



Covid-19 Related Fear, Anxiety and Attendant Demotivation as Threats to Organizational Commitment Among Health Care Workers

Oginyi, C. N. Ronald

Oketa, M. Chibugo

Eze, O. Eze

Nwonyi, K. Sampson

Igwe, A. Ernest

ARTICLE INFO

Article's History

Received: 20/08/2022

Revised: 24/09/2022

Accepted: 30/09/2022

Authors' Affiliation

Department of Psychology and
Sociological Studies,
Ebonyi State University, Abakaliki
Email: kelechinwonyi@gmail.com

Keywords:

Demotivation

Fear

Health Workers

Motivation

Organizational Commitment

ABSTRACT

This study investigated covid-19 related fear, anxiety and attendant demotivation as threats to organizational commitment among health care workers. Two hundred and fifty-four (254) health workers comprising one hundred and forty-four (144) males and one hundred ten (110) females participated in the study. Participants were randomly selected from different Departments in Alex-Ekweme Federal University Teaching Hospitals, Abakaliki. The participants were selected using convenient sampling technique. Participant's ages ranged from 20 to 67 years with a mean age of ($M = 36.70$, $SD = 7.91$). Cross sectional design was adopted. Four instruments were used for data collection. Fear of covid-19 Scale, State-Trait Anxiety Scale, Organizational Commitment Scale, and Work Intrinsic Extrinsic Sub-Scale. Three hypotheses were tested. Hierarchical multiple regression was the main statistic used for data analysis. Result of the multiple regression analysis showed that covid-19 related fear was a significant predictor of organizational commitment among health workers. Anxiety and demotivation were significant predictors of organizational commitment among health workers. The implications of these findings were discussed, and suggestions for further studies were equally made.

Introduction

Coronavirus disease 2019 (COVID-19) epidemic has affected (and continues to affect) all nations, continents, races, and socioeconomic groups; as a result health workers involved in the COVID-19 response may be expected to be at risk of developing fear and psychological distress if commitment on the part of their organization is lacking. The psychological effects of the COVID-19 epidemic have demonstrated the need for organizational commitment to enable healthcare providers to do their job efficiently and effectively, and have access to tools to address people's health and psychological response needs specifically to COVID-19 during the epidemic (Taylor, Landry, Paluszek, Fergus, McKay, & Asmundson 2020). Hence, during Covid-19, one of the things that is anticipated to have motivated employees to work for the good of the organization and society is organizational commitment; this is particularly through its affective commitment, normative commitment, continuance commitment (Al Zefeiti & Mohamad, 2017). There are various studies that discuss organizational commitment, yet it is hardly to see the research done on interrelationship between organizational commitment, employees' fear of covid-19 as well as lack of motivation among health care workers during covid-19 pandemic. Thus, this paper is an attempt to fill this gap in the literature.

In an organizational context like hospital, employees are viewed as the significant factors in determining the sustainability of the organization (Thevanes & Arulrajah 2016). Hence, organizations increasingly are required to focus on Human Resource Management (HRM) to enhance the organizational sustainability; because, achieving organizational sustainability become unrealistic without employee participation and commitment from the side of the organization. Organizational commitment is a psychological construction of responsibility that an employee has towards the mission and direction of an organization. Therefore, organizational commitment refers to employees' psychological attachment towards their organization. Commitment is a force that guides a course of action towards one or more targets (Meyer, 2002). It has been theorized that commitment is a multidimensional construct and that the antecedents, correlates, and consequences of commitment vary across many dimensions (Meyer, 2001). A widely used model of organizational commitment as a

multidimensional construct is (Meyer & Allen, 1997) "Three-Component Model of Commitment". This model refers to the three forms of commitment that is affective, continuance, and normative commitment (Meyer & Allen, 1997). Affective commitment is explained as an emotional attachment to the organization. Continuance commitment is the perceived costs associated with leaving the organization. Normative commitment refers to the perceived obligation to remain in the organization (Meyer, 2001). It has been suggested that employees who exhibit both high organizational commitment and high job involvement would least likely to leave the organization while employees with low levels of organizational commitment and job involvement are the most likely to leave the organization voluntarily (Huselid, 1991). Organizational commitment is a leading factor impacting the level of achievement in many organizations especially during an epidemic such as Covid-19.

Organizational commitment has become one of the most popular work attitudes studied by practitioners and researchers (Meyer Allen & Smith, 1993; Mowday, Steers & Porter, 1982) due to its considerable impact on organizational outcomes such as work performance and enhancement of productivity (Dirani, 2009; Yousef, 2000). Following this, some researchers believe that human resources are critical for organizational effectiveness since it plays a great effect on supporting organizational competitive advantages through teams of committed employees (Al Zefeiti & Mohamad, 2017). A substantial research has been conducted over the past decades to determine how employees' commitment to an organization develops (Meyer & Allen, 1997), as it is an important concept in terms of employee loyalty and efficiency for an organization (Berberoglu & Secim, 2015). Organizational commitment stresses attachment to the organization, including its goals and values. It appears to develop slowly but consistently over time as individuals think about the relationship between themselves and their employer. Indeed, organizational commitment should be somewhat more stable over time (Mowday, Steers & Porter, 1979).

Remarkably, employees' organizational commitment is one of the attitudes that could lead to high performance. This is why employees who are committed to their organization are more likely to be better performers than the less committed employees

as they exert more effort on behalf of the organization towards its success and strive to achieve its goals and missions (Jafri & Lhamo, 2013). Employees with higher scores of commitment are expected to be more motivated and performing at highest levels of performance (Berberoglu & Secim, 2015). Researchers and scholars have defined organizational commitment differently. For example, Farahani, Taghadosi, and Behboudi (2011) described organizational commitment as the psychological likings and devotion that employees have to their organization. Researchers argue that organizational commitment could be considered a bond or link between an employee and organization, as both employees and organizations benefit from employees' organizational commitment (Fulford & Rothman, 2007; Mathieu & Zajac, 1990). Following this, Qureshi, Hayat, Ali, and Sarwat, (2011) define organizational commitment as the feeling of responsibility that an employee has towards the mission of the organization. Kanter (1968) defines organizational commitment as the willingness of social actors to give their energy and loyalty to social systems, the attachment of personality systems to social relations that are seen as self-expressive. In his study, Kanter (1968) proposed a typology of commitment that includes three types of commitment namely: Continuance, cohesion and control. According to Kanter (1968)'s theoretical framework the three types of commitment bind the individual's personality system to areas of the social system of an organization (relationships, roles and norms) and can thus represent an individual's readiness to follow the specified behavior.

During the COVID-19 pandemic, individuals faced psychological stress caused by fear and anxiety due to the high transmission and mortality rate of the disease, the social isolation, economic problems, and difficulties in reaching health services (Cankurtaran, Tezel, Ercan, Yildiz., & Akyuz, 2021). The psychological implications as a result of disease outbreaks are often neglected by the health system (Tucci, Moukaddam, Meadows, Shah, Galwankar, & Kapur, 2017; Torales, O'Higgins, Castaldelli-Maia, & Ventriglio, 2020; Ahorsu, Lin, Imani, Saffari, Griffiths, & Pakpour, 2020), although studies have found that the proportion of mental health effects is higher than the effect of a particular disease during epidemics (Reardon, 2015). One of the emotions involved in mental health outcomes in people during disease outbreaks is fear. It is an adaptive defense

mechanism which when become chronic can lead to adverse mental health effects (Garcia, 2017; Shin, & Liberzon, 2010). The progressive nature and scientific uncertainties related to infectious diseases create fear among people especially when the infection and death rate is alarming (Person, Sy, Holton, Govert, Liang, Garza, et al., 2004). The onslaught of COVID 19 since its beginning is burdening the health systems and paralyzing economies across the world. Nigeria in particular, ranking low in health security index (Global Health Security Index, 2021) is not an exception from the threat of COVID-19.

