

The Scourge of Pandemics, and the Imperative for Health Policy for Frontline Health Workers in Nigeria

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Abstract:- Despite all efforts to combat the dreaded COVID-19 pandemic, there has yet been no deliberate effort to consider a mental health policy for frontline health workers. As a result, this study was set to look into the imperative for health policy for frontline health workers in Nigeria. A qualitative cross sectional survey of 400 frontline health workers drawn from four geographical zones of the country, using a google form was carried out, and the data were analyzed using simple statistics, and SPSS. The results showed that majority of the healthcare workers were females 280(70) most of who were within the age range of 41-50 years 180(45). Some of the respondents who lost a patient or more to COVID-19, 140(35) during treatment, confessed to being depressed 80(42.9) or withdrawn 60(57.1). Most 280(70) of the respondents claimed they did not have all they needed to manage the patients. Majority of those who lost patients to the pandemic 80(57.1), claimed they discussed it with some other person(s), and most of those who discussed it were mostly females who claimed they discussed it with their spouses 40(50). Obviously, majority of those who discussed it, 80(80) claimed they felt better after the discussion, while 180(45) of the respondents claimed that isolation from their families left them in emotional distress. Hazard allowance 120(30) and lack of incentives 200(50) were more of concern to them. Most of the respondents 240(60) rated government performance in tackling the pandemic to be on the average. A Pearson Correlation analysis was conducted between government's performance, and the areas that raised more concerns to the frontline health workers, showed a significant but negative relationship, -0.099 at 0.05 level of significance, which has a negative impact on the mental health of the frontline health workers. A regression analysis of the two variables, was also found to be negative and significant at $t=1.989$, with a value coefficient of -0.099 showing that only 1% of the areas that raised concern was attended to by government's performance at $p<0.5$ level of significance. The results demonstrate clearly the need for mental health policies to address issues of anxiety, depression and psychological distress among frontline health workers in Nigeria with a suggestion that such policies should encapsulate the federal, state, and local government areas, as all frontline health workers in Nigeria are at risk of a mental burden during this pandemic crisis.

Keywords:- Mental Health, Frontline Health Workers, COVID-19, Health Policy.

I. INTRODUCTION

The Coronavirus belongs to a family of viruses that may cause various symptoms such as pneumonia, fever, breathing difficulty, and lung infection [1]. These viruses are common in animals worldwide, but very few cases have been known to affect humans. The World Health Organization (WHO) used the term 2019 novel Coronavirus to refer to a Coronavirus that affected the lower respiratory tract of patients with pneumonia in Wuhan, China on 29 December 2019 [2,3,4]. The WHO announced that the official name of the 2019 novel Corona-virus is Coronavirus disease (COVID-19) [4]. The current reference name for the virus is Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Immunological and Serological studies show that most people develop no symptoms or only mild symptoms when infected with the new Coronavirus, while some people may experience a more pronounced or critical course of the disease. Based on the available scientific evidence and current clinical experience, the SPR Collaboration recommends that physicians and authorities consider this basic treatment protocol for early treatment of the COVID-19 disease in high-risk patients, since the United States(US) physicians have been reporting an 84% decrease in hospitalization rates, a 50% decrease in mortality rates among already hospitalized patients, and an improvement in the condition of patients often within hours using this and similar protocols, [4].

Note: Patients are asked to consult a doctor.

Treatment protocol

1. Zinc (75mg to 100mg per day)
2. Hydroxychloroquine (400mg per day)
3. Azithromycin (up to 500mg per day)
4. Heparin (usual dosage)
5. Vitamins C and D3 plus quercetin

Explanatory notes

1. **Zinc:** This is known to exhibit antiviral properties. Zinc may be used prophylactically or immediately when the first typical symptoms appear. For some patients, treatment with high-dose zinc (100mg per day) may

already be sufficient to prevent progression of the disease.

2. **Hydroxychloroquine (HCQ):** Support of the cellular uptake of zinc as well as additional antiviral properties. If prescribed by a doctor, HCQ may be used immediately upon the onset of the first typical symptoms or even prophylactically. Contraindications (e.g. favism) must be observed.
3. **Azithromycin:** Antibiotic to prevent a bacterial super infection in case of viral pneumonia. In patients at risk and as prescribed by a doctor, azithromycin may be used immediately after the first typical symptoms appear. Contraindications must be observed.
4. **Heparin:** Anticoagulation (blood clotting inhibition) for prophylaxis or treatment of infection-related thrombosis and pulmonary embolism in patients at risk and as prescribed by a doctor.
5. **Vitamins C and D3:** Support of the immune system (also prophylactically). These may be supplemented by the antiviral flavonoid **quercetin**, which supports the absorption of zinc. If HCQ is not available, quercetin may to some extent serve as a replacement.

