicating dissatisfaction with self; disappointment with past life events; worry about certain personal qualities

and desires being different, whereas high score indicates a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life (Ryff et al., 1995). Respondents reported high scores on the moderate and high categories of the measures on all the six subscales. In conclusion, although majority of the respondents reported good PWB, minority still believed their psychological well-being was compromised.

Research hypothesis (1):

H_1: There is statistically significant impact of PD on the PWB of HCWs during COVID-19.

The first hypothesis attempted to determine the impact of psychological distress on the PWB of health workers during the pandemic era. Multivariate regression was run to assess how psychological distress predicts PWB on the subscales (autonomy, environmental mastery, self-acceptance, purpose in life, positive relations with others and personal growth) of PWB scale. The multivariate regression findings are shown in Table 10 below.

Table 5- *Multivariate Tests for psychological distress and psychological well-being*

Effect		Value	F	Hypotheses df	Error df	Sig	Partial Eta Square
Intercept	Pillai's Trace	.912	186.133	6.000	108.000	.000	.912
	Wilks' Lambda	.088	186.133	6.000	108.000	.000	. 912
	Hotelling's Trace	10.341	186.133	6.000	108.000	.000	. 912
	Roy's Largest Root	10.341	186.133	6.000	108.000	.000	. 912
Psyc distress	Pillai's Trace	.295	7.521	6.000	108.000	.000	. 295
	Wilks' Lambda	.705	7.521	6.000	108.000	.000	. 295
	Hotelling's Trace	.418	7.521	6.000	108.000	.000	. 295
	Roy's Largest Root	.418	7.521	6.000	108.000	.000	. 295

Source: Field survey, 2021

Results from Table 5 indicate that PD is a predictor of PWB F (6, 108) = 7.521, $p < .001$; Wilks Lambda (Λ) = .705; partial eta squared = .295.

The table 6 below shows the parameter estimates of psychological distress on the subscales of psychological well-beings.

Table 6- *Parameter Estimates for psychological distress and psychological well-being*

Dependent variable	Parameter	B	Std Error	t	Sig	Partial Eta Square
Autonomy	Intercept	16.27	.80	20.40	.000	.79
	Psyc. Distress	-.08	.04	-2.24	.027	.04
Env. Mastery	Intercept	17.02	.69	24.80	.000	.85
	Psyc. Distress	-.17	.03	-5.38	.000	.20
Personal growth	Intercept	17.48	.73	24.11	.000	.84
	Psyc. Distress	-.09	.03	-2.74	.007	.06
Positive relation	Intercept	17.14	.95	18.11	.000	.74
	Psyc. Distress	-.21	.04	-4.72	.000	.16
Purpose in life	Intercept	16.79	.90	18.59	.000	.75
	Psyc. Distress	-.16	.04	-3.71	.000	.11
Self-acceptance	Intercept	18.76	.86	21.94	.000	.81
	Psyc. distress	-.19	.04	-4.74	.000	. 17

Source: Field survey, 2021

The table above shows the multivariate regression of PD on PWB. The table further shows the unique contribution of PD on the dependent variable. From the table, all the domains of PWB are significant indicating that the whole model is significant hence the null hypothesis had been rejected. Therefore, PD predicts PWB of HCWs.

Research hypothesis (2):

H_1: There is statistically significant gender difference in psychological distress among healthcare workers amid COVID-19

The second hypothesis aimed at establishing whether there are gender variations in PD among HCWs throughout the pandemic. An independent samples t-test was used to determine the differences. The results are presented in Table 7 below.

Table 7- *T-test results of differences in psychological distress on gender*

Gender	Mean	SD	t-value	P-value
Male	20.14	7.38	-.279	.781
Female	20.51	6.72		

Source: Field survey, 2021, $p > .05$

From the table, the descriptive statistics shows that there are no gender variations in PD among HCWs. The mean score (20.14) of the males shows a lower PD compared to the female mean score (20.51). The Levene's equality test indicates that equal variance was assumed between the independent variables. As a result, the results show that there is no statistically significant difference between males and females in terms of psychological distress with t (113) = -.28; p=.781. Therefore it can be concluded from this study that males

and females HCWs in Nkwanta South Municipal Hospital had the same level of PD.

Research hypothesis 3:

H_1: There is significant relationship between coping mechanisms and psychological distress among healthcare workers amid COVID-19.

The goal of this hypothesis was to see if there was a link between coping mechanisms and PD. Pearson Product Moment Correlation Coefficient was used to evaluate the hypothesis. The correlation analysis results are presented in Table 8.

Table 8- *The relationship between coping mechanisms and PD*

Variable	Psychological distress	Problem focused	Emotion focused	Avoidant focused
Psychological distress	1			
Problem focused	.190*	1		
Emotion focused	.287**	.755**	1	
Avoidant focused	.374**	.461**	.597**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

From the above it can be seen that there is a statistically significant relationship between psychological distress and problem focused coping, emotion focused coping and avoidant focused coping.

Research hypothesis (4):

H_1: There is significant relationship between coping mechanisms and PWB of HCWs amid COVID-19.

The focus of this research hypothesis was to see if there was a link between coping mechanisms and PWB. Pearson Product Moment Correlation Coefficient was used to test the hypothesis. The correlation analysis findings are presented in Table 9.

Table 9- *The relationship between coping and PWB*

Variable	Psychological wellbeing	Problem focused	Emotion focused	Avoidant focused
Psychological wellbeing	1			
Problem focused	.095	1		
Emotion focused	-.002	.755**	1	
Avoidant focused	-.285**	.461**	.597**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

From the above it can be seen that there is a statistically significant relationship between PWB and avoidant focused coping. However, there is no statistically significant relationship between PWB and problem focused coping and emotion focused coping.

Research hypothesis (5):

H_1: Coping mechanisms do not significantly moderate the relationship between PD and PWB of healthcare workers amid COVID-19

The purpose of this hypothesis was to see how coping mechanisms moderate the relationship between PD and PWB.

Problem-focused coping as a moderator between PD and PWB

This hypothesis was stated to examine the interaction effect problem-focused coping has on the relationship between PD and PWB. The moderation analysis was conducted using PROCESS by Andrew F. Hayes. The moderation was done using 5,000 bootstrap samples. Results from the moderation analysis are shown in Table 10 below.

Table 10-*The moderating role of problem focused coping in the relationship between psychological distress and psychological wellbeing*

	Coeff (b)	BootSE	t-value	BLLCI	BULCI
Constant	84.643	1.012	83.632	82.638	86.649
Psychological distress	-.995	.143	-6.942	-1.279	-.711
Problem focused coping	.637	.193	3.311	.256	1.019
Psychological distress* problem focused coping	.071	.028	2.536	.016	.127

Source: field survey, 2021

Model summary: R^2=.326; F (3, 111) =17.907, p<.001

Distress*problem focused coping: R^2 change=.039, F (1, 111) =6.434, P<.05

Criterion: Psychological well-being

The result in Table 10 Shows that problem-focused coping is a significant moderator in the relationship between PD and PWB, b=.071, t=2.536, CI (.016, .127) and p<.05. The examination of the interaction effect is shown in the diagram (Figure 2) below.

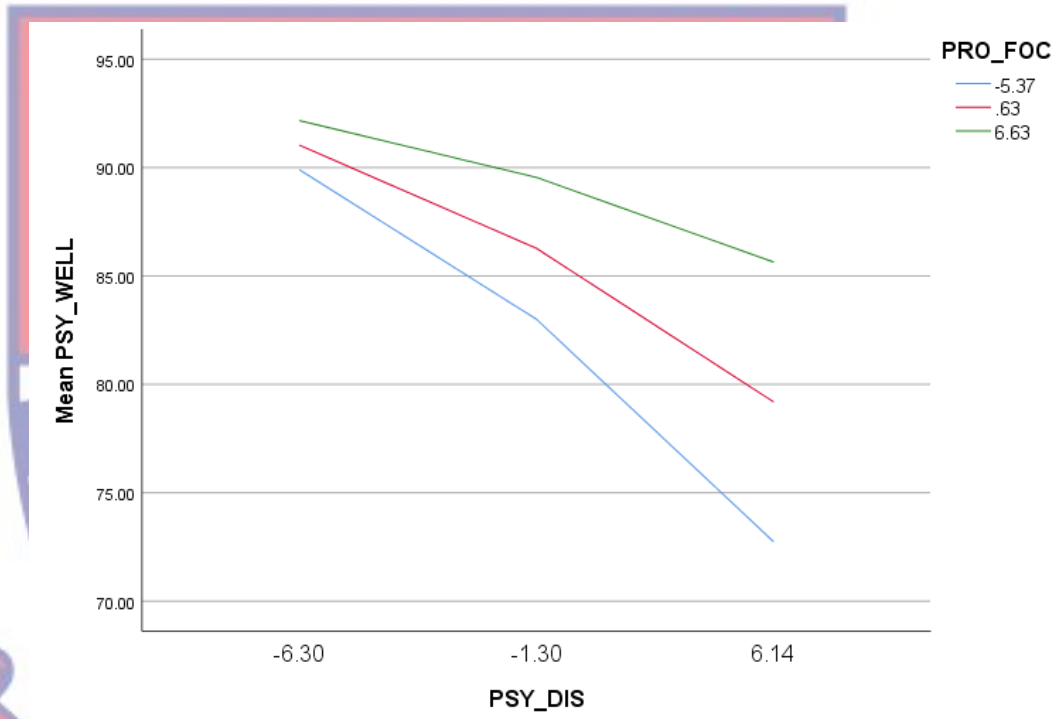

Figure 2

Figure 2 shows the interaction effect of psychological distress, well-being, and problem-focused coping. From the diagram, the interaction plot shows an enhancing effect, implying that as PD and PWB increase, problem-focused coping increases as well. At the lowest, normal, and highest level of PD, PWB increases with increasing in problem-focused coping styles. Hence in this study the presence of problem-focused coping strategies in HCWs does interact with PD to predict PWB.

Emotional-focused coping as a moderator between PD and PWB

This hypothesis was stated to examine the interaction effect emotion-focused coping has on the relationship between PD and PWB. The predictor variable was PD, the moderator was emotion-focused coping, and the criterion was PWB. The moderation analysis was conducted using PROCESS by Andrew F. Hayes. The moderation was done using 5,000 bootstrap samples. Results from the moderation analysis are shown in Table 11 below.