Health care workers who are at the frontline of managing COVID 19 are prone to developing adverse mental health outcomes during this situation. They are likely to develop fear attributed to their close and longer interaction with suspected patients, a better understanding of disease development, and its progression (Doshi, Karunakar, Sukhabogi, Prasanna, & Mahajan, 2020). Early evidence has shown increased work pressure, inadequate protective measures, risk of infection, and transmission of infection to family members, limited organizational support and exhaustion contributing to adverse mental outcomes including fear in health care workers (Doshi, Karunakar, Sukhabogi, Prasanna, & Mahajan, 2020; Lai, Ma, Wang, Cai, Hu, Wei, et al. 2020; Kumar, Katto, Siddiqui, Sahito, Ahmed, Jamil, et al. 2020). Fear and stress experienced by health workers affect their work, behaviour and health outcomes ((Doshi, Karunakar, Sukhabogi, Prasanna, & Mahajan, 2020; Chong, Wang, Hsieh, Lee, Chiu, Yeh, et al. 2004). COVID-19 outbreak and its consequences including lockdown, loss of economy, disruption in regular health services, lack of critical resources including oxygen and protective equipment and inadequate financial motivation among health workers have further crippled the country's health system capacity including its health workers (Adhikari, Ozaki, Marahatta, Rijal, & Mishra, 2020). The understanding of fear and other psychological outcomes among health workers has not received much attention during the early phase of the pandemic. Limited studies so far have investigated the mental health impact of COVID-19 among health workers in Nigeria. In this regard, this study aims to assess the status of COVID-19 fear among health workers involved in the COVID-19 response in Nigeria. In addition, this study aims to explore the

relationship of COVID-19 fear with other mental health outcomes among health workers.

On a related note, Yıldırım et al. (2020) confirmed that fear of COVID-19 was a good predictor of depression and anxiety and served as the mediator between perceived risk and depression and anxiety, while resilience served as a buffer factor. A critical factor associated with a population's level of anxiety and depression in the COVID-19 pandemic may be affective temperaments (Paudel, Bhandari, & Joshi 2019; Vázquez & Gonda, 2020). Researchers consider affective temperaments (depressive, cyclothymic, hyperthymic, irritable, anxious) as stable across the human lifespan (Bhattarai S, Dhungana J, Ensor T, Shrestha, 2020).

The COVID-19 pandemic has been associated with a high level of uncertainty about individuals' mental and physical health. Conceivably, uncertainty may increase the fear of infection, especially when rumination may intensify this process. Ouellet et al. (2019) suggested that a low level of uncertainty tolerance may be a component of basic fear under threatening conditions. The threat to life and health related to the COVID-19 pandemic may cause real fear associated with self-infecting and loved ones' (family members, friends, relatives) infection. Such fear can trigger irrational worry related to the infection and motivate a person to seek information about risk factors. Fear of infection is natural, but health anxiety can turn into symptoms of pathological COVID anxiety manifested in cyberchondria symptoms (Tyrer, 2020). Therefore, people with a high level of anxious temperament who more strongly experience the fear of COVID-19 infection will plausibly also be more prone to intensively search for information on the threat to their health, manifesting in cyberchondria. Starčević and Berle (2013) described cyberchondria as the tendency to over-worry about an individual's health condition and engaging in increased research on the Internet for medical information about symptoms, which may be accompanied by general health anxiety, doubts and compulsions to explain them. Many researchers (Zangouletchi, Yousefi, & Keshavarz, 2018; Starčević, Berle, & Arna'ez, 2020; Jokic-Begic, Lauri Korajlija, & Mikac, 2020) have suggested that cyberchondria involves on frequent online searches for health information that exacerbate anxiety. According to Hashemi et al. (2020), fear of COVID-19 is also directly predicted by cyberchondria, confirming the assumption that excessive searching for information

about one's health adversely affects human mental health.

Anxiety sensitivity, uncertainty intolerance and obsessive-compulsive symptoms are crucial predictors of cyberchondria. Additionally, Starčević et al. (2019) showed that cyberchondria is a construct independent of obsessive-compulsive disorder and intolerance of uncertainty. In their meta-analysis, McMullan et al. (2019) confirmed a general relationship between health anxiety and searching the Internet for information as well as between health anxiety and cyberchondria. In turn, Wang et al. (2021) pointed out that avoiding excessive searching for information about health on the Internet can be a protective factor in relation to somatic and mental health in the context of the COVID-19 pandemic. According to Starčević et al. (2020), a key factor contributing to the development of cyberchondria during the COVID-19 pandemic has been the considerable uncertainty, both psychosocial and medical, associated with the pandemic. Information overload, including an excess of varied and difficult to distinguish information about a disease, has intensified the feeling of danger and fear of disease and has increased cyberchondria (Laato, Najmul Islam, Nazrul Islam, & Whelan, 2020). Maftai and Holman (2020) suggested that uncertainty related to the medical aspects of the COVID-19 pandemic and social isolation could increase health anxiety. Meanwhile, among young people, compared to older people, an essential component in the development of cyberchondria is neuroticism, a personality trait strongly related to fear. Notably, neuroticism is also associated with affective temperaments (Oniszczenko W, Stanislawiak, 2019) and COVID-19 anxiety (Nikčević, Marino, Kolubinski, Leach, & Spada, 2021), indirectly confirming the significance of affective temperaments in the development of cyberchondria. The COVID-19 pandemic is also associated with a high level of uncertainty, health anxiety, and fear of COVID-19-related self-infection and infection in loved ones. Moreover, anxiety and the aforementioned fears may contribute to the development of cyberchondria. That said, little is known about the role of affective temperaments in the development of COVID-19-related fears.

Previous studies show that the accomplishment of an organization depends on its talented and sincere employees and their performance depends on the motivation of the employees and commitment towards their work (Sims, 2007).

Motivation is a psychological response that stimulates an individual to contribute the best by way of productivity and performance. Motivation binds the employee to the organization leading to high commitment and loyalty to one's work place. The binding of the employees to the organization gains more importance particularly in an era of technology-driven healthcare services environment (Hashim & Hameed, 2012). One of the major concerns in the study is to enquire, the role of motivation on commitment of Health Care Employees in hospitals. Motivation and organizational commitment of employees is an important element to enhance job performance. A significant predictor of this commitment is also the type of motivation, which motivates workers to spend time and energy at work. Amotivation, also known as avolition, is a psychological condition defined as "a reduction in the motivation to initiate or persist in goal-directed behavior".

