

**ROLE OF SPIRITUALITY AND WELLNESS PRACTICES ON
COMPLIANCE WITH COVID-19 PANDEMIC PREVENTIVE
MEASURES AMONG HEALTHCARE WORKERS IN
OWERRI, NIGERIA**

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ABSTRACT: The study examined the role of spirituality and wellness practices on compliance with pandemic preventive measures among healthcare workers in Owerri, Imo State, Nigeria. Two hundred and fifty healthcare workers comprising 84 males and 166 females drawn from seven health centres in Owerri participated in the study. Their ages ranged from 23 to 49 years with a mean age of 29.71 years and a standard deviation of 6.02 years. Three instruments namely the Religious Affiliation Scale by Omoluabi (1995), the Wellness Inventory by Muokwe (2010), and the Compliance to Pandemic Commands Scale (COCOS) by Morales-vives, et al. (2021) were used. The study adopted a cross-sectional survey design while Hierarchical Multiple Regression was used for analysis. Two hypotheses were postulated and tested. Results revealed that higher levels of spirituality and engaging in wellness practices are substantial predictors of compliance with COVID-19 protocols. The study recommends that changes in health centres be made to prioritize spirituality and the practice of wellness among physicians, nurses, and other healthcare workers to avoid going through a circle of panic and neglect whenever there's a pandemic or sudden outbreak of diseases.

Keywords: Spirituality, Wellness Practices, COVID-19 Pandemic, Healthcare Workers, Owerri.

INTRODUCTION

A pandemic is an outbreak of infectious disease that occurs over a wide geographical area and that is highly prevalent, generally affecting a significant proportion of the world's population, usually over the course of several months (Piret, & Boivin, 2021). It's simply, a worldwide spread of a new disease. The outbreak of infectious diseases with a pandemic nature regularly occurs throughout history. Major pandemics and epidemics such as plague, cholera, flu, severe acute respiratory syndrome coronavirus (SARs CoV) and Middle East respiratory syndrome (MERs – CoV) have already afflicted humanity (Piret & Boivin, 2021, CDC, 2020). Thus, suggesting that COVID-19 is neither the first pandemic to emerge and likely will not be the last.

The emergence of coronavirus disease or SARs – CoV₂ caused by severe acute respiratory syndrome coronavirus was initially considered a pneumonia of unknown cause but was later declared a public health emergency of international concern on the 30 January, 2020 and eventually a pandemic on the 11 March, 2020 due to the alarming level of its spread and severity. (Ekong, Chukwu & Chukwu, 2020).

For health workers around the globe, the pandemic caused a heightened risk of occupational exposure as well as created the need to adapt to a new roles and responsibilities. Intense global mobilization of public health workers and social measures in health facilities and communities followed along with the introduction of clinical protocols in hospital settings. Amidst the pandemic, the world took urgent measures to strengthen and protect the occupational health and safety of health workers who were constantly exposed to series of work hazards including pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, stigma and physical and psychological violence. Consequently, COVID-19 brought to light the importance of Personal Protective Equipment (PPE) especially in the work place. Some key points towards the use of PPE were that COVID-19 is a disease transmitted by contacts and droplets from coughing and sneezing and PPE then served as an important part of a system to protect staff and other patients from contamination (Cok, 2020). Measures such as case finding, isolations, quarantines, travel restriction and promotion of individual protective behaviour such as hand washing, wearing of face masks, respiratory hygiene, avoidance of public gatherings and physical distancing were selected measures for the control of spread of COVID-19. Unfortunately, despite these measures to mitigate the spread of the virus, there were series of reports on the alarming level of infections and deaths of frontline health workers especially among the nurses. (Odikpo, Ezeke, Egbumiwe, Ilo, Obidife & Nwankwo, 2020). Across the globe, studies indicated 115,493 as estimated number of deaths due to COVID-19 among health workers. (WHO, 2021). In Nigeria precisely, Owhonda, et al. (2021) revealed that infections were mainly in women (71.6%) and in nurses (38.6%) while deaths were mainly in men (70%) and doctors (51.4%).