Table 11-*The moderating role of emotion-focused coping in the relationship between PD and PWB*

	Coeff (b)	BootSE	t-value	LLCI	ULCI
Constant	84.794	1.070	79.262	82.674	86.914
Psychological distress	-1.008	.153	-6.589	-1.311	-.705
Emotion focused coping	.331	.158	2.090	.017	.645
Psychological distress* emotion focused coping	.028	.023	1.243	-.017	.073

Source: field survey, 2021

Model summary: R^2=.281; F (3, 111) =17.907, p<.001

Distress*emotion focused coping: R^2 change=.010, F (1, 111) =1.546 P>.05

Criterion: Psychological well-being

The result in Table 11 shows that emotion-focused coping is not a significant moderator in the relationship between PD and PWB, b=.028, t=1.243, CI (-

.017, .073) and p>.05. The result therefore reflects that the presence of emotion-focused coping in HCWs does not enhance, buffer, or antagonise how PD relates with PWB.

Avoidant-focused coping as a moderator between PD and PWB

This hypothesis was stated to examine the interaction effect avoidant-focused coping has on the relationship between PD and PWB. The predictor variable was PD, the moderator was avoidant-focused coping, and the criterion was PWB. The moderation analysis was conducted using PROCESS by Andrew F. Hayes. The moderation was done using 5,000 bootstrap samples. Results from the moderation analysis are shown in Table 12 below.

Table 12- *The moderating role of avoidant focused-coping in the relationship between PD and PWB*

	Coeff (b)	BootSE	t-value	LLCI	ULCI
Constant	85.044	1.100	77.307	82.864	87.224
Psychological distress	-.836	.162	-5.170	-1.157	-.516
Avoidant focused coping	.363	.281	-1.290	-.921	.195
Psychological distress* avoidant focused coping	.014	.036	.395	-.057	.085

Source: field survey, 2021

Model summary: R^2 =.262; F (3, 111) =13.125, p<.001

Distress* Avoidant focused coping: R^2 change=.001, F (1, 111) =.156 P>.05

Criterion: Psychological well-being

The result in Table 12 shows that avoidant focused-coping is not a significant moderator in the relationship between PD and PWB, b=.014, t=.395, CI (-.057, .085) and p>.05.

Summary of Results

From data analyses, the results revealed that close to half (47%) of HCWs in Nkwanta South Municipal Hospital experienced PD. Although, 53% of the respondents reported no sign of PD, it cannot be concluded that HCWs in the facility did not experience PD. Again, majority of HCWs in this study had rated moderate to high on all the six subscales of the Rfff's Scale of PWB indicating that on the whole a large proportion of them were doing well in terms of their PWB. The study revealed that PD predicted PWB. Furthermore, the study found no gender differences with respect to PD in relation to COVID-19 crisis. In addition, the findings revealed a relationship between coping styles and PD. Again, the study revealed a statistically significant relationship between PWB and avoidant focused coping. Finally, the study revealed that problem-focused coping is a significant moderator in the relationship between PD and PWB

Discussion of the Research Results

The research findings of the study were discussed vis-à-vis reviewed literature. It outlined areas where the findings were in agreement with the existing literature as well as contradictions.

Level of PD among healthcare workers

According to the findings, more than half of the respondents (53%) said they had no signs of PD. However, 28.7%, 5.2% and 13% of the respondents respectively reported mild, moderate and severe forms of PD. These together constituted 47% of the respondents which is very close to the total population of the study. This implies quite a large number of HCWs experienced PD. It can be noted that during a pandemic like COVID-19, HCWs have traditionally been on forefront of the battle as they continue to discharge their duties as front liners or on their normal ward routines. This according to Minder et al. (2020) makes HCWs to be among the high risk category of people to be infected during pandemic. Again HCWs expressed worry of being infected and transmitting same to family members (Wang et al., 2020) and these usually predispose them to all forms of psychological distresses.

In reality, research done to determine the extent of PD among HCWs during significant pandemic such as COVID-19 revealed evidence to corroborate this. During the early stages of the SARS outbreak, for example, data found that HCWs were extremely vulnerable, faced imminent death, and displayed symptoms of cognitive worry (Chon et al., 2004). In addition,

during the 2009 H1N1, Goulia et al. (2010) discovered that more than half of CHWs had relatively significant anxiety.

Furthermore, a study by Kafle et al. (2021) to assess the presence of PD among health service providers during the COVID-19 pandemic found more than half of HCWS experienced mild-to-severe distress. Similarly, a study conducted in Kenya, found that 60% of HCWs had anxiety and 53% had mild to moderate depression (Htay et al., 2020). These empirical evidences substantiated Minder et al. (2020) claim that HCWs are vulnerable during infectious diseases like COVID-19. The current study or findings closely affirmed the position of Kafle et al. (2021) and Htay et al. (2020) about HCWs' experience of PD in relation to COVID-19.

It is worth noting that HCWs on COVID-19 duty are more anxious than those not on such related duties (Sharma et al., 2020). It is also essential to note that the participants in this study were not assigned to COVID-19 or served on the front lines of the battle against the pandemic. Again, there is a relationship between survey time and patients' reported experiences. For example, a survey to determine the relationship between survey timing and patient-reported hospital experiences found that survey time was both significantly and negatively associated with patients reported experiences (Bjertnaes, 2012). The current investigation was undertaken a year after the pandemic began. All of these factors, together with the study's small sample size, could have accounted for the 47 % of HCWs reporting PD versus 53 % reporting no signs of PD.

Level of PWB of HCWs amid COVID-19

Work demands or load of healthcare staff become extraordinary and enduring thus, increase work-related stress of HCWs during pandemic (Russell et al., 2019). Dodge et al. (2012) contend that PWB can be achieved by finding a condition of balance that is influenced by both demanding and rewarding life experiences. Unfamiliar responsibilities assigned to HCWs, along with a lack of social support from colleagues and family members as a result of an outbreak, can exacerbate the detrimental effects of stress on them (Maunder, 2009). All of these factors can have a negative impact on healthcare providers' mental health during an outbreak.

Results from this study revealed that 49.6% of respondents scored moderate on environmental mastery while 76.5% scored high on personal growth. Also, 49.6% scored moderate on positive relations with others whereas 54.8% scored high on purpose in life, 63.5% scored high on self-acceptance while 61.7% scored high on autonomy. Moderate and high scores categorisation reflect favourable PWB whereas low score categorisation represents a compromised PWB. For example, high scorer on sense purpose subscale feels there is significance in present and previous life and values beliefs that give life purpose and meaning, whereas the low scorer believes the opposite. Therefore, findings suggest that HCWs in facility have good PWB.

However, these findings are inconsistent with the empirical evidence in respect of PWB of HCWs amidst pandemic. For example, Singh et al. (2021) study to measure the presence of PWB found that the pooled prevalence of stress (60.7 %), depression (32.7 %), anxiety (34.1 %), and sleep disturbances

(26.7 %). The result showed HCWs had a higher prevalence of stress, anxiety, depression, and psychological distress, as a result, it was concluded that COVID-19 had a considerable impact on their PWB.

Similarly, Shahrour et al. (2020) exploring the presence of ASD and PD among Jordanian nurses found that 64% of them experienced ASD as a result of the virus, and were at risk of developing PTSD. The study further revealed that over one-third of these nurses (41%) experienced substantial psychological discomfort. Furthermore, McGlinchey et al. (2021) found that COVID-19 lockdown had taken a toll on the PWB of healthcare professionals.

There is compelling evidence that a global pandemic like COVID-19 has a higher risk of poor well-being of the general population not excluding HCWs. The current study, on the contrary, takes a different stance. It is crucial to emphasise, however, that a person's PWB amid a crisis can be explained by a variety of factors. During an infectious illness outbreak, such as the COVID-19 pandemic, one's coping styles, support system, and other factors can either improve or worsen one's PWB. Example, Lazarus et al. (1984) postulate that coping mechanisms decrease stress and boost PWB, whereas others increase stress and drive negative well-being.

Despite the fact that a large proportion of HCWs (47%) experienced psychological anguish, their PWB looked to be fairly good. This could be explained by other factors and support systems that they have access to.

Influence of PD on the PWB

The study revealed that 53% of the HCWs had no sign of PD whereas 47% of them experienced PD. Although close to half of the respondents

reported symptomatology of PD, further findings revealed that the respondents had moderate to high scores on all the six domains of PWB. However, the regression analysis found PD to be a good predictor of PWB. This suggests that psychological strain has an effect on psychological health.

The findings support a study by Gray et al. (2020) that found a significant drop in PWB in the 11–16 weeks following the implementation of lockdown measures following the pandemic.

Again, these findings affirm a study by Winefield et al. (2012), which discovered that variables that positively associated with PWB, negatively associated with PD and vice versa. Similarly, a study that looked at the mutuality between PD and subjective well-being after a year of cancer diagnosis discovered that distress and well-being predicted each other (Hou et al., 2014).

In general, psychological well-being is mostly concerned with how well one's life is going. It is a combination of pleasant sensations and effective functionality. Enhancing one's potentials, having a sense of control over one's life, and having a sense of purpose are all part of the notion (Carruthers et al., 2004). PD, on the other hand, is marked by a loss of interest, as well as despair, hopelessness, restlessness, and a tense feeling (Mirowsky et al., 2002). These emotions can have a negative impact on one's happiness and ability to operate, thus explains why psychological distress appeared to predict PWB.

COVID-19, as a worldwide problem, has caused a great deal of distress to humanity, particularly healthcare providers. The pandemic's safety practices, including wearing of facemasks, self-isolation, and social distancing

measures put in place to stop the spread, can all be stressful. Again, HCWs' anxieties of contracting the virus and passing it on to their families may have instilled in them a sense of pessimism, restlessness, and unhappiness; which may have impaired their sense of happiness and purpose in life.

Gender differences in PD

The research on gender disparities in PD and the response of HCWs during the pandemic has not been consistent. While some empirical investigations discovered a preponderant of evidence to support gender differences in PD, others were not successful. For example, a study comparing the severity of anxiety, depression, and acute stress symptoms in males and females during the pandemic found out that women had more severe anxiety, depression, and acute stress symptoms than males (GarcaFernández et al., 2021). Also, Pappa et al. (2020), argue that being female and a nurse had greater association with a higher prevalence of depression and anxiety compared to other HCWs.

Furthermore, in an attempt to investigate the prevalence and associated factors of worry, generalized anxiety disorder, depression, post-traumatic stress disorder, and sleeplessness among Kenyan healthcare workers, Kwobah et al. (2021) discovered that depression was more prevalent among females than males. Again, a survey that looked at the presence and gender bias of several mental health disorders found women to have higher prevalence rates of all mental health problems (Liu et al., 2021).

Similarly, a study that looked at gender differences in emotional stress responses revealed that women showed more grief and anxiety after being

stressed than men (Chaplin et al., 2008). Again, a research that sought to examine gender differentials of lecturers found that females had considerably greater levels of stress, emotional tiredness, and emotionality than males (Redondo-Flórez et al., 2020). In addition, Blanchard et al. (2001) study intended to assess gender variations in PD among irritable bowel syndrome patients found females scored considerably higher on all the measures of PD.