Importantly, **early treatment** as soon as the first symptoms appear and even without a PCR test is crucial to prevent progression of the disease. Zinc and HCQ may also be used prophylactically.

The alleged or actual negative results with HCQ in some studies were based, according to the current state of knowledge, on delayed use (intensive care patients), excessive doses (up to 240mg per day), manipulated data sets, or ignored contraindications (e.g., favism or heart problems).

Early treatment based on the above protocol is intended to **avoid** hospitalization. If hospitalization nevertheless is required, experienced ICU doctors recommend avoiding invasive ventilation (intubation) whenever possible and using oxygen therapy [5]

It is conceivable that the above treatment protocol, which is simple, safe and inexpensive, could render more complex medications, vaccinations, and other measures largely obsolete, [5]. But more of concern is the fact that this treatment protocol does not include anything as a remedy for mental health of both the patients and the frontline health workers. Showing that, all hands are on deck to provide a physical treatment for Covid-19 with no consideration for the mental health of those involved in the treatment of the disease.

Currently, the world recorded a total of 110,837,382 confirmed cases as at 19th February 2021, and still counting. In Africa the total number of Coronavirus cases is 3,634,276 confirmed cases as at 4th of February, and also still counting [6], while in Nigeria, according to [7], the cases have risen to 148,296, 1,777 deaths, and 124,483 recovered cases and still counting.

From a regional perspective, America has the highest number of confirmed cases of 24,293,310 while western pacific has the lowest confirmed cases with 828,402 as at 21 November 2020, [8]

According to [9], a slew of detailed studies has shown and quantified the increased risks the virus poses to older people, men, and other groups. According to the studies, for every 1000 people infected with the Coronavirus, who are under the age of 50, almost none will die. For people in their fifties and early sixties, about five will die, more men than women. The risk then climbs steeply as the years accrue. For every 1000 people in their mid seventies, or older who are infected, 116 will die. These are the stark statistics obtained by some of the first detailed studies into the mortality risk for COVID-19. Despite the fact that this study was not region-specific, there was no mention of the risk of frontline health workers especially those in Nigeria, and how these frontline workers manage their challenges during the pandemic especially as regards their mental health. According to [10], studies have revealed that age is by far the strongest predictor of an infected person's risk of dying.

Sometimes in July 2020 - The World Health Organization (WHO) gave information of the threat posed by COVID-19 to health workers across Africa. More than 10,000 health workers in more than 40 countries which have reported on such infections have been infected with COVID-19 so far, a indication of the challenges medical staff on the frontlines of the occurrence face, [11]. The increase in COVID-19 cases in Africa has placed an ever greater strain on health services across the continent, according to Dr Matshidiso Moeti, WHO Regional Director for Africa. "This had very real consequences for the individuals who work in them, and there is no more sobering example of this than the rising number of health worker infections.", [11].

Apart from the above, the WHO report also showed that about 10% of all cases globally are among health workers, though there is disparity in the range between individual countries. In Africa, information on health worker infections remains limited, but preliminary data reveal that they make up more than 5% of cases in 14 countries in sub-Saharan Africa alone, and in four of these, health workers, especially frontline health workers, make up more than 10% of all infections, [11]. Apart from other reasons, major contributors to these challenges include but not limited to, inadequate access to Personal Protective Equipment (PPEs) or weak infection prevention and control measures which in turn increase the risk of health worker infection. Rising global demand for protective equipment as well as global restrictions on travel have activated supply shortages. Health workers can also be exposed to patients who do not show signs of the disease (asymptomatic) and are in the health facilities for a range of other services. Risks may also arise when health personnel are repurposed for COVID-19 response without adequate briefing, or because of heavy workloads which result in fatigue, burnout and possibly not fully applying the Standard Operating Procedures.

Health workers may be exposed to occupational hazards that put them at risk of disease, injury and even death in the background of the COVID-19 response. These occupational risks include (a) occupational infections with COVID-19;(b) skin disorders and heat stress from prolonged use of PPEs; (c) exposures to toxins because of increased use of disinfectants;(d) psychological distress;(e) chronic fatigue; and (f) stigma, discrimination, physical and psychological violence and harassment [12]. Mitigating these hazards and protecting the health, safety and well-being of health workers requires well-coordinated and all-inclusive measures for infection prevention and control, occupational health and safety, health workforce management and mental health and psychosocial support [12].

