

Influence Of Mindfulness And Meditation On Resilience And Creativity Among Health Workers In Ogun State, Nigeria

Kingsley C. Anonaba, Phd

Department Of Religious Studies, Babcock University, Ilisan-Remo, Nigeria

Ngozi Caroline Uwannah, Phd

Department Of Education, Babcock University, Ilisan-Remo, Nigeria

Abstract

This paper investigates the influence of mindfulness and meditation on resilience and creativity among health workers in Ogun State, Nigeria using the descriptive survey research design. A sample of 325 health workers (made up of doctors, nurses, pharmacists and other categories of health workers) was selected through the stratified random sampling technique. The instrument used for data collection was a structured questionnaire containing five sections: Demographic information, mindfulness, meditation, resilience and creativity. Four hypotheses were formulated and tested using multiple regression analysis at the .05 significance level. Results revealed significant combined influence of mindfulness and meditation on resilience ($F_{(2,322)} = 33.157, p < .0005$), significant relative influence of meditation ($Beta = .281, t = 9.539, p < .0005$) and mindfulness ($Beta = .268, t = 7.428, p < .0005$) on resilience, significant combined influence of mindfulness and meditation on creativity ($F_{(2,322)} = 19.435, p < .0005$) and significant relative influence of meditation ($Beta = .201, t = 6.720, p < .0005$) and mindfulness ($Beta = .185, t = 5.436, p < .0005$) on creativity. It was subsequently recommended, among other things, that healthcare organizations should consider incorporating mindfulness and meditation training into their employee development programmes.

Keywords: *Mindfulness, meditation, resilience, creativity, health workers.*

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I. Introduction

The World Health Organization (WHO) has emphasized the importance of promoting the mental well-being of health workers, particularly in low- and middle-income countries (WHO, 2020). In Nigeria, health workers face numerous challenges, including heavy workloads, limited resources, and exposure to infectious diseases (Adebayo, 2022). These challenges can erode their resilience and creativity, which are essential for providing high-quality patient care. According to a study conducted by Oladeji (2022), Nigerian health workers experience high levels of stress, anxiety, and burnout, which can negatively impact their mental health and well-being. Furthermore, research by Afolabi (2023) highlights the importance of promoting resilience and creativity among health workers in Nigeria, as these qualities are essential for improving patient outcomes and enhancing the overall quality of healthcare services.

Resilience among health workers refers to their ability to withstand and recover from adversity, trauma, or stress (Jackson, Firtko, & Edenborough, 2020). It encompasses various dimensions, including emotional regulation, self-awareness, and coping skills (Wu, Zhang, & Liu, 2022). Health workers with high resilience are better equipped to manage stress, adapt to change and maintain their physical and mental well-being. In addition, resilience and creativity are interconnected, as creative thinking can facilitate problem-solving and adaptability in the face of adversity (Oladeji, 2022). By promoting mindfulness and meditation among health workers, it is possible to enhance their resilience and creativity, leading to improved patient outcomes and a more positive work environment.

Creativity is a vital component of healthcare, enabling health workers to devise innovative solutions to complex problems, think outside the box, and improve patient care (Currey, Considine, & Khaw, 2020). It encompasses various dimensions, including divergent thinking, originality and flexibility (Plucker, 2022). Health workers with high creativity are better equipped to develop innovative solutions, improve patient outcomes, and enhance the overall quality of care. In Nigeria, for instance, a study by Oyeboade, Agoro, and Ogundipe (2022) highlighted the significance of creativity in healthcare, emphasizing its role in improving patient satisfaction and health outcomes.

Mindfulness and meditation have been linked to enhanced resilience and creativity among health workers (Hafenbrack, Vohs, & Baumeister, 2020; Lomas, 2022). Mindfulness involves being present in the moment, paying attention to one's thoughts and feelings without judgment or distraction (Kabat-Zinn, 2020). Meditation, on the other hand, involves focusing one's attention on a specific object, thought, or activity to achieve a mentally clear and emotionally calm state (Goyal & Kumar, 2022). In Nigeria, research by Agoro, Ogundipe, and Oyeboode (2023) demonstrated the effectiveness of mindfulness and meditation in reducing stress and improving resilience among healthcare professionals.

Research has shown that mindfulness and meditation can enhance resilience by reducing stress, improving emotional regulation and increasing self-awareness (Wu et al., 2022; Hafenbrack et al., 2020). Similarly, mindfulness and meditation have been linked to enhanced creativity by improving divergent thinking, increasing originality and facilitating problem-solving (Lomas, 2022; Currey et al., 2020).

Despite the growing body of research on mindfulness, meditation, resilience and creativity, there is a need for more studies that investigate the combined and relative influence of mindfulness and meditation on resilience and creativity among health workers in Nigeria. This study aims to address this knowledge gap by investigating the influence of mindfulness and meditation on resilience and creativity among health workers in Ogun State, Nigeria.