In addition, Starrenburg et al. (2014) found that women reported higher levels of anxiety and shock-related anxiety than men in a study sought to examine gender differences in PD in patients with ICD 1-Year post implant. In fact, sex differences have been discovered in a range of subjects in psychology, including mental health, cognitive aptitude, temperament, mood (Geary, 2010) and tendency towards aggression or violence. These variations may be innate, learned, or both. Genetics and epigenetics (Richardson, 2013), differences in brain structure and function, hormones and socialisation (Halpern, 2000) are all elements that impact gender differences.

Despite the overwhelming evidence, the current data revealed no significant difference in PD between males and females, with t (113) = -.28; p >.05. So, based on the evidence, gender has no bearing on whether or not a healthcare worker develops PD as a result of the pandemic. However, the results corroborate the work of Fresna, Atikah, Salsabila, Pusparini, Purnasari, Anisa and Puspitasari (2021) found no significant gender variations in mental health responses amid COVID-19. Similarly, Olaseni, Akinsola, Agberotimi and Oguntayo (2020) found that gender had no significant difference in the amount of sleeplessness, depression, or anxiety experienced during the pandemic.

Relationship between coping mechanisms and PD

According to the findings of this study, there is a link between coping mechanisms and PD. These findings are consistent with several studies that sought to establish this association. Morris et al. (2018) for example, identified moderate-to-high links between disengagement coping methods and psychological distress in people with head and neck cancer. Similarly, a study conducted by Goldman (2021) on the relationship between coping techniques and perceived stress in the context of COVID-19 found a positive correlation between avoidant coping and perceived stress, as well as a negative correlation between adaptive coping and perceived stress.

Furthermore, the findings of Kausar et al. (1999) revealed that all coping techniques were positively associated with distress, subjective burden, anxiety, and depression of care-givers of neurological diseases patients. Evidence of current study also supports findings of Fluharty et al. (2020), which revealed a link between coping methods and better mental health following lockdown restrictions.

However, the present study contradicted a study by Tancherla et al. (2019) that sought to examine the relationship between coping mechanisms and PD in breast cancer.

Relationship between coping mechanisms and PWB

The findings of this study found no statistically significant relationship between PWB and problem focused coping as well as emotion focused coping styles. Although problem-focused and emotion-focused coping styles

contradicted reviewed literature, avoidant coping strategies affirm previous studies.

For example, Blalock et al. (1995) found that the coping techniques people used strongly predicted PWB among persons with osteoarthritis. Similarly, a study examining the association between PWB and coping methods among parents of children with Down syndrome found a substantial correlation between the two. Results showed that parents who employed active avoidance coping techniques reported lower levels of PWB than those who used problem-focused coping strategies (Hayat et al., 2015).

In addition, a study in a Nigerian university found a substantial combined influence of coping methods on PWB (Ukeh et al., 2018). Furthermore, in a study of teacher education students discovered a connection between coping skills and PWB (Gustems-Carnicer et al., 2013). Similarly, Loukzadeh et al. (2013) discovered a strong link between coping style and PWB among nurses in their work that sought to establish this association. Gholamzadeh, Hamid, Basri, Sharif and Ibrahim (2014) found a relationship between positive religious coping and the PWB of stroke caregivers.

Coping mechanisms as a moderator

Coping was an important variable in this study. This is because significant life events like COVID-19 can cause psychological stress and consequently affect one's psychological well-being. In order to minimise the impact, people resort to a combination of behaviour, thought, and emotion termed coping mechanisms (Folkman et al., 2004). Coping strategies assist

people in dealing with stressful situations in order to lessen unpleasant feelings and impact (Petzold et al., 2020).

Literature on the interaction effect of coping styles in the relationship between PD and PWB is generally unknown; hence the moderating role was tested. Findings from this moderation analysis suggest that problem-focused coping is a significant moderator in the relationship between PD and PWB. This is consistent with similar studies testing the moderating effects of coping styles. For example, during the COVID-19 outbreak in South Korea, Kim et al. (2021) investigated the function of coping strategies in preserving well-being and discovered that coping methods regulated the individuals' rate of change in well-being. While preventive efforts were associated with a lower level of well-being, cognitive evaluation and behavioural interventions predicted steady well-being during the pandemic. A survey assessing the impact of coping strategies on students' psychological well-being indicated that coping strategies have a considerable impact on PWB (Ukeh et al., 2018).

Similarly, Li et al. (2017) examined the moderating role of coping skills on the connection between work stress and job performance among nurses and found that Good coping strategies moderated patient care and job performance, while negative coping strategies moderated workload and time and performance, as well as the relationship between working environment and resources and performance. In addition, when Kamran et al. (2020) looked into the moderating influence of coping methods on the link between stress and social support, they found proof of the moderating effect of coping strategies (Kamran et al., 2020).

However, results showed that emotion-focused and avoidant coping strategies had no moderating effects. This could be due to the fact that HCWs view the virus as a reality that requires pragmatic measures such problem-focused coping skills to quell its effects.

Chapter Summary

This chapter focused on the analyses of data, presentation of results and discussion of findings. The study revealed that 53% of HCWs in Nkwanta South Municipal Hospital did not experience any symptoms of psychological distress. However, close to half (47%) of the sample size did experience psychological distress. Moreover, despite 47 % expressing symptoms of psychological discomfort, the majority of respondents in this survey reported positive psychological well-being during the COVID-19 crisis. Furthermore, analysis showed that PD is a strong predictor of PWB. Again, no significant gender difference was found among HCWs in relation to their psychological distress. Furthermore, the study revealed weak positive significant link between coping and PD. Furthermore, the studies revealed a link between PWB and avoidant coping style. Finally, the findings revealed that avoidant coping has moderation effect on the association between PD and PWB.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

The overall purpose of this study was to examine the prevalence of psychological distress among healthcare workers amid COVID-19, and the level of impact on their psychological well-being. The study also sought to examine the moderating effect of coping mechanisms in the relationship between psychological distress and psychological well-being. Specifically, the study sought to:

1. Determine the level of psychological distress among HCWs in the face of COVID-19 crisis in Nkwanta South Municipal Hospital.
2. Determine the level of psychological well-being among HCWs amid COVID-19.
3. Investigate the influence of psychological distress on psychological well-being of HCWs amid the pandemic.
4. Investigate gender differences in psychological distress among HCWs amid COVID-19 crisis.
5. Investigate the relationship between coping mechanisms and psychological distress
6. Investigate the relationship between coping mechanisms and psychological well-being.
7. Determine the moderating role of coping mechanisms in the relationship between psychological distress and psychological well-being.

The study was purely quantitative and the researcher employed descriptive survey design. Consensus technique was used to recruit a total of 115 healthcare workers (2 Physicians, 4 Physician Assistants, 8 Lab Technicians, 9 Pharmacy staff and 92 Nurses) for the study. Participants were made to respond to a 61 item questionnaire that gauged various constructs in the study. Both descriptive and inferential approaches were employed for data analysis.

Summary of Findings

The study revealed the following crucial findings based on the results from the data analysis in line with research questions and hypotheses that guided the study.

More than 50% of the participants reported no sign of psychological distress. However, 47% of them did experience psychological distress. Thus, healthcare professionals in Nkwanta South Municipal Hospital experienced some level of PD.

Also, results showed participants had quite high scores on various subscales of RPWD that was employed to measure PWB. Participants' scores ranged from 49.6% to 76.55% on various domains of RPWD indicating HCWs in the facility had remarkably good PWB. Again, the study revealed that PD predicts PWB of healthcare workers.

Furthermore, despite overwhelming empirical evidence implicating gender in terms of psychological distress amidst pandemics, findings from the study found a contrary view. Results revealed no significant gender difference in psychological distress.

Besides, the result revealed a positive association between coping mechanisms and PD. This implies that as the scores of coping increase, the scores PD increases as well and vice versa. Again, the study found association between PWB and avoidant coping styles. The study revealed that avoidant coping is a moderator between PD and PWB.

Conclusions

From literature, HCWs constitute the forefront fighters during infectious disease thus, are among the high risk group to contract the disease (Minder et al., 2020). These according to Bai et al. (2020) predispose them to various psychological issues and its attendant influence on well-being. Glanz et al. (2002) opined that when people undergo stressful situation, they react to the stressor in ways to minimise the effects.

The purpose of the current study was to investigate the level of psychological distress and well-being of HCWs during the pandemic and the moderating role of coping mechanisms.

This study found that some HCWs in Nkwanta South Municipal Hospital did experience PD in the wake of the outbreak. Also, the study found that HCWs have relatively good PWB amid COVID-19 crisis. Again, the study concluded that PD predicted PWB of healthcare workers.

Furthermore, it is concluded that there is no gender variations in terms of PD in relation to the pandemic. The study affirmed the association between coping mechanisms and PD. Again, the study found significant relationship between PWB and avoidant coping mechanism. Finally, the study concludes that problem-focused coping mechanism is a moderator between PD and PWB.

Recommendations

The following are the recommendations based on the findings of this study:

1. Nkwanta South Municipal Health Directorate in collaboration with Nkwanta South Municipal Assembly should put in place measures to address psychological distress being experienced by HCWs in the municipality.
2. It is recommended that HCWs should employ problem-focused coping strategies as coping mechanisms in order to enhance their psychological well-being.
3. Clinical health psychologists and health professionals should educate their clients on various problem-focused coping mechanisms so that they can appropriately apply them.

Suggestions for Further Research

1. The study should be conducted in other rural settings in the country.
2. Future studies of this nature should focus on exploring the influence of rural dynamics on how HCWs respond in the face of adversity.
3. Researchers should also focus on exploring human positive traits including but not limited to personality traits and emotional intelligence to establish how these factors influence response of HCWs during pandemic.
4. The researcher used questionnaire to solicit information from respondents. So, future studies should consider interview guide to cover a broad spectrum of information

REFERENCES

Abolfotouh, M. A., AlQarni, A. A., Al-Ghamdi, S. M., Salam, M., Al-Assiri, M. H., & Balkhy, H. H. (2017). An assessment of the level of concern among hospital-based health-care workers regarding MERS outbreaks in Saudi Arabia. *BMC infectious diseases*, *17*(1), 1-10.

Addae, E. A. (2021). COVID-19 pandemic and adolescent health and well-being in sub-Saharan Africa: Who cares?. *The International Journal of Health Planning and Management*.

Alhazzani, W., Møller, M. H., Arabi, Y. M., Loeb, M., Gong, M. N., & Fan, E. & Du, B. (2020). Surviving Sepsis Campaign: guidelines on the management of critically ill adults with Coronavirus Disease 2019 (COVID-19). *Intensive care medicine*, 1-34.