Motivation enables an individual to sustain rewarding value of an action into an uncertain future. Hence, human resources are vital to an effective health care system (Marko, & Zurn, 2006). From an economics viewpoint, health workers' salaries make up a great share of health budgets in most countries (Marko, & Zurn, 2006). The health worker is the gatekeeper of the health system. In the workplace, motivation can be defined as an individual's degree of willingness to exert and maintain an effort towards organizational goals (Miller, Bennett, & Kanfer, 2002). Motivation is closely linked to job satisfaction, which retains workers at their jobs over time (Marc, 2006). Health worker retention reduces costs to the health system of having to recruit, hire, and orient new workers and also reduces the likelihood of vacant posts (Deussom, & Jaskiewicz, 2004). As many countries currently experience a shortage of qualified health workers (World Health Organization, 2006), the loss of any health worker has serious ramifications for the health of people in the country (Eastwood, Conroy, Naicker, West, Tutt, & Plange-Rhule, 2005). Keeping health workers satisfied and motivated helps the entire health system work smoothly (Miller, Bennett, & Kanfer, 2002). Poorly motivated health workers can have a negative impact on individual facilities and an entire health system (Inke, & Imhoff, 2006). Unmotivated health workers greatly impact the citizens. Often it's these health workers who work longer hours, whose workplaces have fewer resources than urban health centers, and

where they can feel most isolated (Lyn & Tulloch, 2008). Unmotivated health workers are known to leave their jobs, either leaving rural and remote areas for work in larger cities, or migrating to other countries in the pursuit of more appealing job opportunities (Inke, & Imhoff, 2006). Some disgruntled health workers have been known to leave the medical field outright (Engeda, Haileselassie, Birhanu, & Kefyalew, 2014).

Motivation is influenced by a complex set of social, professional and economic factors (Deussom, Jaskiewicz, Dwyer, & Tulenko, 2012) as witnessed during covid 19. There are many reasons health workers remain motivated and decide to stay at their jobs. Generally, a health worker will be motivated and express job satisfaction if they feel that they are effective at their jobs and performing well or unmotivated when they are lacking. Factors contributing to motivation and job satisfaction also include strong career development, an adequate compensation, and adequate working and living conditions (Deussom, Jaskiewicz, Dwyer, & Tulenko, 2012). Having strong human resources mechanisms in place within a health system can help to ensure that the right motivational factors are in place at adequate levels to keep health workers satisfied. Maintaining a positive relationship with coworkers can increase motivation. In a study a related study, nurses experienced more job satisfaction if they felt they had greater autonomy to make their own decisions regards to patient needs (Engeda, Haileselassie, Birhanu, & Kefyalew, 2014). However, inversely, problems with career development, salary and working/living conditions are also reasons health workers become unmotivated. Any of these issues—or a combination of them—can lead to health worker dissatisfaction. Career development is generally defined as the possibility to specialize in a specific field or be promoted through the ranks of health workers (Mischa, Bidwell, Thomas, Wyness, Blaauw, & Ditlopo, 2008). A lack of promotion opportunities is another problem. For example, nurses in Tanzania reported working for as many as ten years without a promotion (Manongi, Tanya, & Bygbjerg, 2006). This has led to bad feelings, where the researchers point out that simple communication—such as staff appraisals and transparent promotion procedures—could lead to better morale (Manongi, Tanya, & Bygbjerg, 2006).

Having limited continuing professional development opportunities—or proper training during

preservice education or on the job—is another major theme among discontented health workers (Mischa, Bidwell, Thomas, Wyness, Blaauw, & Ditlopo, 2008). In understaffed clinics and hospitals as usually witnessed in Nigeria, health workers are often asked to perform tasks beyond their scope of practice, but without adequate training. This can lead to frustration and demotivation (Manongi, Tanya, & Bygbjerg, 2006). This also creates concerns about the quality of health services provided. Inadequate and outdated medical resources and supplies at clinics and hospitals can also contribute to health workers' frustration on the job, and eventual attrition. Health workers argue that a dearth of adequate resources prohibits them from doing their jobs (Manongi, Tanya, & Bygbjerg, 2006). Another issue is maintaining a positive relationship with management. In some cases, vacant positions are left unfilled for long periods of time, increasing workloads for remaining health workers (Kotzee, & Couper, 2006).

In addressing the challenges of amotivation, motivation strategies should approach these complex problems holistically: provide opportunities for career development, make efforts to ensure adequate compensations, and promote positive work environments, including supportive supervision (Kotzee, & Couper, 2006). Knowing that there is room within a health worker's career for further development is a critical factor in motivating health workers and allowing them to continue to meet the changing medical needs of their communities (Dieleman, & Jan, 2006). Increasing the number of job opportunities, whether is moving up the organization hierarchy or provided with the ability to learn new things, is an important indicator of job satisfaction (Dieleman, & Jan, 2006). Career planning – whether personal or institutional – allows health workers to increase learning and job commitment. Organizations or health systems which assist health workers in planning their careers can improve morale and encourage retention of ambitious personnel (American Society of Health-System Pharmacists, 2003). Providing safer and more pleasant working conditions increase health care workers' productivity and quality of service (Deussom, & Jaskiewicz, 2014). Insuring health workers feel safe at their job is also important to motivation, productivity and their decision to remain at work (Manongi, Tanya, & Bygbjerg, 2006). This includes such issues as providing health workers access to clean water; insuring workers have

adequate supplies of safety equipment and are trained to handle chemicals properly; further, making minor adjustments to the physical environment – such as increasing ergonomics of equipment and decreasing the amount of heavy lifting for health workers – decreases the amount of absenteeism (Manongi, Tanya, & Bygbjerg, 2006). Following positive management protocols and providing quality supervision is also important (World Health Organization, 2010).

Motivating health workers does not fall only on their supervisors. Health workers from rural backgrounds or with rural work experience are more likely to be motivated to go and work there (World Health Organization, 2010). Developing national plans to attract, motivate, and retain health workers should be conducted through evidence-based decision-making (Deussom, & Jaskiewicz, 2014). This includes leveraging proper data to help drive policy and decisions (Deussom, & Jaskiewicz, 2014). However, when working with health systems, it is often difficult to know what to measure – especially in the developing world (Luoma, 2006). Any motivation and retention strategy is not complete without a cost-benefit analysis, which allows policy-makers to weigh the pros and cons of specific proposals (Ditlopo, Duane, Laetitia, Steve, & Posy, 2013). Finally, careful communication is necessary to ensure proper expectations are set for the health workers (Ditlopo, Duane, Laetitia, Steve, & Posy, 2013).

Statement of the Problem

Globally, periods of pandemic such as Covid-19 calls for organizational commitment in institutions of work. This is because it has become one of the most popular work attitudes studied by practitioners and researchers due to its considerable impact on organizational outcomes such as work performance and enhancement of productivity. The negative impacts of covid-19 on the society and especially to the world of work could be easily cushioned by good commitments on the part of employees as well as employers. Covid-19 brought a lot of challenges like fear, anxiety and demotivation to workers generally. However, it is possible the effects of covid-19 pandemic on workers is higher among health workers. Hence, the present study is of the view that the fear caused by covid-19, and the anxiety following it may have more influence on organizational commitment among health workers. Also, that government and hospital unserious nature may have caused health

workers to be unmotivated which can negatively impact their organizational commitment. This probably maybe because the nature of their work expose them more to the pandemic, or to patients with covid-19, thereby endangering their health and putting their families at risk. In addressing these problems, the following research questions are stated to guide the study further.

Will covid-19 related fear significantly predict organizational commitment of health workers?

Will anxiety significantly predict organizational commitment of health workers?