Objectives

The general objective of this study is to investigate the influence of mindfulness and meditation on resilience and creativity among health workers in Ogun State, Nigeria. The specific objectives are:

1. to investigate the combined influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria;
2. to investigate the relative influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria;
3. to determine the combined influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria; and
4. to determine the relative influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria.

Hypotheses

Ho1: There is no significant combined influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria.

Ho2: There is no significant relative influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria.

Ho3: There is no significant combined influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria.

Ho4: There is no significant relative influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria.

II. Methods

Design and Participants

This study employed a quantitative research design, specifically a survey research design, to investigate the influence of mindfulness and meditation on resilience and creativity among health workers in Ogun State, Nigeria. The population of this study consisted of all health workers in public and private hospitals in Ogun State, Nigeria. A sample of 400 health workers was selected using a stratified random sampling technique. The sample was stratified based on job categories (doctors, nurses, pharmacists and other health workers) and hospital types (public and private).

Instrumentation

A self-administered questionnaire was used to collect data. The questionnaire consisted of five sections: Demographic information, mindfulness, meditation practices, resilience and creativity. The Demographic information section was developed by the researcher. The mindfulness and meditation practices sections were adapted from the Mindfulness Attention Awareness Scale (MAAS) (Brown & Ryan, 2003). The resilience section was adapted from the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003). The creativity section was adapted from the Torrance Test of Creative Thinking (TTCT) (Torrance, 1974). A pilot study was carried out on a sample of 30 health workers randomly selected from public and private hospitals in Lagos State in order to assess the reliability of the questionnaire. Cronbach's alpha coefficients were found to be .85, .76, .80 and .74 for the mindfulness, meditation practices, resilience and creativity sections respectively. These indices

provided evidence for the internal consistency of the instrument. The validity of the questionnaire was determined by expert opinion.

Data Collection Procedure

The questionnaire was administered to the selected health workers through their hospital administrators. The administrators were asked to distribute the questionnaires to the health workers and collect them after completion.

Method of Data Analysis

The data collected were analyzed using frequency counts and percentage for the demographic data of participants and multiple regression analysis for the hypotheses. Tests were carried out at the .05 level of significance.

Ethical Considerations

The study was approved by the Ethical Review Committee of the Olabisi Onabanjo University Teaching Hospital, Sagamu, Ogun State, Nigeria. Informed consent was obtained from each participant before administering the questionnaire. Participants were assured of confidentiality and anonymity.

III. Results

Demographic Presentation

Table 1: Frequency Distribution for Participants' Demographic Data

S/N	Characteristics	Level	N = 325	Count	%
1.	Age (years)	Below 30		82	25.2
		30 – 49		126	38.8
		50& above		117	36.0
2.	Gender	Male		132	40.6
		Female		193	59.4
3	Professional Affiliation	Medical Doctors		48	14.8
		Nurses		134	41.2
		Pharmacists		76	23.4
		Others		67	20.6

Table 1 is the frequency distribution of demographic data. It revealed that the greatest proportion of the participants (39%) were 30 – 49years old. This was followed by those who were 50 years old and above (36%) and under 30 years old (25%). A majority of the participants (59%) were female health workers, while 41% of the participants were male health workers. Finally, the greatest proportion of the participants (41%) was nurses. This was followed by pharmacists (23%), other health workers (21%) and Medical Doctors (15%).

Test of Hypotheses

Hypothesis One

There is no significant combined influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria.

Table 2: Model Summary and Coefficients of the Multiple Regression Analysis for Combined Influence of Mindfulness and Meditation on Resilience

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	6630.466	2	3315.233	33.157	.000
	Residual	32195.184	322	99.985		
	Total	38825.650	324			

Model Summary: $R = .518$, $R^2 = .268$, Adj. $R^2 = .261$, Std Error = 5.07347

Dependent Variable: Resilience

Predictors: (Constant), Mindfulness, Meditation.

Table 2 revealed that with the variables entered into the model simultaneously, there were significant results ($F_{(2,322)} = 33.157$, $p < .0005$). The null hypothesis is therefore rejected in favour of the alternative hypothesis. It is subsequently concluded that there is a significant combined influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria. Table 2 further revealed that mindfulness and meditation jointly accounted for 26.1% of the variance in resilience (Adj. $R^2 = .261$).

Hypothesis Two

There is no significant relative influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria.

Table 3: Coefficients of the Multiple Regression Analysis for Relative Influence of Mindfulness and Meditation on Resilience

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	25.686	1.498	17.286	.000
	Mindfulness	4.073	1.266	.268	7.428
	Meditation	6.413	1.504	.281	9.539

Dependent Variable: Resilience

Table 3 revealed significant results, leading to the conclusion that there is a significant relative influence of mindfulness and meditation on resilience among health workers in Ogun State, Nigeria. Specifically, meditation (Beta = .281, $t = 9.539$, $p < .0005$) had a stronger influence than mindfulness (Beta = .268, $t = 7.428$, $p < .0005$) on resilience. Table 3 further revealed that resilience can be predicted from mindfulness and meditation by means of the regression equation:

$$\text{Resilience} = 4.073 \times \text{Mindfulness} + 6.413 \times \text{Meditation} + 25.686.$$

Hypothesis Three

There is no significant combined influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria.