Ali, M., Uddin, Z., Ahsan, N. F., Haque, M. Z., Bairagee, M., Khan, S. A., & Hossain, A. (2021). Prevalence of mental health symptoms and its effect on insomnia among healthcare workers who attended hospitals during COVID-19 pandemic: A survey in Dhaka city. *Heliyon*, *7*(5), e06985.

Alradhawi, M., Shubber, N., Sheppard, J., & Ali, Y. (2020). Effects of the COVID-19 pandemic on mental well-being amongst individuals in society-a letter to the editor on "The socio-economic implications of the coronavirus and COVID-19 pandemic: A review". *International journal of surgery (London, England)*.

Aly, H. M., Nemr, N. A., Kishk, R. M., & bakr Elsaid, N. M. A. (2021). Stress, anxiety and depression among healthcare workers facing

COVID-19 pandemic in Egypt: a cross-sectional online-based study. *BMJ open*, *11*(4), e045281.

Andersen, K. G., Rambaut, A., Lipkin, W. I., Holmes, E. C., & Garry, R. F. (2020). The proximal origin of SARS-CoV-2. *Nature medicine*, *26*(4), 450-452.

Antwi-Boasiako, J., & Nyarkoh, E. (2021). Government Communication during the Covid-19 Pandemic in Ghana. *International Journal of Public Administration*, *44*(13), 1175-1188.

Arvidsdotter, T., Marklund, B., Kylén, S., Taft, C., & Ekman, I. (2016). Understanding persons with psychological distress in primary health

Ashinyo, M. E., Dubik, S. D., Duti, V., Amegah, K. E., Ashinyo, A., Larsen-Reindorf, R., ... & Kuma-Aboagye, P. (2020). Healthcare workers exposure risk assessment: a survey among frontline workers in designated COVID-19 treatment centers in Ghana. *Journal of Primary Care & Community Health*, *11*, 2150132720969483.

Bai, Y., Yao, L., Wei, T., Tian, F., Jin, D. Y., Chen, L., & Wang, M. (2020). Presumed asymptomatic carrier transmission of COVID-19. *Jama*, *323*(14), 1406-1407.

Ballou, J., & Lavrakas, P. J. (2008). Encyclopedia of survey research methods. *Vol 2, pp. 509). Los Angeles: Sage*.

Bashar, M. A., & Bammidi, R. (2020). Psychological impact of COVID-19 pandemic on health care professionals and workers. *Industrial Psychiatry Journal*, *29*(1), 176.

Benfante, A., Di Tella, M., Romeo, A., & Castelli, L. (2020). Traumatic stress in healthcare workers during COVID-19 pandemic: a review of the immediate impact. *Frontiers in psychology*, *11*, 2816.

Benight, C. C., & Harper, M. L. (2002). Coping self-efficacy perceptions as a mediator between acute stress response and long-term distress following natural disasters. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *15*(3), 177-186.

Bernard, H. R., & Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches*. Sage.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of behavioral medicine*, *4*(2), 139-157.

Bhatnagar, S., Mehdiratta, L., & Karthik, A. R. (2020). Corona pandemic: Bringing anaesthesiologist's professional role and other skills to the fore. *Indian Journal of Anaesthesia*, *64*(Suppl 2), S87

Bjertnaes, O. A. (2012). The association between survey timing and patient-reported experiences with hospitals: results of a national postal survey. *BMC Medical Research Methodology*, *12*(1), 1-6.

Blalock, S. J., DeVellis, B. M., & Giorgino, K. B. (1995). The relationship between coping and psychological well-being among people with osteoarthritis: A problem-specific approach. *Annals of Behavioral Medicine*, *17*(2), 107-115.

Blanchard, E. B., Keefer, L., Galovski, T. E., Taylor, A. E., & Turner, S. M. (2001). Gender differences in psychological distress among patients with irritable bowel syndrome. *Journal of psychosomatic research*, *50*(5), 271-275.

Borrell-Carrió, F., Suchman, A. L., & Epstein, R. M. (2004). The biopsychosocial model 25 years later: principles, practice, and scientific inquiry. *The Annals of Family Medicine*, *2*(6), 576-582.

Bradburn, N. M. (1969). The structure of psychological well-being.

Campbell, D. (2020). Half of UK health workers suffering stress because of Covid-19. *The Guardian*, *23*.

Carruthers, C., & Hood, C. D. (2004). The power of the positive: Leisure and well-being. *Therapeutic Recreation Journal*, *38*(2), 225-245.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, *56*(2), 267.

Centers for Disease Control and Prevention. (2020). Interim clinical guidance for management of patients with confirmed 2019 novel coronavirus (2019-nCoV) infection, Updated February 12, 2020.

Chan, A. O., & Huak, C. Y. (2004). Psychological impact of the 2003 severe acute respiratory syndrome outbreak on health care workers in a medium size regional general hospital in Singapore. *Occupational Medicine*, *54*(3), 190-196.

Chan, S. S., Leung, D., Chui, H., Tiwari, A. F., Wong, E. M., Wong, D. C., ... & Lau, Y. L. (2007). Parental response to child's isolation during the SARS outbreak. *Ambulatory Pediatrics*, *7*(5), 401-404.

Chaplin, T. M., Hong, K., Bergquist, K., & Sinha, R. (2008). Gender differences in response to emotional stress: an assessment across subjective, behavioral, and physiological domains and relations to alcohol craving. *Alcoholism: Clinical and Experimental Research*, *32*(7), 1242-1250.

Chong, M. Y., Wang, W. C., Hsieh, W. C., Lee, C. Y., Chiu, N. M., Yeh, W. C., ... & Chen, C. L. (2004). Psychological impact of severe acute respiratory syndrome on health workers in a tertiary hospital. *The British Journal of Psychiatry*, *185*(2), 127-133.

Chow, S. K., Francis, B., Ng, Y. H., Naim, N., Beh, H. C., Ariffin, M. A. A., ... & Sulaiman, A. H. (2021, January). Religious coping, depression and anxiety among healthcare workers during the COVID-19 pandemic: a Malaysian perspective. In *Healthcare* (Vol. 9, No. 1, p. 79). Multidisciplinary Digital Publishing Institute.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Christopher, J. C., & Hickinbottom, S. (2008). Positive psychology, ethnocentrism, and the disguised ideology of individualism. *Theory & psychology*, *18*(5), 563-589.

Cimprich, B. (1999). Pretreatment symptom distress in women newly diagnosed with breast cancer. *Cancer Nursing*, *22*(3), 185-194.

Cohen, L. D. (1991). On active contour models and balloons. *CVGIP: Image understanding*, *53*(2), 211-218.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.

Cohen, L., Manion, L., Morrison, K., & Wyse, D. (2010). *A guide to teaching practice*. Routledge.

Coldwell, D., & Herbst, F. (2004). Business Research. Cape Town: Juta and Co.

de Boer, S. F., Buwalda, B., & Koolhaas, J. M. (2017). Untangling the neurobiology of coping styles in rodents: towards neural mechanisms underlying individual differences in disease susceptibility. *Neuroscience & Biobehavioral Reviews*, *74*, 401-422.

Deng, S. Q., & Peng, H. J. (2020). Characteristics of and public health responses to the coronavirus disease 2019 outbreak in China. *Journal of clinical medicine*, *9*(2), 575.

Diener, E. (2000). Explaining differences in societal levels of happiness: Relative standards, need fulfillment, culture, and evaluation theory. *Journal of Happiness studies*, *1*(1), 41-78.

Dijkstra, M., & Homan, A. C. (2016). Engaging in rather than disengaging from stress: Effective coping and perceived control. *Frontiers in psychology*, *7*, 1415.

Ding, X., Tang, Y. Y., Tang, R., & Posner, M. I. (2014). Improving creativity performance by short-term meditation. *Behavioral and Brain Functions*, *10*(1), 1-8.

Docea, A. O., Tsatsakis, A., Albulescu, D., Cristea, O., Zlatian, O., Vinceti, M., ... & Calina, D. (2020). A new threat from an old enemy: Re-emergence of coronavirus. *International journal of molecular medicine*, *45*(6), 1631-1643.

Dodge, R., Daly, A. P., Huyton, J., & Sanders, L. D. (2012). The challenge of defining wellbeing. *International journal of wellbeing*, *2*(3).

Dohrenwend, B. P., & Dohrenwend, B. S. (1982). Perspectives on the past and future of psychiatric epidemiology. The 1981 Rema Lapouse Lecture. *American Journal of Public Health*, *72*(11), 1271-1279.

Drapeau, A., Marchand, A., & Beaulieu-Prévost, D. (2012). Epidemiology of psychological distress. In *Mental illnesses-understanding, prediction and control*. InTech.

Duangdao, K. M., & Roesch, S. C. (2008). Coping with diabetes in adulthood: a meta-analysis. *Journal of behavioral medicine*, *31*(4), 291-300.

Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*(4286), 129-136.

Engel, R. (Ed.). (1992). *Handbook of organophosphorus chemistry*. CRC Press.

Feller, S. C., Castillo, E. G., Greenberg, J. M., Abascal, P., Van Horn, R., Wells, K. B., & University of California, Los Angeles Community

Translational Science Team. (2018). Emotional well-being and public health: Proposal for a model national initiative. *Public Health Reports, 133*(2), 136-141.

Fluharty, M., Bu, F., Steptoe, A., & Fancourt, D. (2020). Association of coping strategies with mental health trajectories during the first twenty-one weeks of COVID-19 lockdown.

Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annu. Rev. Psychol., 55*, 745-774.

Forgas, J. P., & George, J. M. (2001). Affective influences on judgments and behavior in organizations: An information processing perspective. *Organizational behavior and human decision processes, 86*(1), 3-34.

Fredrickson, B. L., & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition & emotion, 19*(3), 313-332.

Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological science, 13*(2), 172-175.

Fresna, R. H., Atikah, S. N., Salsabila, M. M., Pusparini, P. W., Purnasari, R. H., Anisa, R., ... & Puspitasari, S. (2021). Gender Differences in Mental Health Responses of Health Workers During the Covid-19 Pandemic: A Systematic Review with Meta-Analysis. *Journal of Health Policy and Management, 6*(2), 130-138.

Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology?. *Review of general.*

Galloway, S. E., Paul, P., MacCannell, D. R., Johansson, M. A., Brooks, J. T., MacNeil, A., ... & Dugan, V. G. (2021). Emergence of SARS-CoV-2 b. 1.1. 7 lineage—united states, december 29, 2020–january 12, 2021. *Morbidity and Mortality Weekly Report*, *70*(3), 95 *psychology*, *9*(2), 103-110.

Gámez, W., Chmielewski, M., Kotov, R., Ruggero, C., & Watson, D. (2011). Development of a measure of experiential avoidance: The Multidimensional Experiential Avoidance Questionnaire. *Psychological assessment*, *23*(3), 692.