Based on their risk levels which could be, Lower risk –jobs or tasks without frequent, close contact with the public or others and that do not require contact with people known or suspected of being Infected with SARS-CoV-2 [13];Medium risk–jobs or tasks with close frequent contact with patients, visitors, suppliers and c-workers but that do not require contact with people known or suspected of being infected with SARS-CoV-2 [14]; High risk–jobs or tasks with high potential for close contact with people who are known to be or suspected of being infected with SARS-CoV-2 or contact with objects and surfaces possibly contaminated with the virus [13]; Very high risk–jobs and tasks with risk of exposure to aerosols containing SARS-CoV-2,in settings where aerosol-generating procedures are regularly performed on patients with COVID-19 or working with infected people in indoor, crowded places without adequate ventilation [15], insufficient occupational health and safety measures can result in increased rates of work-related illness among health workers, high rates of absenteeism, reduced productivity and diminished quality of care [16,17] due to the burden on their mental health.

In many African countries infection prevention and control measures in health facilities are still not fully implemented let alone a touch on the mental health of the frontline health workers. When WHO assessed clinics and hospitals across the continent for these measures, only 16% of the nearly 30 000 facilities surveyed had assessment scores above 75%. Many health centers were found to lack the infrastructure necessary to implement key infection prevention measures, or to prevent overcrowding. Only 7.8% (2213) had isolation capacities and just a third had the capacity to triage patients, [11].

Due to the concerted efforts by WHO and partners, some African countries have managed to reduce health worker infections considerably. For example, few months ago over 16% of COVID-19 infections in Sierra Leone were among health workers. The figure has now dropped to 9%. Cote d'Ivoire has reduced the proportion of infections among health workers from 6.1% to 1.4%. Scaling up infection prevention and control measures can further reduce infections among health workers. This study did not mention Nigeria, even though there is data paucity for this in Nigeria.

[18] carried out a study on the “Health Professionals Facing the Coronavirus Disease 2019 (COVID-19) Pandemic: What are the Mental Health Risks?” Even though the work gave few presentations of the challenges of frontline health workers, it concluded that this tragic health crisis should significantly enhance our understanding of the mental health risk factors among the health care professionals facing the COVID-19 pandemic. The conclusion also mentioned that reporting information is essential to plan future prevention strategies. Most importantly, it deduced that protecting health care professionals is indeed an important component of public health measures to address large-scale health crisis. Thus, interventions to promote mental well-being in health care professionals exposed to COVID-19 need to be immediately implemented, and to strengthen prevention and response strategies by training health care professionals on mental help and crisis management.

This shows that the mental health of frontline health workers is of immense importance in fighting this pandemic, but not much is done in this line, **hence the aim of this work is, “The scourge of the corona pandemic and the imperative for a mental health policy for frontline health workers”.**

Several authors have attempted to put the pieces of challenges COVID-19, has on the mental health of healthcare workers especially the frontline health workers together in order to proffer solutions [19,20], for example worked in China. They investigated the effects of social support on sleep quality of medical staff treating patients with COVID-19. In a cross sectional study, they found out that high levels of anxiety, stress and self efficacy were associated with sleep quality, and social support. However this study did not put into consideration policies that will assist the frontline health workers during this pandemic.

In another research, [21] in a mental health survey of 230 medical staff in a tertiary infectious disease hospital for COVID-19 also a cross sectional study, found out that anxiety of different stages cumulatively was found to be, (46.08%). He also found out that anxiety was higher in females (25.67%) than in males (11.63%), anxiety in nurses was higher (26.88%) than in doctors (14.29%). This study was also similar to the works of [22], all pointing to a gap in policy on mental health for the frontline health workers.

II. BRIEF REVIEW

The advent of the COVID-19 has brought to the open, the lapses in the healthcare systems of countries. It has also, apart from many things, ensured that many countries restructure their health sectors to combat the pandemic appropriately. A brief look at some of the countries with best practices to combat the Corona crisis include: Sri Lanka, China, Singapore. On the other hand, some of the countries with bad practices include: Italy, the United Kingdom, and Spain. The questions at this point are: what did they do right or wrong and what policies did they put in place?