Will demotivation significantly predict organizational commitment of health workers?

Purpose of the Study

The purpose of the present study is to understand how covid-19 related fear, anxiety and demotivation serve individually as predictors of organizational commitment among health workers during covid-19 period. Specifically, the study seeks to;

Examine whether covid-19 related fear will significantly predict organizational commitment of health workers.

Determine whether anxiety will significantly predict organizational commitment of health workers.

Investigate whether demotivation will significantly predict organizational commitment of health workers

Hypotheses

Covid-19 related fear will significantly predict organizational commitment among healthcare workers.

Anxiety will significantly predict organizational commitment among healthcare workers.

Demotivation will significantly predict organizational commitment among healthcare workers.

Method

Participants

Data for this study were collected from a sample of two hundred and fifty-four (254) healthcare workers (nurses, medical doctors, medical laboratory technologists/scientists, and administrators), from different Departments of Alex-Ekweme Federal University Teaching Hospital, Abakaliki. They were selected using convenient sampling technique. Their ages ranged from 20 to 67 years with an average age of 36.70 years ($SD = 7.91$). All the participants were of the Christian religion. They include both females (110) and males (144). The minimum educational qualification of the participants was First School Leaving Certificate, while only 220 had at least a First Degree.

Instruments

A questionnaire comprising four instruments were used for data collection. The instruments used in the present study are; Fear scale of COVID 19 (FCV-19S), Organizational Commitment Questionnaire, Work Extrinsic Intrinsic Motivation Scale, and

Fear scale of COVID 19 (FCV-19S) (Ahorsu, Lin, Imani, Saffari, Griffiths, & Pakpour, 2020)

The fear scale of COVID 19 (FCV-19S) was used in the study to assess the fear among health workers. It is a relatively new scale developed in 2020 (Ahorsu, Lin, Imani, Saffari, Griffiths, & Pakpour, 2020) and has been used in different countries including India (Doshi, Karunakar, Sukhabogi, Prasanna, & Mahajan, 2020), Bangladesh (Sakib, Bhuiyan, Hossain, Mamun, Hosen, Abdullah, et al. 2020), Israel, Italy, Turkey and Eastern Europe. The FCV-19S has seven items and five-point Likert scales ranging from 1 to 5, with lower and higher values indicating strongly disagree and strongly agree, respectively. The total scores range between 7 and 35, and higher the score, higher the fear of COVID-19. Similarly, the 14-item Hospital Anxiety and Depression Scale (HADS) was used for measuring anxiety (HADS-A, 7 items) and depression (HADS-D, 7 items), and the 7-item Insomnia Severity Index (ISI) was used for measuring insomnia.

Organizational Commitment Questionnaire (Mowday, Steers & Porter 1979)

Organizational commitment was measured by means of the Organizational Commitment Questionnaire (OCQ) developed by Mowday, Steers and Porter (1979). OCQ contains 15 items that measure employees' level of commitment to their organizations. The respondents indicate the extent to which each item reflect their commitment to their organization on a 5-point likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The authors reported a Cronbach's alpha of .91 and .89 for the professional and clerical samples respectively. The Organizational Commitment Questionnaire has been used in several studies in Nigeria and has proven to be psychometrically sound (E.g., Tella, Ayeni & Popoola, 2007). Sample items include: I feel very little loyalty to this organization; I am proud to tell others that I am part of this organization; I really care about the fate of this organization; deciding to work for this organization was a definite mistake on my part.

Work Extrinsic Intrinsic Motivation Scale (Vallerand, 1997)

The WEIMS is divided into three-item six subscales, which correspond to the six types of motivation postulated by SDT (i.e., intrinsic motivation, integrated, identified, introjected and external regulations, and amotivation). Participants were asked to indicate on a Likert-type scale³ ranging from 1 (does not correspond at all) to 5 (corresponds exactly) the extent to which the items represent the reasons they are presently involved in their work. Although most researchers favour a multidimensional approach to (work) motivation, the use of a single score, such as the work self-determination index (W-SDI; Vallerand, 1997), is at times desirable. The W-SDI may be particularly useful when researchers want to select individuals who display either a self-determined or a none self-determined motivational profile. The WEIMS can be used to generate that index by multiplying the mean of each subscale by weights corresponding to the underlying level of self-determination (Ryan & Connell, 1989).

The range of possible scores on the W-SDI is between 36 for a 7-point Likert-type scale (and 24 when using a 5-point Likert-type scale). The total score derived from this formula reflects individuals' relative level of self-determination. A positive score indicates a self-determined profile and a negative score indicates a none self-determined profile. Previous research has shown that the self-determination index displays high levels of reliability and validity (e.g., Fortier, Vallerand, & Guay, 1995; Green-Demers, Pelletier, & Me'nard, 1997; Pelletier, Dion, Slovinec-D'Angelo, & Reid, 2004). The internal consistency (Cronbach's alpha coefficient) of the W-SDI was .84

State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs 1983)

The State-Trait Anxiety Inventory (STAI) is a commonly used measure of trait and state anxiety developed by Spielberger, Gorsuch, Lushene, Vagg, and Jacobs (1983). It can be used in clinical settings to diagnose anxiety and to distinguish it from depressive syndromes. It also is often used in research as an indicator of caregiver distress Form Y, its most popular version, has 20 items for assessing trait anxiety and 20 for state anxiety. State anxiety items include: "I am tense; I am worried" and "I feel calm; I feel secure." Trait anxiety items include: "I worry too much over something that really doesn't matter" and "I am content; I am a steady person." All items are rated on a 4-point scale (e.g., from "Almost Never" to "Almost Always"). Higher scores indicate

greater anxiety. The STAI is appropriate for those who have at least a sixth-grade reading level. Internal consistency coefficients for the scale have ranged from .86 to .95; test-retest reliability coefficients have ranged from .65 to .75 over a 2-month interval (Spielberger et al., 1983). Test-retest coefficients for this measure in another study ranged from .69 to .89 (Spielberger, 1989). Considerable evidence attests to the construct and concurrent validity of the scale (Spielberger, 1989). Studies also have shown that it is a sensitive predictor of anxiety over time, and that it can vary with changes in support systems, health, and other individual characteristics (Elliott, Shewchuk, & Richards, 2001; Shewchuk, Richards & Elliott, 1998). Omolabi (1987) validated the instrument in Nigeria. According to Omolabi (1987), the coefficient reliability for both STAI 1 and STAI 2 were found to be .61 and .86 respectively. Convergent coefficient reliability for STAI 1 was shown to be .69, .43 for both male and female respectively; while that of STAI 2 was .35, .51 for both male and female. Also, cut off norm for Nigerian males and females for both STAI 1 and STAI 2 were shown to be 33.59 and 33.54 respectively.

Procedure

The researchers obtained permission from the Research and Ethics Board of Alex-Ekwueme Federal University Teaching Hospital Abaakliki. The researchers introduced themselves through the informed consent form that the participants read and signed before participating in the study, and which indicated that they accept to participate in the study. Afterwards, the researcher administered the questionnaires to the participants in the various departments of the hospital. The administration of the questionnaire was done with the help of research assistants, who were trained on the modes of administering the questionnaire. Participants who agreed to participate were assured that their responses will be treated with utmost confidentiality and that participation in the study is voluntary. The questionnaires were collected back after the participants had filled them correctly. Out of 260 questionnaires that were administered to the participants, returned questionnaires were utilized. The questionnaires were cross checked for abnormalities before subjecting them for data analysis. Two hundred and fifty-four completed questionnaires found to be free from abnormalities were used for data analysis. Participants were debriefed on the idea behind the study, and equally

thanked for been part of the research, and for contributing to knowledge.