García-Fernández, L., Romero-Ferreiro, V., Padilla, S., David López-Roldán, P., Monzó-García, M., & Rodriguez-Jimenez, R. (2021). Gender differences in emotional response to the COVID-19 outbreak in Spain. *Brain and behavior*, *11*(1), e01934.

Ghana Statistical Service (2012). 2010 Population and Housing Census: Summary report of final results. Accra: Sakoa Press Limited.

Gholamzadeh, S., Hamid, T. A., Basri, H., Sharif, F., & Ibrahim, R. (2014). Religious coping and psychological well-being among Iranian stroke caregivers. *Iranian Journal of Nursing and Midwifery Research*, *19*(5), 478.

Gage, N. L. (2000). The Paradigm Wars and Their Aftermath: A'Historical* Sketch of Research on Teaching Since 1989. *Sociology of Education: Theories and methods*, *1*, 141.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. Longman Publishing.

Given, L. M. (2008). The Sage encyclopedia of qualitative research methods. Los Angeles: Sage Publications.

Geary, D. C. (2010). *Male, female: The evolution of human sex differences*. American Psychological Association.

Ghana Statistical Service. (2014). Ghana Demographic and Health Survey 2014: Ghana Statistical Service, Ghana Health Service. *Ghana Statistical Service (GSS) Ghana Demographic and Health Survey*.

Glanz, K., Lewis, F. M., & Rimer, B. K. (2002). Health behavior and health education. 3rd edn San Francisco

Goduka, N. (2012). From positivism to indigenous science: A reflection on world views, paradigms and philosophical assumptions. *Africa insight*, *41*(4), 123-138.

Goldberg, D (2000). Distinguishing mental illness in primary care. *BMJ: British Medical Journal*, *321*(7273), 1412.

Goldman, J. N. (2021). Relationships Between Coping Mechanisms and Perceived Stress of Portland State University Community Members Amidst COVID-19.

Gorbalenya, Alexander E., Susan C. Baker, Ralph S. Baric, Raoul J. de Groot, Christian Drosten, Anastasia A. Gulyaeva, Bart L. Haagmans et al. "Severe acute respiratory syndrome-related coronavirus: The species and its viruses–a statement of the Coronavirus Study Group." *BioRxiv* (2020).

Goulia, P., Mantas, C., Dimitroula, D., Mantis, D., & Hyphantis, T. (2010). General hospital staff worries, perceived sufficiency of information and associated psychological distress during the A/H1N1 influenza pandemic. *BMC infectious diseases*, *10*(1), 1-11.

Graphic.com.gh. 2020. Ghana Medical Association. [online] Available at: <https://www.graphic.com.gh/ghana-news-video/ghana-news-in-brief for-thursday-july-9-2021.html> [Accessed 9 July 2020].

Gray, N. S., O'Connor, C., Knowles, J., Pink, J., Simkiss, N. J., Williams, S. D., & Snowden, R. J. (2020). The influence of the COVID-19 pandemic on mental well-being and psychological distress: impact upon a single country. *Frontiers in Psychiatry*, *11*.

Grimes, D. A., & Schulz, K. F. (2002). Descriptive studies: what they can and cannot do. *The* , *359*(9301), 145-149.

Guan, W. J., Ni, Z. Y., Hu, Y., Liang, W. H., Ou, C. Q., He, J. X., ... & Zhong, N. S. (2020). Clinical characteristics of coronavirus disease 2019 in China. *New England journal of medicine*, *382*(18), 1708-1720.

Gupta, B., Bajwa, S. J. S., Malhotra, N., Mehdiratta, L., & Kakkar, K. (2020). Tough times and Miles to go before we sleep-Corona warriors. *Indian Journal of Anaesthesia*, *64*(Suppl 2), S120.

Gustems-Carnicer, J., & Calderón, C. (2013). Coping strategies and psychological well-being among teacher education students. *European Journal of Psychology of Education*, *28*(4), 1127-1140.

Hadaway, A. (2020). Handwashing: clean hands save lives. *Journal of*

Halpern, D. F. (2000). *Sex differences in cognitive abilities*. Psychology press.

Consumer Health on the Internet, *24*(1), 43-49.

Harrington, R. (2012). *Stress, health and well-being: Thriving in the 21st century*. Cengage Learning.

Hayat, I., & Zafar, M. (2015). Relationship between psychological well-being and coping strategies among parents with down syndrome children. *IJHSS*, *7*(1), 109.

Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic modelling*, *20*(2), 331-360.

Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann Acad Med Singapore*, *49*(1), 1-3.

Holahan, C. J., Moos, R. H., Holahan, C. K., Brennan, P. L., & Schutte, K. K. (2005). Stress generation, avoidance coping, and depressive symptoms: a 10-year model. *Journal of consulting and clinical psychology*, *73*(4), 658.

Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., ... & Bullmore, E. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *The Lancet Psychiatry*, *7*(6), 547-560.

Holshue, M. L., DeBolt, C., Lindquist, S., Lofy, K. H., Wiesman, J., Bruce, H., ... & Pillai, S. K. (2020). First case of 2019 novel coronavirus in the United States. *New England Journal of Medicine*. motion disaster". *Mother Jones. https://www. mothe rjone s. com/coron aviru s-updat*

es/2020/04/the-menta l-healt h-effec ts-of-coron avir u s-are-a-slow-motio n-disas ter/. Accessed, 10.

Hopkins, J. S., & Russell, D. (2020). The mental health effects of Coronavirus are a "slow-motion disaster". *Mother Jones. https://www. mothe rjone s. com/coron aviru s-updat es/2020/04/the-menta l-healt h-effec ts-of-coron avir u s-are-a-slow-motio n-disas ter/. Accessed, 10.*

Horwitz, A. V., & Wakefield, J. C. (2007). *The loss of sadness: How psychiatry transformed normal sorrow into depressive disorder*. Oxford University Press.

Hou, W. K., & Lam, J. H. M. (2014). Resilience in the year after cancer diagnosis: a cross-lagged panel analysis of the reciprocity between psychological distress and well-being. *Journal of Behavioral Medicine*, *37*(3), 391-401.

House, R. (1998). *Dic Random House Webster's Concise Dictionary: Dic Random House Websters Concise Thesaurus*. Random House.

Howitt, D., & Cramer, D. (2010). Introduction to qualitative methods in psychology.

Htay, M. N. N., Marzo, R. R., AlRifai, A., Kamberi, F., El-Abasiri, R. A., Nyamache, J. M., ... & Abas, A. L. (2020). Immediate impact of COVID-19 on mental health and its associated factors among healthcare workers: a global perspective across 31 countries. *Journal of Global Health*, *10*(2).

Huang, J. Z., Han, M. F., Luo, T. D., Ren, A. K., & Zhou, X. P. (2020). Mental health survey of 230 medical staff in a tertiary infectious

disease hospital for COVID-19. *Zhonghua lao dong wei sheng zhi ye bing za zhi= Zhonghua laodong weisheng zhiyebing zazhi= Chinese journal of industrial hygiene and occupational diseases*, *38*, E001-E001.

Huang, Y., & Zhao, N. (2020). Chinese mental health burden during the COVID-19 pandemic. *Asian journal of psychiatry*, *51*, 102052.

Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied psychology: health and well-being*, *1*(2), 137-164.

Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. *Advances in experimental social psychology*, *20*, 203-253.

Izzetti, R., Nisi, M., Gabriele, M., & Graziani, F. (2020). COVID-19 transmission in dental practice: brief review of preventive measures in Italy. *Journal of dental research*, *99*(9), 1030-1038.

Jacobs, N., Myin-Germeys, I., Derom, C., Delespaul, P., Van Os, J., & Nicolson, N. A. (2007). A momentary assessment study of the relationship between affective and adrenocortical stress responses in daily life. *Biological psychology*, *74*(1), 60-66.

Jain, A., Singariya, G., Kamal, M., Kumar, M., Jain, A., & Solanki, R. K. (2020). COVID-19 pandemic: Psychological impact on anaesthesiologists. *Indian journal of anaesthesia*, *64*(9), 774.

John, A., Eyles, E., McGuinness, L. A., Okolie, C., Olorisade, B. K., Schmidt, L., ... & Moran, P. (2020). The impact of the COVID-19 pandemic on

self-harm and suicidal behaviour: protocol for a living systematic review. *F1000Research*, *9*(644), 644.

Johns Hopkins Coronavirus Resource Center. 2020. COVID-19 Map – Johns Hopkins Coronavirus Resource Center. [online] Available at: <https//coronavirus.jhu.edu/map.thml> [Accessed 4 November 2020].

Jorm, A. F., & Duncan-Jones, P. (1990). Neurotic symptoms and subjective well-being in a community sample: different sides of the same coin?. *Psychological Medicine*, *20*(3), 647-654.

Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological bulletin*, *127*(3), 376.

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.

Kalueff, A. V., Wheaton, M., & Murphy, D. L. (2007). What's wrong with my mouse model?: Advances and strategies in animal modeling of anxiety and depression. *Behavioural brain research*, *179*(1), 1-18.

Kamran, I. H. D. I. S., & Sherazi, H. (2020). Examining the Moderating Impact of Coping Strategies on the Relationship of Stress and Social Support.

Katerndahl, D. A. (2008). Impact of spiritual symptoms and their interactions on health services and life satisfaction. *The Annals of Family Medicine*, *6*(5), 412-420.

Kausar, R., & Powell, G. E. (1999). Coping and psychological distress in carers of patients with neurological disorders. *Asia Pacific disability rehabilitation journal*, *10*(2).

Kendler, K. S., Kuhn, J. W., Vittum, J., Prescott, C. A., & Riley, B. (2005). The interaction of stressful life events and a serotonin transporter polymorphism in the prediction of episodes of major depression: a replication. *Archives of general psychiatry*, *62*(5), 529-535.

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L., ... & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological medicine*, *32*(6), 959- 976.

Keyes, C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of consulting and clinical psychology*, *73*(3), 539.

Khoo, A. (2020). Ghana in COVID-19 pandemic. *Inter-Asia Cultural Studies*, *21*(4), 542-556.

Kim, J. H., Shim, Y., Choi, I., & Choi, E. (2021). The role of coping strategies in maintaining well-Being during the COVID-19 outbreak in South Korea. *Social Psychological and Personality Science*, 1948550621990595.

Kobasa, S. C. (1979). Stressful life events, personality, and health: an inquiry into hardiness. *Journal of personality and social psychology*, *37*(1), 1.

Krause, M., Corts, D. (2012). *Psychological Science*: *Modeling Scientific Literacy*. New Jersey: Pearson Education Inc.