Despite these greater destructive consequences of COVID-19, non-compliances to preventive measures were also reported regardless of higher knowledge of pandemic among healthcare workers. (Nivette et al., 2020, Pollak et al., 2020). Precisely among health care professionals, research indicated that around one-fifth of the healthcare workers removed their face mask while talking to patients, four-fifth of them reused surgical mask and 44% incorrectly disposed face mask. (Odikpo, Ezike & Onyi, 2020).

In this regard, Alao, Durudola, Ibrahim and Asinobi (2020) indicated that poor compliance with preventive measures was among the prime causes of the increase in the rate of infection spread among health workers. However, Ilesanmi and Afolabi opined that the use of face mask and social distancing were more embraced compared to other preventive measures. While Olapegba et al. (2021) insisted that preventive measures such as hand washing, social distancing, restrictions on public gathering, and lockdown were halted thus leading to counter-productivity of other preventive measures during the last pandemic. Some previous studies on the factors contributing to COVID-19 compliance with preventive measures considered age, gender, personality traits, self-esteem, service years, and level of education. However, the present study aims to examine the role spirituality and wellness practices played on compliance with preventive measures during the last pandemic.

Generally, spirituality entails people's varying tendencies to commit themselves to religious belief, principles and activities. It is a state or quality of being dedicated to God, religion or spiritual things or values especially as contracted with material or temporal ones. (Koenig, Kings & Carson, 2020). Studies have shown that spirituality and religion have beneficial impacts on mental and physical health. Precisely, Del Castillo, Biani and Joaquin, (2020)

indicated that spirituality offers greater levels of well-being, satisfaction with life, hope and optimism as well as decreased rate of anxiety, depression, stress, and substance use among patients suffering/dealing with different diseases. Hence, it's inclusion in this study. On the other hand, spirituality could also be a hindrance to compliance as some zealous followers may decide to resort to only faith and prayers during an outbreak of disease.

Wellness practices being another variable of interest in this study is defined as an active process through which people become aware of themselves and make choices that help them live successfully, healthy and in a more balanced way. (Barman, 2016). It is simply an act of practicing healthy habits on a daily basis in order to attain a better physical and mental health outcome. It entails the absence of physical, psychological and religious illnesses (Horton & Synder, 2009). The national wellness institute promotes six dimensions of wellness as follows – emotional, occupational, physical, social, intellectual and spiritual.

Physical wellness is all about how one takes care of his/her body, mind, health and vitality. It requires a well-balanced diet, enough physical activity, exercise, proper weight maintenance, sleep, avoidance of risky sexual behaviour, limited exposure to environmental contaminations, and restricted intake of harmful substances. Emotional or mental wellness is concerned with the ability to understand one's own feelings, accept limitations, achieve emotional stability and become comfortable with one's own emotions. Spiritual wellness is concerned with how one integrates his/her belief and values in order to gain purpose, happiness and enrichment in life. The financial wellbeing deals with how one understands and handles money in ways that provides him for financial changes in life. Obviously as literatures display, health professionals commonly experience stress and burnout which greatly contribute to decrease in their quality of life (Al-Ghunaim, et al., 2021).

Historical parallels demonstrate that pandemic is inevitable and undoubtedly persistent to emerge. Unfortunately, the difficulties in understanding new waves virus strains scientific efforts to immediately develop drug and vaccines. Hence the essence of this study on social preventive measures in preparation for a hypothetical worst-case scenario.

Statement of the Problem

Viral diseases are persistent to emerge and as such denotes a serious issue to public health. In the preceding centuries, numerous viral epidemics such as severe acute respiratory syndrome coronavirus (SARS – CV) and Middle East respiratory syndrome coronavirus were identified in different periods. During our time, the World Health Organization (WHO) declared the outbreak of a disease due to a novel coronavirus, a public health emergency of international concern on 30th January, 2020. Due to its pandemic nature and lack of effective treatment then, WHO also devised a number of mitigation techniques to curb the spread of the virus. Staying at home, social distancing, wearing of face masks and practicing hand hygiene were some of the most frequently advised pandemic preventive measures. In general, such safeguards were thought to reduce COVID-19 transmission and in particular to protect those at the highest risk of several illness, such as the elderly, those with underlying medical conditions like diabetes and in particular, frontline health workers. Undoubtedly, then, healthcare sector became one of the most hit by the pandemic as those employed or contracted in it faced multiple hazards that affected their physical, psychological and social wellbeing.