Table 4: Model Summary and Coefficients of the Multiple Regression Analysis for Combined Influence of Mindfulness and Meditation on Creativity

Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4955.057	2	2477.529	19.435
	Residual	41047.228	322	127.476	
	Total	46002.285	324		

Model Summary: $R = .453$, $R^2 = .205$, Adj. $R^2 = .197$, Std Error = 7.63275

Dependent Variable: Creativity

Predictors: (Constant), Mindfulness, Meditation.

Table 4 revealed that with the variables entered into the model simultaneously, there were significant results ($F_{(2,322)} = 19.435$, $p < .0005$). The null hypothesis is therefore rejected in favour of the alternative hypothesis. It is subsequently concluded that there is a significant combined influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria. Table 4 further revealed that mindfulness and meditation jointly accounted for 19.7% of the variance in creativity (Adj. $R^2 = .197$).

Hypothesis Four

There is no significant relative influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria.

Table 5: Coefficients of the Multiple Regression Analysis for Relative Influence of Mindfulness and Meditation on Creativity

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	13.805	2.063	10.394	.000
	Mindfulness	3.177	1.846	.185	5.436
	Meditation	4.833	1.413	.201	6.720

Dependent Variable: Creativity

Table 5 revealed significant results, leading to the conclusion that there is a significant relative influence of mindfulness and meditation on creativity among health workers in Ogun State, Nigeria. Specifically, meditation (Beta = .201, $t = 6.720$, $p < .0005$) had a stronger influence than mindfulness (Beta = .185, $t = 5.436$, $p < .0005$) on creativity. Table 5 further revealed that creativity can be predicted from mindfulness and meditation by means of the regression equation:

$$\text{Creativity} = 3.177 \times \text{Mindfulness} + 4.833 \times \text{Meditation} + 13.805.$$

IV. Discussion

This study investigated the influence of mindfulness and meditation on resilience and creativity among health workers in Ogun State, Nigeria. The findings of this study provide valuable contributions to the existing literature on mindfulness, meditation, resilience and creativity. Firstly, the demographic presentation of the participants revealed that the majority of the participants (39%) were 30 – 49 years old, followed by those who were 50 years old and above (36%) and under 30 years old (25%). Additionally, a majority of the participants (59%) were female, while 41% were male. The greatest proportion of the participants (41%) was nurses, followed by pharmacists (23%), other health workers (21%) and medical doctors (15%). These findings highlight the diversity of the participants in terms of age, gender and professional affiliation.

Secondly, the results indicate that mindfulness and meditation have a significant combined influence on resilience among health workers. This finding supports previous studies that have shown mindfulness and meditation to be effective in enhancing resilience (Hafenbrack et al., 2020; Wu et al., 2022). The implications of this finding are that mindfulness and meditation can be useful tools for health workers to manage stress and maintain their physical and mental well-being. Furthermore, the results reveal that meditation has a stronger relative influence on resilience than mindfulness. This finding is consistent with previous research that has shown meditation to be effective in reducing stress and improving emotional regulation (Goyal & Kumar, 2022). The implications of this finding are that meditation may be a more effective intervention for enhancing resilience among health workers.

Thirdly, the results indicate that mindfulness and meditation have a significant combined influence on creativity among health workers. This finding supports previous studies that have shown mindfulness and meditation to be effective in enhancing creativity (Lomas, 2022; Currey et al., 2020). The implications of this finding are that mindfulness and meditation can be useful tools for health workers to develop innovative solutions to complex problems.

Finally, the results reveal that meditation has a stronger relative influence on creativity than mindfulness. This finding is consistent with previous research that has shown meditation to be effective in improving divergent thinking and originality (Lomas, 2022). The implications of this finding are that meditation may be a more effective intervention for enhancing creativity among health workers.

Based on the research findings, the following recommendations are made:

1. Healthcare organizations in Ogun State, Nigeria, should consider incorporating mindfulness and meditation training into their employee development programmes. This could help health workers develop resilience and creativity, leading to improved patient outcomes and a more positive work environment.
2. Healthcare organizations should prioritize promoting work-life balance among health workers. This could involve providing resources and support to help health workers manage stress, maintain their physical and mental well-being, and cultivate resilience.
3. Healthcare organizations should encourage health workers to think creatively and develop innovative solutions to complex problems. This could involve providing training and resources on creative problem-solving, as well as recognizing and rewarding health workers who demonstrate creativity and innovation.
4. Further research is needed to fully understand the influence of mindfulness and meditation on resilience and creativity among health workers in Nigeria. Future studies could investigate the long-term effects of mindfulness and meditation training, as well as the impact of these practices on patient outcomes and healthcare quality.

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