Krohne, H. W. (2002). Stress and Coping Theories. Johannes Gutenberg-Universität Mainz. Germany.

Kwobah, E. K., Mwangi, A., Patel, K., Mwogi, T., Kiptoo, R., & Atwoli, L. (2021). Mental Disorders Among Health Care Workers at the Early Phase of COVID-19 Pandemic in Kenya; Findings of an Online Descriptive Survey. *Frontiers in psychiatry*, 1212.

Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist*, *64*(4), 241.

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., ... & Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA network open*, *3*(3), e203976-e203976.

Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time?. *Journal of personality and social psychology*, *81*(4), 684.

Lawand, N. M., & Al Tabbah, S. International Journal of Biology and Medicine.

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Fifty years of the research and theory of RS Lazarus: An analysis of historical and perennial issues*, 366-388.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of personality*, *1*(3), 141-169.

Lee, T. S. H., Tzeng, W. C., & Chiang, H. H. (2019). Impact of coping strategies on nurses' well-being and practice. *Journal of Nursing Scholarship*, *51*(2), 195-204.

Li, L., Ai, H., Gao, L., Zhou, H., Liu, X., Zhang, Z., ... & Fan, L. (2017). Moderating effects of coping on work stress and job performance for nurses in tertiary hospitals: a cross-sectional survey in China. *BMC health services research*, *17*(1), 1-8.

Liu, M., He, P., Liu, H. G., Wang, X. J., Li, F. J., Chen, S., ... & Li, C. H. (2020). Clinical characteristics of 30 medical workers infected with new coronavirus pneumonia. *Zhonghua Jie he he hu xi za Zhi*, 209-214.

Liu, S., Yang, L., Zhang, C., Xu, Y., Cai, L., Ma, S., ... & Zhang, B. (2021). Gender differences in mental health problems of healthcare workers during the coronavirus disease 2019 outbreak. *Journal of psychiatric research*, *137*, 393-400.

Liw, L., & Han, S. Y. (2020). Coping as a moderator of self-discrepancies and psychological distress. *Counselling Psychology Quarterly*, 1-19.

Loukzadeh, Z., & Bafrooi, N. M. (2013). Association of coping style and psychological well- being in hospital nurses. *Journal of caring sciences*, *2*(4), 313.

Massé, R. (2000). Qualitative and quantitative analyses of psychological distress: methodological complementarity and ontological incommensurability. *Qualitative Health Research*, *10*(3), 411-423.

Matua, G. A., & Van der Wal, D. M. (2015). Living under the constant threat of Ebola: a phenomenological study of survivors and family caregivers

during an Ebola outbreak. *Journal of Nursing Research*, *23*(3), 217-224.

Maunder, R. G. (2009). Was SARS a mental health catastrophe?. *General hospital psychiatry*, *31*(4), 316.

Maunder, R. G., Lancee, W. J., Balderson, K. E., Bennett, J. P., Borgundvaag, B., Evans, S., ... & Wasylenki, D. A. (2006). Long-term psychological and occupational effects of providing hospital healthcare during SARS outbreak. *Emerging infectious diseases*, *12*(12), 1924.

McConville, J., McAleer, R., & Hahne, A. (2017). Mindfulness training for health profession students—the effect of mindfulness training on psychological well-being, learning and clinical performance of health professional students: a systematic review of randomized and non-randomized controlled trials. *Explore*, *13*(1), 26-45.

McGlinchey, E., Hitch, C., Butter, S., McCaughey, L., Berry, E., & Armour, C. (2021). Understanding the lived experiences of healthcare professionals during the COVID-19 pandemic: an interpretative phenomenological analysis. *European Journal of Psychotraumatology*, *12*(1), 1904700.

McNicholas, F., Sharma, S., Oconnor, C., & Barrett, E. (2020). Burnout in consultants in child and adolescent mental health services (CAMHS) in Ireland: a cross-sectional study. *BMJ open*, *10*(1), e030354.

Mensah, D., Asampong, R., Amuna, P., & Ayanore, M. A. (2020). COVID-19 effects on national health system response to a local epidemic: the case of cerebrospinal meningitis outbreak in Ghana. *The Pan African Medical Journal*, *35*(Suppl 2).

Minder, R., & Peltier, E. (2020). Virus knocks thousands of health workers out of action in Europe. *The New York Times*, *24*.

Mirowsky, J., & Ross, C. E. (2002). Measurement for a human science. *Journal of health and social behavior*, 152-170.

Miyamoto, I. (2020). *COVID-19 Healthcare Workers: 70% Are Women*. Daniel K. Inouye Asia-Pacific Center for Security Studies..

Mohajan, H. K. (2020). Quantitative Research: A Successful Investigation in Natural and Social Sciences. *Journal of Economic Development, Environment and People*, *9*(4), 50-79.

Mohindra, R., Ravaki, R., Suri, V., Bhalla, A., & Singh, S. M. (2020). Issues relevant to mental health promotion in frontline health care providers managing quarantined/isolated COVID19 patients. *Asian J Psychiatr*, *51*(3), 102084.

Moos, R. H. (1974). Psychological techniques in the assessment of adaptive behavior. *Coping and adaptation*, 334-399.

Morris, N., Moghaddam, N., Tickle, A., & Biswas, S. (2018). The relationship between coping style and psychological distress in people with head and neck cancer: A systematic review. *Psycho-oncology*, *27*(3), 734-747.

Moskowitz, J. T., Hult, J. R., Bussolari, C., & Acree, M. (2009). What works in coping with HIV? A meta-analysis with implications for coping with serious illness. *Psychological bulletin*, *135*(1), 121.

Muller, L., & Spitz, E. (2003). Multidimensional assessment of coping: validation of the Brief COPE among French population. *L'encéphale*, *29*(6), 507-518.

Murray, R. B., & Huelskoetter, M. M. W. (1987). *Psychiatric/mental health nursing: Giving emotional care*. Appleton & Lange.

Nadler, R. T., Rabi, R., & Minda, J. P. (2010). Better mood and better performance: Learning rule-described categories is enhanced by positive mood. *Psychological Science*, *21*(12), 1770-1776.

Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and social psychology review*, *10*(3), 235-251.

Ng, K., Poon, B. H., Kiat Puar, T. H., Shan Quah, J. L., Loh, W. J., Wong, Y. J., ... & Raghuram, J. (2020). COVID-19 and the risk to health care workers: a case report. *Annals of internal medicine*, *172*(11), 766-767.

Nsiah-Asare, A. (2017). The health sector in Ghana: facts and figures 2017. *Accra: Ghana Health Service*.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). New York: McGraw-Hill.

Ofori, A. A., Osarfo, J., Agbeno, E. K., Manu, D. O., & Amoah, E. (2021). Psychological impact of COVID-19 on health workers in Ghana: A multicentre, cross-sectional study. *SAGE open medicine*, *9*, 20503121211000919.

Olaseni, A. O., Akinsola, O. S., Agberotimi, S. F., & Oguntayo, R. (2020). Psychological distress experiences of Nigerians during Covid-19 pandemic; the gender difference. *Social Sciences & Humanities Open*, *2*(1), 100052.

Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsi, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, behavior, and immunity*, *88*, 901-907.

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: a meta-analytic review. *Psychological bulletin*, *135*(4), 531.

Payton, A. R. (2009). Mental health, mental illness, and psychological distress: same continuum or distinct phenomena?. *Journal of health and Social Behavior*, *50*(2), 213-227.

Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of behavioral medicine*, *25*(6), 551-603.

Petrie, K. J., Booth, R. J., & Pennebaker, J. W. (1998). The immunological effects of thought suppression. *Journal of personality and social psychology*, *75*(5), 1264.

Petzold, M. B., Plag, J., & Ströhle, A. (2020). Umgang mit psychischer Belastung bei Gesundheitsfachkräften im Rahmen der COVID-19-Pandemie. *Der Nervenarzt*, *91*(5), 417-421.

Polit, D. F., Beck, C. T., & Hungler, B. P. (2001). *Essentials of nursing research: Methods, appraisal and utilization.* (5th ed.), Lippincot. Williams & Wilkins Philadephia.

Preti, E., Di Mattei, V., Perego, G., Ferrari, F., Mazzetti, M., Taranto, P., ... & Calati, R. (2020). The psychological impact of epidemic and pandemic outbreaks on healthcare workers: rapid review of the evidence. *Current psychiatry reports*, *22*(8), 1-22.

Puchalski, C., Ferrell, B., Virani, R., Otis-Green, S., Baird, P., Bull, J., ... & Sulmasy, D. (2009). Improving the quality of spiritual care as a dimension of palliative care: the report of the Consensus Conference. *Journal of palliative medicine*, *12*(10), 885-904.

Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches*. sage.

Purdy, E. R. (2013). *Biopsychosocial model. Salem Press Encyclopedia*. Retrieved from https://libproxy.singaporetech.edu.sg/login?url=ht

Qaseem, A., Etxeandia-Ikobaltzeta, I., Yost, J., & Humphrey, L. L. (2020). Update Alert: Use of N95, Surgical, or Cloth Masks to Prevent COVID-19 in Health Care and Community Settings: Living Practice Points From the American College of Physicians (Version 1). *Annals of Internal Medicine*, *173*(12), 170.

Quakyi, N. K. (2020). Ghana's much praised COVID-19 strategy has gone awry. Here is why. *The Conversation*.

Rahe, R. H., & Arthur, R. J. (1978). Life change and illness studies: Past history and future directions. *Journal of human stress*, *4*(1), 3-15.

Rahe, R. H., & Holmes, T. H., (1967). The social readjustment rating scale. *Journal of psychosomatic research*.

Ran, L., Chen, X., Wang, Y., Wu, W., Zhang, L., & Tan, X. (2020). Risk factors of healthcare workers with coronavirus disease 2019: a retrospective cohort study in a designated hospital of Wuhan in China. *Clinical Infectious Diseases*, *71*(16), 2218-2221.

Redondo-Flórez, L., Tornero-Aguilera, J. F., Ramos-Campo, D. J., & Clemente-Suárez, V. J. (2020). Gender differences in stress-and burnout-related factors of university professors. *BioMed Research International*, *2020*.

Reio, T. G. (2016). Nonexperimental research: Strengths, weaknesses and issues of precision. *European Journal of Training and Development*.

Reuters 2020. Ghana health workers warn of potential COVID-19 calamity. [online] Available at: <https://www.usnews.com/news/world/articles/2020-07-09/ghana-health-workers-warn-of-potential-covid-19-calamity> [Accessed 9 July 2020].

Richards, K. (2003). *Qualitative inquiry in TESOL*. Springer.

Richardson, S. S. (2013). Sex Itself. In *Sex Itself*. University of Chicago Press.

Ridner, S. H. (2004). Psychological distress: concept analysis. *Journal of advanced nursing*, *45*(5), 536-545.