Multiple regression. Statistical package for the Social Sciences (SPSS) version 25 was employed in the data analyses.

Design/statistics

The design of the study is cross sectional design. Analysis of data was done using Hierarchical

Results

The results of the findings of this study are presented in this chapter. Before analysis, data was cross checked for abnormalities and none was found. The descriptive statistics and correlations of the variables are shown in Table 1. The regression results for covid-19 related fear, anxiety, and demotivation predicting organizational commitment is shown in Table 2, while the summary of the findings followed.

Table 1: Means, standard deviations, and correlations among the study variables

Variable	M	SD	1	2	3	4	5	6	7	8	9
Age	1.35	.51	-								
Gender	1.55	.50	-.21*	-							
Marital Status	1.53	.50	-.61***	-.01	-						
Rank	3.48	2.11	.11	-.43***	-.07	-					
Educational Status	2.76	.75	.55***	.07	-.56***	-.12	-				
Years on the Job	5.20	3.22	.86***	-.15	-.60***	.60	.58***	-			
Covi-19 Fear	21.42	3.02	.28**	.01	-.24*	.12	.18	.26**	-		
Anxiety	37.46	7.49	.15	-.13	-.16	.09	.11	.09	.31**	-	
Demotivation	34.33	5.43	.12	-.11	-.14	.07	.13	.11	.30**	.35*	-
Work Engagement	63.59	10.39	-.24*	-.02	-.24*	-.27**	.18	.32**	-.63***	-.41***	-.23**

Note: *** $P < .001$; ** $P < .01$; * $P < .05$

Mean and standard deviation were computed for the data collected from the participants. Result of correlation indicated that age ($r = -.24$, $p < .05$), rank ($r = -.27$, $p < .01$), years on the job ($r = -.32$, $p < .01$), covid-19 fear ($r = -.63$, $p < .001$), anxiety ($r = -.41$, $p < .001$), and demotivation ($r = -.23$, $p < .01$) all had negative significant relationship with organizational commitment among health workers; similarly marital status ($r = -.24$, $p < .05$), had negative significant relationship with organizational commitment among health workers. Age was significantly related to gender ($r = -.21$, $p < .05$), marital status ($r = -.61$, $p < .001$), educational status ($r = .55$, $p < .001$), years on the job ($r = .86$, $p < .001$), and covid-19 fear ($r = .28$, $p < .01$). Gender was significantly related to rank ($r = -.43$, $p < .001$). Marital status was significantly related to educational status ($r = -.56$, $p < .001$), years on the job ($r = -.60$, $p < .001$), and covid-19 fear ($r = -.24$, $p < .05$). Years on the job was significantly related to covid-19 fear ($r = .26$, $p < .01$). Educational status was significantly related to years on the job ($r = .58$, $p < .001$). Covid-19 related fear was significantly related to anxiety ($r = .31$, $p < .01$), and demotivation ($r = .30$, $p < .01$). Anxiety was significantly related to demotivation ($r = .30$, $p < .01$).

Table 2: Hierarchical multiple regression predicting organizational commitment from Covid-19 related fear, anxiety and demotivation.

	R	R²	R²Δ	B	Beta(β)	T
Step 1	.20	.12	.20			
Age				-2.90	-.14	-.60
Gender				3.87	.19	1.39
Marital Status				-1.05	-.05	-.32
Rank				-1.60**	-.33**	-2.47**
Educational Status				.40	.03	.19
Years on the job				1.28	.40	1.70
Step 2						
Covid-19 Fear	-.49	-.43	-.29	-1.96***	-.57***	-5.75***
Step 3						
Anxiety	-.55	-.49	-.06	-.37**	-.27**	-2.79**
Step 3						
Demotivation	-.56	-.51	-.09	-.19***	-.54***	-4.45***

Note: *** $P < .001$; ** $P < .01$; * $P < .05$

Result of Hierarchical multiple regression analysis showed that amongst the demographic variables only rank ($\beta = .33, p < .01$), positively significantly predicted organizational commitment among health workers, while age, gender, marital status, educational status, and years on the job were not significant predictors of organizational commitment among health workers. Covid-19 related fear was included in step 2 of the equation; and it negatively significantly predicted organizational commitment among health workers ($\beta = -.57, p < .001$). The finding implies that the more workers express fear, the less they are committed to their organization. The entry of anxiety in step 3 of the equation added statistically negative significant variance as a predictor of organizational commitment among health workers ($\beta = -.27, p < .01$). Increase in anxiety tends to decrease organizational commitment among health workers, as they fear risking their lives that is not protected. Demotivation was added in step 4 of the equation and it added statistically negative significant variance as a predictor of organizational commitment among health workers ($\beta = -.54, p < .001$). Therefore, the more health workers are unmotivated they more they tend to decrease their organizational commitment.

Discussion

The study examined covid-19 related fear, anxiety and attendant demotivation as threats to organizational commitment among health care workers. As expected, the results from the Hierarchical Regression analyses revealed that covid-19 related fear was a significant negative predictor of organizational commitment among health workers, thus the first hypothesis was confirmed. The period of covid-19 peak brought a lot of fear on the people especially health care workers, as people struggle not to lose their lives. This is so because our health institutions are in deplorable state. Even though some studies may found contrary results, such as Inness et al. (2020) who found that fear of covid-19 did not stop health care workers from committing to their organizations, however previous literature (e.g., Clarke, 2021; Lu & Yang, 2020; Mullen et al., 2021) found that covid-19 related fears was associated with low organizational commitment. Based on this finding, covid-19 fear was high because our government did not make serious adequate plan to save the masses and the health workers cannot do much without good support from government. Therefore, the fear that came with it makes them to seek out ways of saving themselves since our leaders are not thinking and problem-solving oriented, as well as shows no genuine interest for their well-being and contributions, then they are more likely to show less organizational commitment. This can further be explained on the grounds that fear breeds in a lot of challenges and difficulties in our lives, society and environment. Hence, it can hamper employee's ability to promote organizational commitment.

The finding of the study also showed that anxiety is a negative significant predictor of organizational commitment among health care workers. Thus, workers exposed to high level of anxiety appears to engage less in organizational commitment. Also, anxiety proves to be implicated in making some workers see no need to engage more in promoting their organization. This finding confirmed the second hypothesis that anxiety will negatively significantly predict organizational commitment among health workers. The finding is consistent with extant finding by Salajegheh, Sheikhy, and Askaripoor (2021) who reported that anxiety correlated with organizational commitment, stress at work, and control at work. Similarly, the finding is consistent with previous studies (e.g., Tims & Akkermans 2021; Zhou, Lu, Liu, Zhang, & Chen 2020; Li, Guan, Chang, & Zhang

2021) that the organizational commitment was stronger for health workers who experience low anxiety at work place. More so, anxiety negates positive evaluations about one's self and the absence of it is found to contribute to the experience of pleasant affective states, which in turn yielded desirable organizational commitment.