Taking Sri Lanka which had its first case of COVID-19 on the 11th of March 2020, the Head of State put forth some strategies, which include; awareness strategy and the action strategy, and the surveillance strategy, isolation strategy, as well as patient management strategy to mention just a few. On this, physical infrastructures, manpower, and equipments were stepped up, from the COVID-19 prevention programme. Institutional framework as conceptualized by Udaya Indrarathna, (2020), shows most of what was required but did not show anything to tackle mental health of frontline health workers such a good

mental health policy. All the countries that are noted for best practice did some few things in common, like widening quarantine rules for overseas arrivals and discouraging their citizens from travelling abroad; closing of boarders to reduce risk of new cases coming in and virus spread. Strict monitoring of social media, to prevent misinformation in the country, total restriction of movement in form of country lockdowns and provision of palliatives for the citizens were also ensured. In all that was done, no country made any policies that relate to the mental health of the frontline health workers [23].

Table 1.0 Summary of Some Country Policies.

S/No	Country	Policy type	Key Responses	Any Mental Health Policy
1.	Afghanistan	Fiscal	-Health packages including building hospital. -Social packages -Package to support agriculture -Wheat purchases.	Not specific
		Monetary and Micro financial	-Flexible application of penalties on loans, with support for bank administrative fees. -Monitored early signs of liquidity stress.	None
		Exchange and Balance of Payment.	-Da Afghanistan Bank(DAB) ensured price stability in the context of a flexible exchange rate regime.	None
2.	Germany	Fiscal	-Spending on healthcare including R&D vaccines. -Expanded access to short term work, subsidy to preserve jobs and workers income. -Basic income support for self employed personnel severely affected by Covid-19. -Temporary expansion of duration of unemployed insurance and parental leave benefits. -Temporary VAT reduction, more support for families, and grants for SMEs.	
		Monetary and Micro financial.	-Release of countercyclical capital buffer for banks. -A three month payment moratorium on consumers' loans was granted.	
		Exchange rate and Balance of payment.	No measure.	
3	Ethiopia	Fiscal	-\$635 million (0.6 % of GDP) for emergency food distribution. -\$430 million (0.4 % of GDP) for health sector response in worse case scenario. -Allocation for provision of emergency shelters, and non food items as well as agricultural sector support and nutrition. -Operational facilitation of logistics on export and imports process, such as free railway transport of goods between Ethiopia, and Djibouti. -Removal of taxes from the import of raw materials for production of COVID-19 essential goods.	
		Monetary and Micro financial	-The Central Bank provided 15 billion birr (0.45 percent of GDP) of additional liquidity to private banks to facilitate debt restructuring and prevent bankruptcies.	
		Exchange	No measures.	
4	Nigeria	Fiscal	-Review of 2020 budget to include a ₦500 billion (0.3 percent of GDP) Covid-19 intervention, to channel resources to additional health related current and capital expenditure, (test, supplies and facilities). -Import duty waivers for pharmaceutical firms were introduced even though land boarders were closed. -Removal of fuel subsidy -Increases in electricity tariff.	

		Monetary and Micro financial.	-Reduction of interest rate on all applicable CBN interventions from 9 -5 % with a one year moratorium on CBN intervention facilities. Liquidity injection of ₦3.6million (2.4 percent of GDP). - Private sector intervention initiative.
		Exchange rate and Balance of Payments.	-Exchange rate at the beginning of COVID-19 crisis was ₦361/ dollars, but I&E turnover has been low since April 2020.

SOURCE: 2020 International Monetary Fund. Policy Tracker Policy Responses to COVID-19. [24],

Consideration from the International Labor organization (ILO's) Policy framework, policy recommendations in response to COVID-19, made some pillar policy recommendations which include:

Pillar 1

Stimulating the Economy and Employment

The COVID-19 crisis impacts on both the demand and the supply sides of the labor market, and it has major implications for the goal of ensuring full employment and decent work. In particular, the crisis is pushing many families into poverty and increasing existing inequalities.

Pillar 2

Supporting Enterprises, Jobs and Incomes

Efforts to contain the spread of the virus have disrupted production flows, caused demand for non-essential goods and services to plummet, and forced enterprises around the world to suspend or scale down operations.

Pillar 3

Protecting Workers in the Workplace

While many people have lost their jobs and incomes, many others continue to work. Making sure that work can be performed safely is a shared priority.

Pillar 4

Relying on Social Dialogue for Solutions

The lessons from previous global crises have shown that governments alone cannot address the challenges stemming from strong shocks.

COVID-19 continues to spread across the world with a trajectory difficult to predict. The health, humanitarian and socio-economic policies we implement will determine how quickly and strongly we recover [16,17],

Despite all these policies, recommendations that will help the mental health of frontline health workers seem not to be in sight as all the policies do not seem to tilt to this direction.