Rossi, R., Socci, V., Pacitti, F., Di Lorenzo, G., Di Marco, A., Siracusano, A., & Rossi, A. (2020). Mental health outcomes among front and second line health workers associated with the COVID-19 pandemic in Italy. *MedRxiv*.

Russell, C. D., Millar, J. E., & Baillie, J. K. (2020). Clinical evidence does not support corticosteroid treatment for 2019-nCoV lung injury. *The Lancet*, *395*(10223), 473-475.

Russell, H., Maître, B., Watson, D., & Fahey, É. (2018). *Job stress and working conditions: Ireland in comparative perspective. An analysis of the European Working Conditions Survey* (No. 84). Research Series.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual review of psychology*, *52*(1), 141-166.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, *57*(6), 1069.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of personality and social psychology*, *69*(4), 719.

Ryff, C. D., Keyes, C. L., & Hughes, D. L. (2003). Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth?. *Journal of health and Social Behavior*, 275-291.

Saad, M., De Medeiros, R., & Mosini, A. C. (2017). Are we ready for a true biopsychosocial–spiritual model? The many meanings of "spiritual". *Medicines*, *4*(4), 79.

Sahebi, A., Abdi, K., Moayedi, S., Torres, M., & Golitaleb, M. (2021). The prevalence of insomnia among health care workers amid the COVID-19 pandemic: An umbrella review of meta-analyses. *Journal of Psychosomatic Research*, 110597.

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.

Santrock, J. W. (2007). *A Topical Approach to Human Life-span Development*, (3rd Ed). St. Louis, MO: McGraw-Hill

Sarma, P., Prajapat, M., Avti, P., Kaur, H., Kumar, S., & Medhi, B. (2020). Therapeutic options for the treatment of 2019-novel coronavirus: An evidence-based approach. *Indian journal of pharmacology*, *52*(1), 1.

Saunders, M., Lewis, P. & Thornhil, A. (2007). Research Methods for Business Students. (4th Ed). New York: Pearson Education Limited.

Seifert, T. (2005). Assessment of the Ryff scales of psychological well-being. *Retrieved October*, *23*, 2010.

Seligman, M. E. (2003). Fundamental assumptions. *Psychologist*, *16*(3), 126.

Seligman, M. E. (2012). *Flourish: A visionary new understanding of happiness and well- being*. Simon and Schuster.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. American Psychologist, 55(1), 5–14

Shah, J., Monroe-Wise, A., Talib, Z., Nabiswa, A., Said, M., Abeid, A., ... & Ali, S. K. (2021). Mental health disorders among healthcare workers during the COVID-19 pandemic: a cross-sectional survey from three major hospitals in Kenya. *BMJ open*, *11*(6), e050316.

Shahrour, G., & Dardas, L. A. (2020). Acute stress disorder, coping self-efficacy and subsequent psychological distress among nurses amid COVID-19. *Journal of nursing management*, *28*(7), 1686-1695.

Shanafelt, T. D., Mungo, M., Schmitgen, J., Storz, K. A., Reeves, D., Hayes, S. N., ... & Buskirk, S. J. (2016, April). Longitudinal study evaluating the association between physician burnout and changes in professional work effort. In *Mayo Clinic Proceedings* (Vol. 91, No. 4, pp. 422-431). Elsevier.

Sharma, R., Saxena, A., Magoon, R., & Jain, M. K. (2020). A cross-sectional analysis of prevalence and factors related to depression, anxiety, and stress in health care workers amidst the COVID-19 pandemic. *Indian Journal of Anaesthesia*, *64*(Suppl 4), S242.

Shi, Y., Wang, G., Cai, X. P., Deng, J. W., Zheng, L., Zhu, H. H., ... & Chen, Z. (2020). An overview of COVID-19. *Journal of Zhejiang University. Science. B*, 1.

Sim, K., & Chua, H. C. (2004). The psychological impact of SARS: a matter of heart and mind. *Cmaj*, *170*(5), 811-812.

Singh, R. K., Bajpai, R., & Kaswan, P. (2021). COVID-19 pandemic and psychological wellbeing among health care workers and general population: A systematic-review and meta-analysis of the current

evidence from India. *Clinical epidemiology and global health*, *11*, 100737.

Sirois, F. M., & Owens, J. (2021). Factors associated with psychological distress in health-care workers during an infectious disease outbreak: A rapid systematic review of the evidence. *Frontiers in psychiatry*, *11*, 1591.

Slade, M. (2010). Mental illness and well-being: the central importance of positive psychology and recovery approaches. *BMC health services research*, *10*(1), 1-14.

Spraycar, M. (Ed.). (1995). *Stedman's medical dictionary*. Williams & Wilkins.

Starrenburg, A., Pedersen, S., Van den Broek, K., Kraaier, K., Scholten, M., & Van der Palen, J. (2014). Gender differences in psychological distress and quality of life in patients with an ICD 1-Year postimplant. *Pacing and clinical electrophysiology*, *37*(7), 843-852.

Stawicki, S. P., Jeanmonod, R., Miller, A. C., Paladino, L., Gaieski, D. F., Yaffee, A. Q.,... & Galwankar, S. C. (2020). The 2019–2020 novel coronavirus (severe acute respiratory syndrome coronavirus 2) pandemic: A joint american college of academic international medicine-world academic council of emergency medicine multidisciplinary COVID-19 working group consensus paper. *Journal of global infectious diseases*, *12*(2), 47.

Sue, D., Sue, D.W., & Sue, S. (2006). *Understanding Abnormal Behaviour*. (8th Ed). Boston: Houghton Mifflin Company.

Sukamolson, S. (2007). Fundamentals of quantitative research. *Language Institute Chulalongkorn University*, *1*(3), 1-20.

Sulmasy, D. P. (2002). A biopsychosocial-spiritual model for the care of patients at the end of life. *The gerontologist*, *42*(suppl_3), 24-33.

Suls, J., David, J. P., & Harvey, J. H. (1996). Personality and coping: Three generations of research. *Journal of personality*, *64*(4), 711-735.

Taha, S., Matheson, K., Cronin, T., & Anisman, H. (2014). Intolerance of uncertainty, appraisals, coping, and anxiety: The case of the 2009 H 1 N 1 pandemic. *British journal of health psychology*, *19*(3), 592-605.

Tam, C. W., Pang, E. P., Lam, L. C., & Chiu, H. F. (2004). Severe acute respiratory syndrome (SARS) in Hong Kong in 2003: stress and psychological impact among frontline healthcare workers. *Psychological medicine*, *34*(7), 1197-1204.

Tancherla, A., Celine, E., Dharmaraja, F., Natalie, F., Putri, H., Nathania, R., & Kurniawan, A. (2019). Relationship of Mechanism of Coping and Psychological Problems in Breast Cancer Patients. *Annals of Oncology*, *30*, vi146.

Tang, Y. Y. (2017). *The neuroscience of mindfulness meditation: How the body and mind work together to change our behaviour*. Springer.

Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. *American psychologist*, *55*(1), 99.

Tennen, H., & Affleck, G. (2002). Benefit-finding and benefit-reminding. *Handbook of positive psychology*, *1*, 584-597.

Terry, D. J., & Hynes, G. J. (2004). Coping: pitfalls and promise. *Annual review of psychology*, *55*, 745-774.

Thabane, L., Ma, J., Chu, R., Cheng, J., Ismaila, A., Rios, L. P., ... & Goldsmith, C. H. (2010). A tutorial on pilot studies: the what, why and how. *BMC medical research methodology*, *10*(1), 1-10.

Ting, D. S. W., Carin, L., Dzau, V., & Wong, T. Y. (2020). Digital technology and COVID-19. *Nature medicine*, *26*(4), 459-461.

Thoresen, S., Blix, I., Wentzel-Larsen, T., & Birkeland, M. S. (2021). Trust and social relationships in times of the COVID-19 pandemic. *European Journal of Psychotraumatology*, *12*(sup1), 1866418.

Tyrrell, D. A. J., & Bynoe, M. L. (1966). Cultivation of viruses from a high proportion of patients with colds. *Lancet*, 76-7.

Uchitomi, Y., Mikami, I., Nagai, K., Nishiwaki, Y., Akechi, T., & Okamura, H. (2003). Depression and psychological distress in patients during the year after curative resection of non–small-cell lung cancer. *Journal of Clinical Oncology*, *21*(1), 69-77.

Ukeh, M. I., & Hassan, A. S. (2018). The impact of coping strategies on psychological well-being among students of Federal University, Lafia, Nigeria. *Journal of Psychological Psychotherapy*, *8*(349), 2161-0487.

Usher, K., Bhullar, N., Durkin, J., Gyamfi, N., & Jackson, D. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support.

Venner, M. (1988). Adjustment, coping and defense mechanisms--deciding factors in the therapeutic process. *Zeitschrift fur die gesamte innere Medizin und ihre Grenzgebiete*, *43*(2), 40-43.

Vishnevsky, T., & Beanlands, H. (2004). Qualitative research. *Nephrology Nursing Journal*, *31*(2), 234.

Warr, P. B., Barter, J., & Brownbridge, G. (1983). On the independence of positive and negative affect.

Wang, H., Liu, Y., Hu, K., Zhang, M., Du, M., Huang, H., & Yue, X. (2020). Healthcare workers' stress when caring for COVID-19 patients: An altruistic perspective. *Nursing ethics*, *27*(7), 1490-1500.

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.

Wassenaar, T. M., & Zou, Y. (2020). 2019_nCoV/SARS-CoV-2: rapid classification of betacoronaviruses and identification of Traditional Chinese Medicine as potential origin of zoonotic coronaviruses. *Letters in applied microbiology*, *70*(5), 342-348.

Weinbrecht, A., Schulze, L., Boettcher, J., & Renneberg, B. (2016). Avoidant personality disorder: a current review. *Current psychiatry reports*, *18*(3), 29.

Weiten, W., Dunn, D. S., & Hammer, E. Y. (2014). *Psychology applied to modern life: Adjustment in the 21st century*. Nelson Education.

Weiten, W., & Lloyd, M. A. (2008). Psychology Applied to Modern Life . Wadsworth Cengage Learning.

Werner, E. E. (1993). Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. *Development and psychopathology*, *5*(4), 503-515.

Williamson, E. J., Walker, A. J., Bhaskaran, K., Bacon, S., Bates, C., Morton, C. E., ... & Goldacre, B. (2020). Factors associated with COVID-19-related death using OpenSAFELY. *Nature*, *584*(7821), 430-436.

Winefield, H. R., Gill, T. K., Taylor, A. W., & Pilkington, R. M. (2012). Psychological well- being and psychological distress: is it necessary to measure both?. *Psychology of Well-Being: Theory, Research and Practice*, *2*(1), 1-14.