One of the main theories about social anxiety asserts that social anxiety is related to overestimating the negative aspects of social interactions, and underestimating the positive aspects (Huppert, Roth, & Foa, 2003). Individuals with social anxiety tend to overestimate the threat of social interactions, the likelihood of negative outcomes, and the consequences of negative outcomes. Individuals with social anxiety also tend to underestimate their ability to handle social interactions. One popular treatment for social anxiety targets these patterns of thinking, and also encourages individuals with social anxiety to practice engaging in social interactions. One theory about social anxiety is that patterns of thoughts and beliefs play an important role in social anxiety, and targeting these thoughts and beliefs can be a helpful way to treat it (Huppert, Roth, & Foa, 2003).

The finding of the study equally showed that demotivation is a negative significant predictor of organizational commitment among health care workers. Thus, unmotivated workers engage less in organizational commitment. Also, motivation is well known to play huge role in improving working conditions and in making some workers see need to engage more in promoting their organization; hence, any lack of motivation breeds opposite and hampers negatively on the organization. This finding confirmed the third hypothesis that demotivation will negatively significantly predict organizational commitment among health workers. The finding is consistent with extant finding by Bengt Larsson, Ylva Ulfssdotter Eriksson¹, and Petra Adolfsson (2021) who reported that demotivation was negatively correlated with organizational commitment at work. Similarly, the finding is consistent with previous studies (e.g., Rastegar, Akbarzadeh, and Heidari 2012) that the organizational commitment was stronger for health workers who are motivated. More so, demotivation makes workers unhappy, lack courage and will to do their job effectively. Hence, there is huge need to motivate workers in order to maximize organizational goals, as employees remain the key drivers of every organization.

SDT focuses on the “nature” of motivation, that is, the “why of behaviour.” The underlying assumption is that “human beings are active, growth-oriented organisms who are naturally inclined toward integration of their psychic elements into a unified sense of self and integration of themselves into larger social structures” (Deci & Ryan, 2000, p. 229). Although psychological growth and integration tendencies are natural, they are susceptible to social and environmental conditions which can either support propensities for self-determination or disrupt them (Ryan & Deci, 2002).

Implication of the Study

This study has some practical implications. For example, covid-19 related fear was a negatively significant predictor of organizational commitment among health workers. The practical implication for this nascent finding is that workers with high level fear following covid-19 impacts exhibit less organizational commitment as their safety is not assured. To achieve potential aims of most institutions/organizations especially in terms of employees been committed, the working environment need to be supportive such that it is free from fears. Interestingly, giving conducive opportunities to workers will get them committed to the health institution; and enable them introduce a lot of diverse innovations in the institution as they will feel free to utilize their talents.

There are other several essential implications resulting from the present study. One of such is that anxiety hampers a lot on the way employees commit to their organization. Anxiety builds fear, low self-confidence, low self-esteem and evaluation in employees thereby reducing their ability to achieve more success. Anxiety can negatively turn health workers who are supposed to be ensuring effectiveness of our health institutions into patients, and as such helpers and ineffective in discharging their duty. It can build despair, hence, perceiving their job as worthless other than a good opportunity to contribute to society.

Demotivation negatively impact the way health workers are committed to their jobs. Generally, it is a well-known fact that unmotivated person or situation breeds discomfort, unfriendliness, challenges and negativity. Therefore, it is important for health institutions to encourage motivation of different kinds as it helps to accomplish considerable number of interpersonal and organizational objectives, including motivating employees to take further steps

to make the work milieu safe. Thus, it should be emphasized practically when achieving organizational goals, including commitment as the target. Organizations should introduce opportunities that build motivation so as to achieve organizational goals and maintain good commitment on the part of employees.

Limitations of the Study

This research work is not without limitations. The sample size for this study was limited. Larger sample size may be necessary to allow for more generalization and possible conclusions. Another limitation is the choice of using only one health institution out of numerous health institutions in the South East. Although the study targeted at public institution health workers as participants of interest for the study; the use of workers of other private institutions from other locations especially other regions of the country may be efficient. The researcher also encountered difficulties obtaining permission and accessing the workers because of their busy schedules. The study used cross-sectional study which possesses all the inherent weakness of this kind of study.

In view of these limitations given above, the researcher makes the following recommendations. (1) Future researchers interested in organizational commitment should look at other variables like resilience, personality type, religious orientation, ethnic group, gender, and Social support as factors linking organizational commitment.

(2) The inclusion of larger sample size is necessary to give room for more generalization and conclusion.

(3) Samples sizes involving public institutions of other geographical regions in Nigeria can be used for better generalization of findings. Longitudinal study may be adopted.

Conclusion

This study sheds further light on the importance of organizational commitment in realizing the dreams of our society work environment. In spite of the limitations of the present study, the findings provide valuable guidance for researchers and practitioners trying to identify ways through which they can commitment on the part of organizations among healthcare institutions/workers. These findings can thus help organizations to better manage the dynamic interplay of leader behaviours in affecting employees' safety compliance. It is shown that COVID fear as well as anxiety and demotivation negatively impacted organizational commitment of

employees in health sectors which is harmful to the general public. Health facility managers need to brace up in other to achieve quality health systems for our country.

References

- Adhikari, B., Ozaki, A., Marahatta, S. B., Rijal, K. R., & Mishra, S. R. (2020). Earthquake rebuilding and response to COVID-19 in Nepal, a country nestled in multiple crises. *Journal of Glob Health*, 10, 020367. pmid:33110561
- Ahorsu, D. K., Lin, C-Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 1. pmid:32226353
- Alnazly, E., Khraisat, O. M., Al-Bashaireh, A. M., & Bryant, C. L. (2021). Anxiety, depression, stress, fear and social support during COVID-19 pandemic among Jordanian healthcare workers. *PLoS One*, 16, e0247679.
- American Society of Health-System Pharmacists. (2003). ASHP guidelines on the recruitment, selection, and retention of pharmacy personnel. *American Journal of Health-System Pharmacy*, 60, 587-93.
- Bhattarai, S., Dhungana, J., Ensor, T., & Shrestha, U. B. (2020). Assessment of service availability and infection prevention measures in hospitals of Nepal during the transition phase of COVID-19 case surge.
- Bonenberger, M., Aikins, M., Akweongo, P., & Kaspar, W. (2014). The effects of health worker motivation and job satisfaction on turnover intention in Ghana: a cross-sectional study." *Human Resources Health* 12(43), 10-1186.
- Bursac, Z., Gauss, C. H., Williams, D. K., & Hosmer, D. W. (2008). Purposeful selection of variables in logistic regression. *Source Code for Biology and Medicine*, 3, 17. pmid:19087314
- Cankurtaran, D., Tezel, N., Ercan, B., Yildiz, S. Y., & Akyuz, E. U. (2021). The effects of COVID-19 fear and anxiety on symptom severity, sleep quality, and mood in patients with fibromyalgia: a pilot study. *Advanced Rheumatol*, 61(1), 41. doi: 10.1186/s42358-021-00200-9.
- Chong, M. Y., Wang, W. C., Hsieh, W. C., Lee, C. Y., Chiu, N. M., Yeh, W. C., et al. (2004). Psychological impact of severe acute respiratory syndrome on health workers in a tertiary hospital. *British Journal of Psychiatry*, 185, 127–133.
- Deussom, R., & Jaskiewicz, W. (2014). Using evidence for human resources for health decision-making: An example from Uganda on health workforce recruitment and retention.
- Deussom, Rachel, Wanda Jaskiewicz, Sarah Dwyer, and Kate Tulenko. (2012). Holding Health Workers Accountable: Governance Approaches to Reducing Absenteeism. Technical Brief 3 (2012).
- Dieleman, M., & Jan-Willem, H. (2006). Improving health worker performance: In search of promising practices. Geneva: World Health Organization.
- Ditlopo, P., Duane, B., Laetitia, C. R., Steve T., & Posy, B. (2013). Policy implementation and financial incentives for nurses in South Africa: a case study on the occupation-specific dispensation." *Global health action* 6 (2013).
- Doshi, D., Karunakar, P., Sukhabogi, J. R., Prasanna, J. S., & Mahajan, S. V. (2020). Assessing Coronavirus Fear in Indian Population Using the Fear of COVID-19 Scale. *International Journal of Mental Health Addict*, 1–9.
- Engeda, Eshetu Haileselassie, Anteneh Messele Birhanu, and Kefyalew Addis Alene. "Intent to stay in the nursing profession and associated factors among nurses working in Amhara Regional State Referral Hospitals, Ethiopia." *BMC nursing* 13, no. 1 (2014): 24.
- Franco, Lynne Miller, Sara Bennett, and Ruth Kanfer. "Health sector reform and public sector health worker motivation: a conceptual framework." *Social science & medicine* 54, no. 8 (2002): 1255-1266.
- Garcia R. Neurobiology of fear and specific phobias. *Learn Mem*. 2017;24: 462–471. pmid:28814472
- Global Health Security Index. In: The Nuclear Threat Initiative [Internet]. [cited 29 Oct 2021]. Available: <https://www.nti.org/about/programs-projects/project/global-health-security-index/>