Despite efforts invested by government to mitigate the spread, results from some studies. Indicated 115,493 as estimated number of deaths due to COVID-19 among health workers globally. (WHO, 2020). In Nigeria precisely, there were series of reports on the alarming level of infection and deaths of frontline health workers especially among nurses. (Odikpo, Ezike, Egbuniwe, Ilo, Obidefe & Nwankwo, 2020).

Overtime, the trajectory of disease pandemic has always undermined the belief that vaccination and antibodies would win the battle against emerging infectious diseases. This is because their scale of effects has never been anticipated, recognized, experienced, and estimated. Consequently, this difficulty in understanding new virus waves strains scientific efforts to immediately develop drugs and vaccines. As a result, social measures remain the veritable universal standard for curbing the rapid spread of emerging infectious diseases such as COVID-19.

While research is still growing on the factors that predicted compliance with preventive measures during the last pandemic, there's a need to continue such studies in developing countries where health sectors need more robust support from social measures. Moreover, preparing for a hypothetical worse scenario is also valuable as evidence suggests that the likelihood of a pandemic has increased over the past centuries because of increased global travel, integration, urbanization, changes in land use and greater exploitations of natural resources (Jones, 2008).

Hence, the study on the role spirituality and wellness practices played on compliance with COVID-19 preventive measures among Health workers during the past pandemic.

Purpose of the Study

The general purpose of the study is to investigate if spirituality and wellness practices will predict compliance with COVID-19 protocol among health workers in Imo state. Specifically, this study aims at investigating:

1. if spirituality will predict compliance with COVID-19 protocol among health workers in Imo state; and
2. if wellness practices will predict compliance with COVID-19 protocol among health workers in Imo State

Empirical Review

Obi, Obara and Simeon (2021) examined the impact of COVID-19 pandemic on the public healthcare sector of Nigeria. Using 60 healthcare practitioners drawn from across the country and content analysis for data analysis, the result revealed that the Nigerian public health sector's response to the outbreak of COVID-19 although commendable was grossly undermined because of the existing weak public healthcare system. It further revealed that the country's public health facilities provision is unable to meet the need for testing or diagnosis during the pandemic.

A descriptive institutionally based cross-sectional study was conducted by Zenbaba et al. (2021) to assess compliance toward infectious preventive measures. The study employed 660 healthcare professionals in public hospitals of South-East Ethiopia. Using ordinary logistic regression for data analysis, results revealed an overall good compliance and knowledge of health professionals regarding COVID-19 preventive measures. Moreso, working in general hospital, service years, knowledge and water availability were some of the factors found to have statistically significant associations with compliance among healthcare professionals regarding COVID-19 preventive measures.

Diego-Cordero, Anvila-Mantilla, Vega-Escano, Lucchetti and Badanta (2020) through an integrative review of literature examined the role of spirituality and religiosity in healthcare during the COVID-19 pandemic. Their findings revealed the importance of including spirituality in clinical practice for both patients and healthcare professionals. On one hand, spirituality was found to be a good coping strategy used by healthcare professionals to promote mental health and well-being during the pandemic. It also resulted in greater patient satisfaction with the care given. On the other, addressing the spiritual needs of individuals led to a reduction in stress, anxiety, depression and an increase in resilience and hope among patients.

Roga, Bekele and Gonta (2021) also conducted research to determine the level of compliance and its associated factors with COVID-19 preventive measures. Employing 380 participants and multivariate logistic regression model for analysis, the result indicated that participants aged between 18-30, with good knowledge, favourable attitude and good practice were 2.6, 4.5, 2.9, and 3.4 times respectively more adherent towards COVID-19 preventive measures than their counterparts.