Wood, S.E., Wood E. L., & Boyd, D. (2007). The World of Psychology. Boston: Allyn & Bacon.

World Health Organization, & World Health Organization. (2020). Naming the coronavirus disease (COVID-19) and the virus that causes it.

World Health Organization, & World Health Organization. (2018). WHO MERS global summary and assessment of risk. *Middle East respiratory syndrome coronavirus (MERS-CoV)(2018) Available: https://www.who.int/csr/disease/coronavirus_infections/riskassessment-august-2018. pdf*.

World Health Organization. (2017). *Global diffusion of eHealth: making universal health coverage achievable: report of the third global survey on eHealth*. World Health Organization.

World Health Organization. (2006). A state of complete physical mental and social well-being and not merely the absence of disease or infirmity.

Constitution of the World Health Organization Basic Documents, Forty-fifth edition, Supplement.

Worldometers.ifo. 2021. COVID Live-Coronavirus Statistics-Worldometr. [online] Available at: <https://www.worldometers.info/coronavirus/> [Accessed March 26 2021].

Www2.statsghana.gov.gh. 2020. [online] Available at: <https//www2.statsghana.gov.gh/docfiles/2010_District_Report/Volta/Nkwanta%20SOUTH.pdf> [Accessed19 October202].

XU, K., CAI, H., & CAI, H. X. (2020). Kaijin."Management of COVID-19: the Zhejiang experience.". *Journal of Zhejiang University (medical science)*, *49*(2).

Zakowski, S. G., Hall, M. H., Klein, L. C., & Baum, A. (2001). Appraised control, coping, and stress in a community sample: A test of the goodness-of-fit hypothesis. *Annals of Behavioral Medicine*, *23*(3), 158-165.

Zhang, H. (2020). The influence of the ongoing COVID-19 pandemic on family violence in China. *Journal of family violence*, 1-11.

Zhang, L., Zhu, F., Xie, L., Wang, C., Wang, J., Chen, R., ... & Zhou, M. (2020). Clinical characteristics of COVID-19-infected cancer patients: a retrospective case study in three hospitals within Wuhan, China. *Annals of oncology*, *31*(7), 894-901.

APPENDICES

APPENDIX A

QUESTIONNAIRE

Dear Respondent,

The goal of this survey is to get your feedback as a healthcare worker on health-related issues in the wake of the COVD-19 pandemic. Your responses would be processed on a computer alongside those of other people and handled in confidence. Although I prefer that you answer all questions, you have the choice to refuse to answer any one question, a group of questions, or the full questionnaire without penalty.

Thank you.

Informed Consent

I have read and comprehended the preceding information and agree to complete the questionnaire under the stated conditions [ ]. If you agree to participate in the study, please check the box at the bottom of the statement..

SECTION A: Background Information

1. Age…….. years
2. Gender……. [ ] Male [ ] Female
3. Marital status [ ] Never married [ ] Married [ ] Divorced [ ] Widowed
4. How long have you been on this job? ……..... year (s)
5. What category of healthcare worker are you? .....

SECTION B

INSTRUCTIONS: This section aims to determine your level of mental anguish as a healthcare worker during the COVID-19 situation. Please rate how much you agree with the statements below. Please read each question carefully and mark the response that is most likely to apply to you. If the previous question was 'none of the time,' questions 3 and 6 are automatically given a one.

		None of the time	**A little of the time**	**Some of the time**	**Most of the time**	**All the time**
1	How many times have you felt fatigued for no apparent reason?	1	2	3	4	5
2	How frequently did you experience anxiety?	1	2	3	4	5
3	How frequent did you feel so tense that nothing seemed to help you relax?	1	2	3	4	5
4	How many times have you felt hopeless??	1	2	3	4	5
5	How frequently did you feel fidgety or restless?	1	2	3	4	5
6	How frequent have you been unable to sit still because you were restless?	1	2	3	4	5
7	How regular did you feel depressed?	1	2	3	4	5
8	How often have you felt that everything is an effort?	1	2	3	4	5
9	How many times have you been so sad that nothing could make	1	2	3	4	5

	you happy?					
10	How many times did you feel unworthy?	1	2	3	4	5
	TOTAL:					

SECTION C

INSTRUCTIONS: The purpose of this part is to assess your psychological well-being as a healthcare worker in the middle of the COVID-19 pandemic. A variety of statements on happiness are listed below. Please check one box next to each statement to show how much you agree or disagree with it.

		Strongly Agree	**Somew hat Agree**	**A little agree**	**A little Disagree**	**Somewh at disagree**	**Strongly Disagree**
1	Most parts of my personality is appealing to me.	1	2	3	4	5	6
2	When I consider the events of my life so far, I am content with how things have turned out.	1	2	3	4	5	6
3	Some individuals go through life aimlessly, but I am not one of them.	1	2	3	4	5	6
4	I am frequently saddened by the pressures of daily	1	2	3	4	5	6

	life.						
5	In many ways, I am dissatisfied with my life achievements.	1	2	3	4	5	6
6	I've found it challenging and irritating to maintain close relationships.	1	2	3	4	5	6
7	I take each day as it comes and try not to think about the future.	1	2	3	4	5	6
8	In general, I believe I am in command of my circumstances.	1	2	3	4	5	6
9	I'm good at handling day-to-day obligations.	1	2	3	4	5	6
10	I sometimes feel like I've accomplished everything there is to accomplish in life.	1	2	3	4	5	6
11	Life has been an endless journey of learning, growing, and changing for me.	1	2	3	4	5	6

		Strongly Agree	Somew hat Agree	A little agree	A little Disagree	Somewh at disagree	Strongly disagree
12	I believe it is vital for me to have fresh experiences that challenge my perceptions of myself and the world.	1	2	3	4	5	6
13	People describe me as a generous person who is prepared to give of my time.	1	2	3	4	5	6
14	I've long given up on making significant adjustments or improvements in my life.	1	2	3	4	5	6
15	People who have strong opinions tend to influence me.	1	2	3	4	5	6
16	I haven't had a lot of warm and trusted interactions with other people.	1	2	3	4	5	6
17	I haven't had many warm and trusting	1	2	3	4	5	6

	connections with others.						
18	I evaluate myself based on my own values rather than the values of others.	1	2	3	4	5	6

SECTION D

INSTRUCTIONS: As a healthcare provider, how have you attempted to cope with the COVID-19 pandemic? Read the statements and mark how much you've used each coping strategy.

		I haven't been doing this at all	**A little bit**	**Moderate**	**I've been doing this a lot**
1	To keep my mind off things, I've turned to work or other things.	1	2	3	4
2	I've been focussing my energies on resolving my current problem.	1	2	3	4
3	"This isn't real," I've been telling myself.	1	2	3	4
4	To make myself feel better,	1	2	3	4

	I've been using alcohol or other narcotics.				
5	Others have been offering me emotional support.	1	2	3	4
6	I've given up on attempting to cope with it.	1	2	3	4
7	I've been doing everything I can to improve the issue.	1	2	3	4
8	I haven't been able to accept the fact that it has happened.	1	2	3	4
9	I've been saying things to get rid of my bad feelings.	1	2	3	4
10	Other folks have offered me assistance and suggestions.	1	2	3	4
11	To get through it, I've been utilising alcohol or other drugs.	1	2	3	4
12	I've been attempting to view it in a more positive way.	1	2	3	4
13	I've been berating myself for a while now.	1	2	3	4
14	I've been attempting to devise a plan of action.	1	2	3	4
15	Someone has provided me with reassurance and understanding.	1	2	3	4
16	I've given up on trying to deal with it.	1	2	3	4

		I haven't been doing this at all	A little bit	Moderate	I've been doing this a lot
17	I've been looking for something positive in the current situation.	1	2	3	4
18	It's been a source of jokes for me.	1	2	3	4
19	I've been going to the movies, watching TV, reading, daydreaming, sleeping, or shopping to distract myself from it.	1	2	3	4
20	I've come to terms with the truth of what has occurred.	1	2	3	4
21	I've been expressing my dissatisfaction.	1	2	3	4
22	I've been looking for solace in my faith or spiritual views.	1	2	3	4
23	I've been attempting to seek advise or assistance from others on what to do.	1	2	3	4
24	I've been figuring out how to live with it.	1	2	3	4
25	I've been seriously considering my options.	1	2	3	4
26	I've been blaming myself for events.	1	2	3	4
27	I've been praying or meditating for the past few days.	1	2	3	4
28	I've been joking around about it.	1	2	3	4

THANK YOU FOR YOUR PARTICIPATION.

Appendix B: Introductory Letter

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 0332091697
Email:dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: DEP/74/V.4

Your Ref:

8th February, 2021

.....
.....
.....
.....
.....

Dear Sir,

LETTER OF INTRODUCTION: MR. KOJO BIJOBU.

Mr. Bijobu is a second-year student of our department with registration number EF/CHP/19/0006. He needs a data for a pilot testing on the topic: "*PSCHOLOGICAL DISTRESS AND WELLBEING OF HEALTH WORKERS AMID COVID-19 PANDEMIC: THE MODERATING ROLE OF COPING MECHANISM*".

We would be grateful if you could give him the necessary assistance he requires. The department supports his application.

Thank you.

Yours faithfully,

Dr. Mark O. Amponsah
HEAD

Appendix C: Ethical Clearance from Ethical Review Board- UCC

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/ucc.edu/05/21-02

Date: 5th January, 2021

Your Ref: .....

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Kojo Bijobu....., Reg. No. EF/CHP/19/10006 is an M.Phil. / ~~Ph.D.~~ student in the Department of Education and Psychology..... in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Psychological distress and well-being of health care workers amid Covid-19 pandemic: The moderating role of coping mechanisms.....

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/~~her~~ the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

Appendix D: Approval from Nkwanta South Municipal Health Directorate

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS

Telephone 0332091697
Email dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: DEF/19/V.4

Your Ref:

DISTRICT HEALTH DIRECTORATE
RECEIVED
16 JUN 2021
NKWANTA SOUTH V/R.

8th February, 2021

THE DIRECTOR
MUNICIPAL HEALTH DIRECTORATE
NKWANTA SOUTH
.....
.....

Dear Sir,

LETTER OF INTRODUCTION: MR. KOJO BIJOBU.

Mr. Bijobu is a second-year student of our department with registration number EF/CHP/19/0006. He needs a data for a pilot testing on the topic: "*PSCHOLOGICAL DISTRESS AND WELLBEING OF HEALTH WORKERS AMID COVID-19 PANDEMIC: THE MODERATING ROLE OF COPING MECHANISM*".

We would be grateful if you could give him the necessary assistance he requires. The department supports his application.

Thank you.

Yours faithfully,

Dr. Mark O. Amponsah
HEAD