- Hashemi SGS, Hosseinneshad S, Dini S, Griffiths MD, Lin C.-Y, Pakpour AH. The mediating effect of the cyberchondria and anxiety sensitivity in the association between problematic internet use, metacognition beliefs, and fear of COVID-19 among Iranian online population. *Heliyon*. 2020; 6: e05135. <https://doi.org/10.1016/j.heliyon.2020.e05135>
- Henderson, Lyn N., and Jim Tulloch. "Incentives for retaining and motivating health workers in Pacific and Asian countries." *Human resources for health* 6, no. 1 (2008): 18.
- Joint Learning Initiative. "Human Resources for Health: Overcoming the Crisis." Cambridge (MA): Harvard University Press; 2004.
- Jokic-Begic N, Lauri Korajlija A, Mikac U. Cyberchondria in the age of COVID-19. *PloS One*. 2020; 15 (12): e0243704. <https://doi.org/10.1371/journal.pone.0243704>.
- Kang L, Li Y, Hu S, Chen M, Yang C, Yang BX, et al. The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *Lancet Psychiatry*. 2020;7: e14.
- Khanal P, Devkota N, Dahal M, Paudel K, Joshi D. Mental health impacts among health workers during COVID-19 in a low resource setting: a cross-sectional survey from Nepal. *Globalization and Health*. 2020;16: 89. [pmid:32977818](https://doi.org/10.1016/j.glo.2020.1000083)
- Khanal P, Paudel K, Devkota N, Dahal M, Mishra SR, Joshi D (2021) Corona virus fear among health workers during the early phase of pandemic response in Nepal: A web-based crosssectional study. *PLOS Glob Public Health* 1(12): e0000083. <https://doi.org/10.1371/journal.pglph.0000083>.
- Kotzee, T. J., and I. D. Couper. "What interventions do South African qualified doctors think will retain them in rural hospitals of the Limpopo province of South Africa." *Rural Remote Health* 6, no. 3 (2006): 581.
- Kumar J, Katto MS, Siddiqui AA, Sahito B, Ahmed B, Jamil M, et al. Predictive Factors Associated With Fear Faced by Healthcare Workers During COVID-19 Pandemic: A Questionnaire-Based Study. *Cureus*. 12: e9741. [pmid:32944456](https://doi.org/10.7755/cureus.9741)
- Laato S, Najmul Islam AKM, Nazrul Islam M, Whelan E. What drives unverified information sharing and cyberchondria during the COVID-19 pandemic? *Eur J Inf Syst*. 2020; 29(3): 288–305. <https://doi.org/10.1080/0960085X.2020.1770632>.
- Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Netw Open*. 2020;3: e203976. [pmid:32202646](https://doi.org/10.1001/jama.2020.10000)
- Luoma, Marc. "Increasing the Motivation of Health-care Workers." *Capacity Project Technical Brief* 7 (2006).
- Maben J, Bridges J. Covid-19: Supporting nurses' psychological and mental health. *J Clin Nurs*. 2020;29: 2742–2750. [pmid:32320509](https://doi.org/10.1111/jocn.15000)
- Maftei A, Holman AC. Cyberchondria during the coronavirus pandemic: The effects of neuroticism and optimism. *Front Psychol*. 2020; 11: 567345. <https://doi.org/10.3389/fpsyg.2020.567345> PMID: 33192848.
- Maliselo, Tino, and Rita, Magawa. 2013. Retaining doctors in rural Zambia: A policy issue.
- Manongi, Rachel N., Tanya C. Marchant, and Ib Christian Bygbjerg. "Improving motivation among primary health care workers in Tanzania: a health worker perspective." *Human resources for health* 4, no. 1 (2006): 6.
- Mathauer, Inke, and Ingo Imhoff. "Health worker motivation in Africa: the role of non-financial incentives and human resource management tools." *Human resources for health* 4, no. 1 (2006): 24.
- Maunder RG, Lancee WJ, Rourke S, Hunter JJ, Goldbloom D, Balderson K, et al. Factors associated with the psychological impact of severe acute respiratory syndrome on nurses and other hospital workers in Toronto. *Psychosom Med*. 2004;66: 938–942. [pmid:15564361](https://doi.org/10.1093/psom/kkz001)
- McMullan RD, Berle D, Arna'ez S, Starčević V. The relationships between health anxiety, online health information seeking, and cyberchondria: Systematic review and meta-analysis. *J Affect Disord*. 2019; 245: 270–278. <https://doi.org/10.1016/j.jad.2018.11.037> PMID: 30419526
- Nikčević AV, Marino C, Kolubinski DC, Leach D, Spada MM. Modelling the contribution of the Big Five personality traits, health anxiety, and COVID-19 psychological distress to