Another study conducted by Ukono and Mbamalu (2021) examined the factors predicting adherence to COVID-19 containment measures in selected Nigerian communities (Enugu, Lagos and Federal Capital Territory, Abuja). Multiple regression and descriptive statistics were used to estimate the influence of social factors (religion, family, friends), demographic characteristics (age, residential area, gender) and credibility factors (perceived trust, ease of adherence) on attitude toward media messages and social measures on COVID-19 preventive guidelines. Results showed that age, gender, marital status, type of street, education and state of residence have significant influence on adherence to COVID-19 messages. While age and gender positively correlated with credibility assessment, type of street was negatively associated with credibility assessment of COVID-19 messages. Social factors remove associated with credibility assessment of COVID-19 message social factor specifically have more predictive influence on adherence to COVID-19 messages than credibility assessment of COVID-19 messages.

Hypotheses

1. Spirituality will not significantly predict compliance with COVID-19 protocols among health workers in Imo state.
2. Wellness practices will not significantly predict compliance with COVID-19 protocols among health workers in Imo state.

METHOD

Participants

A total number of two hundred and fifty participants were used for this study. Participants were drawn from the Federal Medical Centre, Owerri, Holy Rosary Hospital, Emekuku, Vaden Specialist Hospital, World Bank, Owerri, St. John Leonardi Clinic, Amakohia, Graviola Hospital, Amakohia, Silver Spring Eye Care, Ikenegbu, and Orchard Pharmacy, Ikenegbu, using a convenience sampling technique. The participants were made up of 84 males and 116 females with ages ranging from 23 to 49 years (Mean = 29.71; SD = 6.018).

Instruments

Three instruments were used in this study; the Religious Affiliation Scale (RAS) by Omoluabi, (1995), the Wellness Inventory (WI) by Moukwe (2010) and the Compliance to Pandemic Commands Scale (COCOS) by Morales-Vives, et al. (2022).

The Religious Affiliation Scale by P.F Omoluabi (1995) is a 21-item inventory is designed to measure the extent to which individual clients engage in religious activities, hold strong religious views, and believe in prescribed religious practices. The RAS is rated on a True or False format. Omoluabi (1995) reported a reliability coefficient of .97 while Erinoso(1996) obtained a validity coefficient of .26 for the scale.

The Wellness Inventory (WI) was developed and validated in Nigeria by Muokwe (2010). WI is a 22-item inventory designed to measure three dimensions of wellness practices; physical, religious and emotional wellness. Each item is rated on a 5-point scale of 1(strongly disagree) to 5(strongly agree) response format. Muokwe (2010) obtained a Cronbach's alpha reliability of .75 and a Spearman-Brown reliability of .85 for the overall WI. A concurrent validity coefficient of .47 was also obtained by Muokwe (2010). A Cronbach's alpha of .87 was obtained was also obtained after a pilot study by the researcher.

Compliance to Pandemic Commands Scale (COCOS) was developed in Spain by Morales-Vives, Duenas, Ferrand, Vigil-Colect and Veraba (2022). COCOS is a 27-item inventory designed to measure compliance with preventive measures of COVID-19. The items are rated on a 5-point Likert format. Items 2, 4, 7, 10, 13, 14, 16, 19, 20, 22, 23, 24, 26, 27 are reverse scored. The 27-items of COCOS were subjected to a pilot among 40 participants comprising 22 males and 18 females (M=29.03, SD=5.81) to ascertain its reliability and internal consistency among Nigerian samples. Only 13 items (items 1, 5, 6, 8, 15, 16, 17, 18, 19, 21, 23, 25, and 27) of the scale yielded corrected-items total of .32 and above and were used for the study.

Procedure

The study commenced with the researcher securing formal authorization from the management of the chosen healthcare centers. The researcher then implemented a purposive sampling method for participant selection, preceded by an introduction to the study, a detailed

explanation of its purpose, and the solicitation and acquisition of participants' consent while adhering to established protocols. Participants who expressed willingness to partake in the study were explicitly guaranteed the confidentiality of their responses. To align with the selection criteria, participants needed to demonstrate a minimum of six years of service, signifying their professional tenure throughout the COVID-19 pandemic.

Design and Statistics

The design used for this study was a cross-sectional survey design while Hierarchical Multiple Regression Analysis was used for data analyses.

RESULTS

Table 1: Zero-Order Correlations of the Key Variables Used in the Study

	COVID-19 Protocol	Age	Gender	Spirituality	Wellness
COVID-19 Protocol	1	-.420**	.137*	.216**	.414**
Age		1	.155*	.033	-.018
Gender			1	.058	.257**
Spirituality				1	-.109
Wellness					1

Note: $N = 250$, *. Correlation is significant at the 0.05 level (2-tailed), **. Correlation is significant at the 0.01 level (2-tailed).

The outcomes of the study are detailed in Table 1, illustrating zero-order correlations among the key variables under investigation. The variables include COVID-19 Protocol, age, gender, spirituality, and wellness. Notably, the correlation analysis, conducted with a sample size (N) of 250, revealed significant associations among the variables.

Specifically, a substantial negative correlation was observed between age and adherence to COVID-19 protocols ($r = -.420$, $n = 250$, $p < .01$). Conversely, positive correlations were identified between gender and adherence to COVID-19 protocols ($r = .137$, $n = 250$, $p < .05$), spirituality and adherence to COVID-19 protocols ($r = .216$, $n = 250$, $p < .05$), and wellness and adherence to COVID-19 protocols ($r = .414$, $n = 250$, $p < .01$). Additionally, a noteworthy positive correlation was established between wellness and gender ($r = .257$, $n = 250$, $p < .01$).

Table 2: Summary of Hierarchical Multiple Regression Analyses for COVID-19 Protocol on Spirituality and Wellness Practices.

Predictors	<i>Step 1 β</i>	<i>Step 2 β</i>
<i>Step 1</i>		
Spirituality	.216**	.258**
<i>Step 2</i>		
Wellness Practices		.439**
ΔF	12.04**	61.047**
R^2	.047**	.238**
ΔR^2	.047*	.191
<i>Df</i>	1, 245	2, 244
<i>Dublin Watson</i>	2.43	

Note: $N = 250$

Table 2 provides a comprehensive overview of the hierarchical multiple regression analyses conducted to assess the influence of Spirituality and Wellness Practices on COVID-19 Protocol compliance. The analysis involved two steps, with Spirituality as the predictor in Step 1 and the addition of Wellness Practices in Step 2.

In Step 1, Spirituality demonstrated a significant positive relationship with COVID-19 Protocol compliance ($\beta = .216^{**}$, $p < .05$), explaining 4.7% of the variance in compliance ($R^2 = .047$, $F(1, 245) = 12.04$, $p < .05$). This result supports the rejection of Hypothesis 1, indicating that higher levels of spirituality are associated with increased compliance with COVID-19 protocols.

Moving to Step 2, the inclusion of Wellness Practices significantly improved the model, explaining an additional 19.1% of the variance in COVID-19 Protocol compliance ($R^2 = .238$, $F(2, 244) = 61.047$, $p < .05$). Wellness Practices emerged as a significant positive predictor of COVID-19 Protocol compliance ($\beta = .439^{**}$, $p < .05$, $t = 7.81$). This result led to the rejection of the second null hypothesis, highlighting that engaging in wellness practices is a substantial predictor of compliance with COVID-19 protocols.

The overall model, encompassing both Spirituality and Wellness Practices, elucidated that 23.8% of the variation in COVID-19 Protocol compliance could be explained. The Durbin-Watson statistic of 2.43 fell within the accepted range ($1.5 < D < 2.5$), affirming the absence of autocorrelation in the data and attesting to the independence of the error term

DISCUSSION

Ensuring compliance with infection preventive practices is imperative for mitigating the transmission of infections, especially during pandemics or outbreaks of new diseases. This study sought to explore the influence of spirituality and wellness practices on the compliance of healthcare workers in Owerri with pandemic preventive measures during the latest global health crisis.