- generalised anxiety and depressive symptoms during the COVID-19 pandemic. *J Affect Disord.* 2021; 279: 578–584. <https://doi.org/10.1016/j.jad.2020.10.053> PMID: 33152562.
- Oniszczenko W (2021) Anxious temperament and cyberchondria as mediated by fear of COVID-19 infection: A cross-sectional study. *PLoS ONE* 16(8): e0255750. <https://doi.org/10.1371/journal.pone.0255750>
- Oniszczenko W, Stanisławiak E. Five Factor Personality Model versus affective temperaments: A study in a nonclinical Polish sample. *Curr Issues Personal Psychol.* 2019; 7: 15–23. <https://doi.org/10.5114/cipp.2019.82751>. *PLOS ONE Affective temperaments, cyberchondria, COVID-19* | *PLOS ONE* | <https://doi.org/10.1371/journal.pone.0255750> August 5, 2021 9 / 10
- Ouellet C, Langlois F, Provencher MD, Gosselin P. Intolerance of uncertainty and difficulties in emotion regulation: Proposal for an integrative model of generalized anxiety disorder. *Eur Rev Appl Psychol.* 2019; 69(1): 9–18. <https://doi.org/10.1016/j.erap.2019.01.001>.
- Paudel K, Bhandari P, Joshi YP. Situation analysis of novel Coronavirus (2019-nCoV) cases in Nepal. *Applied Science and Technology Annals.* 2020;1: 9–14.
- Person B, Sy F, Holton K, Govert B, Liang A, Garza B, et al. Fear and Stigma: The Epidemic within the SARS Outbreak. *Emerg Infect Dis.* 2004;10: 358–363. PMID:15030713
- Reardon S. Ebola's mental-health wounds linger in Africa. *Nature.* 2015;519: 13–14. PMID:25739606
- Reznik A, Gritsenko V, Konstantinov V, Khamenka N, Isralowitz R. COVID-19 Fear in Eastern Europe: Validation of the Fear of COVID-19 Scale. *Int J Ment Health Addict.* 2020; 1–6. PMID:32406404
- Rowe, Alexander K., Don de Savigny, Claudio F. Lanata, and Cesar G. Victora. "How can we achieve and maintain high-quality performance of health workers in low-resource settings?." *The Lancet* 366, no. 9490 (2005): 1026-1035.
- Sakib N, Bhuiyan AKMI, Hossain S, Al Mamun F, Hosen I, Abdullah AH, et al. Psychometric Validation of the Bangla Fear of COVID-19 Scale: Confirmatory Factor Analysis and Rasch Analysis. *Int J Ment Health Addict.* 2020; 1–12. PMID:32395096
- Satici B, Gocet-Tekin E, Deniz ME, Satici SA. Adaptation of the Fear of COVID-19 Scale: Its Association with Psychological Distress and Life Satisfaction in Turkey. *Int J Ment Health Addict.* 2020; 1–9. PMID:32395095
- Shanafelt T, Ripp J, Trockel M. Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic. *JAMA.* 2020;323: 2133–2134.
- Shin LM, Liberzon I. The Neurocircuitry of Fear, Stress, and Anxiety Disorders. *Neuropsychopharmacol.* 2010;35: 169–191. PMID:19625997
- Shrestha N, Mishra SR, Ghimire S, Gyawali B, Marahatta SB, Maskey S, et al. Health System Preparedness for COVID-19 and Its Impacts on Frontline Health-Care Workers in Nepal: A Qualitative Study Among Frontline Health-Care Workers and Policy-Makers. *Disaster Med Public Health Prep.*: 1–9. PMID:34140051
- Shrestha R, Shrestha S, Khanal P, Kc B. Nepal's first case of COVID-19 and public health response. *J Travel Med.* 2020;27: taaa024. PMID:32104884
- Singh DR, Sunuwar DR, Shah SK, Karki K, Sah LK, Adhikari B, et al. Impact of COVID-19 on health services utilization in Province-2 of Nepal: a qualitative study among community members and stakeholders. *BMC Health Services Research.* 2021;21: 174. PMID:33627115
- Soraci P, Ferrari A, Abbiati FA, Del Fante E, De Pace R, Urso A, et al. Validation and Psychometric Evaluation of the Italian Version of the Fear of COVID-19 Scale. *Int J Ment Health Addict.* 2020; 1–10. PMID:32372892
- Ssengooba, Freddie, Syed Azizur Rahman, Charles Hongoro, Elizeus Rutebemberwa, Ahmed Mustafa, Tara Kielmann, and Barbara McPake. "Health sector reforms and human resources for health in Uganda and Bangladesh: mechanisms of effect." *Human Resources for Health* 5, no. 1 (2007): 3.

- Starčević V, Baggio S, Berle D, Khazaal Y, Viswasam K. Cyberchondria and its relationships with related constructs: A network analysis. *Psychiatr Q*. 2019; 90(3): 491–505. <https://doi.org/10.1007/s11126-019-09640-5> PMID: 31098922.
- Starčević V, Berle D, Arna'ez S. Recent insights into cyberchondria. *Curr Psychiatry Rep*. 2020; 22: 56. <https://doi.org/10.1007/s11920-020-01179-8> PMID: 32852626.
- Starčević V, Berle D. Cyberchondria: Towards a better understanding of excessive health-related Internet use. *Expert Rev Neurother*. 2013; 13(2): 205–213. <https://doi.org/10.1586/ern.12.162> PMID: 23368807.
- Starčević V, Schimmenti A, Billieux J, Berle D. Cyberchondria in the time of the COVID-19 pandemic. *Hum Behav Emerg Technol* (2020). <https://doi.org/10.1002/hbe2.233> PMID: 33363277.
- The Capacity Project. 2009. "What about the health workers?" Improving the work climate at rural facilities in Kenya. Voices from the Capacity Project, no. 27. Chapel Hill, NC: The Capacity Project.
- Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. *Int J Soc Psychiatry*. 2020;66: 317–320. pmid:32233719
- Tucci V, Moukaddam N, Meadows J, Shah S, Galwankar SC, Kapur GB. The Forgotten Plague: Psychiatric Manifestations of Ebola, Zika, and Emerging Infectious Diseases. *J Glob Infect Dis*. 2017;9: 151–156. pmid:29302150
- Tyrer P. COVID-19 health anxiety. *World Psychiatry*. 2020; 19(3): 307–308. <https://doi.org/10.1002/wps.20798> PMID: 32931105.
- Tzur Bitan D, Grossman-Giron A, Bloch Y, Mayer Y, Shiffman N, Mendlovic S. Fear of COVID-19 scale: Psychometric characteristics, reliability and validity in the Israeli population. *Psychiatry Res*. 2020;289: 113100. pmid:32425276
- Vujicic, Marko, and Pascal Zurn. "The dynamics of the health labour market." *The International journal of health planning and management* 21, no. 2 (2006): 101-115.
- Wang C, Tee M, Roy AE, Fardin MA, Srichokchatchawan W, Habib HA, et al. (2021) The impact of COVID-19 pandemic on physical and mental health of Asians: A study of seven middleincome countries in Asia. *PloS One*. 2021; 16(2): e0246824. <https://doi.org/10.1371/journal.pone.0246824> PMID: 33571297.
- Willis-Shattuck, Mischa, Posy Bidwell, Steve Thomas, Laura Wyness, Duane Blaauw, and Prudence Ditlopo. "Motivation and retention of health workers in developing countries: a systematic review." *BMC Health Services Research* 8, no. 1 (2008): 247.
- World Health Organization. "Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations." World Health Organization, 2010.
- World Health Organization. "The world health report: 2006: working together for health." (2006).
- Zangoulechi Z, Yousefi Z, Keshavarz N. The role of anxiety sensitivity, intolerance of uncertainty, and obsessive-compulsive symptoms in the prediction of cyberchondria. *Adv Biosci Clin Med*. 2018; 6: 1–6. <https://doi.org/10.7575/aiac.abcm.v.6n.1p.1> PMID: 29780691
- Zhu Z, Xu S, Wang H, Liu Z, Wu J, Li G, et al. COVID-19 in Wuhan: Sociodemographic characteristics and hospital support measures associated with the immediate psychological impact on healthcare workers. *EClinicalMedicine*. 2020;24. pmid:32766545.