A notable finding from this investigation is the substantial positive correlation between spirituality and compliance with pandemic preventive measures among healthcare workers. This suggests that individuals with elevated levels of spirituality are more likely to exhibit a heightened adherence to pandemic preventive measures. This aligns with the earlier observations of Ukona and Mbamalu (2020), highlighting the significant predictive influence of social factors, such as religion, family, and friends, on adherence to COVID-19 messages, surpassing the impact of the credibility assessment of these messages. Additionally, the findings resonate with Diego-Cordero et al. (2020), who identified spirituality as a valuable coping strategy employed by healthcare professionals to enhance mental health and overall well-being.

One plausible explanation for this correlation, as proposed by Diego-Cordero (2020), is that spirituality contributes to a heightened sense of well-being, life satisfaction, hope, optimism, resilience, and a reduced incidence of anxiety, depression, and substance misuse. In light of these outcomes, it is conceivable that spirituality aids individuals in coping more effectively with life disruptions, facilitating the adaptation to new roles and responsibilities, including compliance with preventive measures. Moreover, spirituality encompasses qualities such as humility, obedience, and submission to a sacred or divine being. Individuals who demonstrate obedience and submission to an unseen sacred entity may find it more natural to comply with visible leaders and their established rules and regulations, particularly if these directives are rooted in sacred texts like the Bible or Quran. Additionally, some individuals perceive their spiritual leaders as divinely appointed, fostering a readiness to obey and follow instructions accepted within their congregation.

Another noteworthy finding of this research underscores that wellness practices are a positive predictor of compliance with pandemic preventive measures among healthcare professionals. This implies that individuals who engage in higher levels of wellness practices are more likely to comply with pandemic preventive measures. This aligns with the conclusions drawn by Roga, Bekele, and Gonta (2021), whose research indicated that participants aged between 18 and 30, possessing good knowledge, favourable attitudes, and strong practices, were more inclined to exhibit robust compliance with COVID-19 preventive measures compared to their counterparts.

A plausible explanation for this finding may be rooted in the similarity between wellness practices and pandemic preventive measures. Healthcare workers who prioritize wellness through self-care may find pandemic preventive measures to be familiar, routine, and easily embraced. Evidently, preventive measures have become ingrained as a normal aspect of life within their healthcare setting, possibly diminishing the need for external enforcement for compliance.

Conclusion

This study underscores the essential roles played by spirituality and wellness practices in influencing the adherence of healthcare workers to pandemic preventive measures. The insights derived from this study contribute valuable perspectives to the ongoing discourse on strategies aimed at promoting compliance with critical public health measures during pandemics.

The study has effectively demonstrated that both spirituality and wellness practices serve as significant predictors of compliance with pandemic preventive measures. Based on these findings, it is imperative to advocate for the incorporation of sustainable lifestyles centred around spirituality and wellness practices within our healthcare centres, a recommendation that holds relevance not only during pandemics but also in the post-pandemic era.

Recommendations

Considering the documented efficacy of spirituality as a coping technique during challenging life circumstances and disasters, the management of the healthcare sector at a national level must proactively encourage and understand the spiritual needs of healthcare professionals, especially during critical moments like pandemics.

Anticipating an upcoming wave of pandemic-associated psychological distress, coupled with prevailing negative attitudes towards vaccines in many developing countries, it is crucial to prioritize wellness practices among physicians, nurses, and other healthcare workers who valiantly respond to the call of duty in times of the greatest need.

The Nigerian government should take the lead in facilitating comprehensive infection preventive measures in health centres. This includes ensuring adequate natural ventilation, functional handwashing facilities with running water, promoting frequent handwashing practices, and implementing disinfection protocols for examination tables and beds before and after each procedure. Tailored communication strategies aimed at increasing knowledge on wellness practices among healthcare practitioners and the general public are essential for safeguarding the lives of our invaluable healthcare workforce even beyond the current pandemic.

In addition, incorporating tutorials—whether visual or in-person—on the importance of stress management, nutrition, sleep health, and meditation into medical training programs is crucial. Such classes provide trainees with essential knowledge and self-care practices that can enhance their ability to navigate stress and cultivate resilience during sudden outbreaks of pandemics.

Collectively, these measures can significantly reduce the burden on government officials to enforce compliance and penalize defaulters while also minimizing the spread of diseases during any future pandemics.

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