III. MATERIAL AND METHODS

Study Design

This research took the design of a qualitative cross sectional survey.

Study Area

The study area is Nigeria, a country in the sub Saharan Africa. The current population of Nigeria is 208,160,493 as of Thursday, November 26, 2020, based on World meter elaboration of the latest United Nations data [7]. Nigeria 2020 population is estimated at 206,139,589 people at midyear according to UN data, with a total land area is 910,770 Km² (351,650 sq. miles), 52.0 % of the population is urban (107,112,526 people in 2020). Nigeria population is equivalent to 2.64% of the total world population. Nigeria ranks number 7 in the list of countries (and dependencies) by population. The population density in Nigeria is 226 per Km² (586 people per mi²). The median age in Nigeria is 18.1 years.

Economically, in 2020, Nigeria had challenges with its GDP as it went into recession more than once. GDP is Nigeria's biggest economic data and it measures the monetary value of everything produced in the country. It depicts the nation's total economic activity. A recession is a period of decline in general economic activity, typically defined when an economy experiences a decrease in its gross domestic product for two consecutive quarters.

The latest contraction in Nigeria's GDP indicated the second recession in the country in the past 5 years. Recall that the Nigerian economy entered recession in Q2 2020 when GDP contracted by -2.06% for the second time in the year.

Analysts continue to dimension the recovery pattern for the Nigerian economy in 2021, with reputable outlets forecasting a slow recovery pattern on the back of possible second wave of Covid-19 pandemic currently distorting economic landscape in the advanced economies.

The IMF forecast for the Nigerian economy was that it would contract to -4.3% in 2020, as the Central Bank continues to drive aggressive intervention to stimulate the economy on the path of recovery.

Nigeria’s Gross Domestic Product (GDP) in real terms declined by -3.62% (year-on-year) in Q3 2020, thereby marking a full-blown recession and second consecutive contraction from -6.10% recorded in the previous quarter (Q2 2020).

According to the report, the performance of the economy in Q3 2020 reflected residual effects of the restrictions to movement and economic activity implemented across the country in early Q2 in response to the COVID-19 pandemic [25]

Sample Size Determination

Samples were drawn from major parts of the nation. Initially a random sampling was used for the first few respondents, later the snow ball method was incorporated as the respondents, now referred their colleagues to be part of

the research. A google machine was used to prepare the questionnaire to be answered online. Nigeria was divided into four (4) geographical zones, viz; North, South, East, and Western Nigeria Questionnaires was then sent to each zone in order to capture views from all the zones. The questionnaire was then introduced to few front liners who later sent them further to their fellow colleagues. For each zone a boundary of 120 questionnaires were sent. Once this was archived, the system stopped further acceptance of the answered questionnaire for that zone. Of the 120 questionnaires, only 100 correctly answered questionnaires were selected and used for this research, which gives a sample size of four hundred, (400) therefore N= 400.

IV. DATA ANALYSIS

The collected data were analyzed using simple statistics mean and standard deviation, Regression and correlation analysis was also carried out.

Table 4.0 Results

Table of Results.

S/N	QUESTIONS	RESPONSE	FREQUENCY	PERCENTAGE
1	Sex	Male	120	30
		Female	280	70
2	Marital status	Married	200	50
		Single	200	50
3	Average age	21-30	80	20
		31-40	140	35
		41-50	180	45
4	Frontline health workers	Yes	380	95
		No	20	5
5	During your work with COVID-19 patients were you separated from your family?	Yes	60	15
		No	340	85
6	Have you lost anyone to COVID-19?	Yes	80	20
		No	320	80
7	Did you lose any patient during treatment?	Yes	140	35
		No	260	65
8	How did you feel at the death of the patient?	frustrated	-	0.00
		Depressed	80	42.9
		Withdrawn	60	57.1
9	Did you have all you needed to manage the patient?	Yes	120	30
		No	280	70
10	Has any COVID-19 patient died under your care?	Yes	140	
		No	260	
11	If yes to question 10 above, did you discuss it with	Yes	80	57.1

	anyone?			
		No	60	42.9
12	If yes to question 11 above, with whom did you discuss it?	A therapist	00	00
		A friend	20	25
		Your spouse	40	50
		A cleric	-	0.00
		Officials of NCDC	20	45
13	Did you feel better after the discussion?	Yes	80	80
		No	20	20
14	COVID-19 required that frontline health workers should be isolated, did this have any emotional effect on you?	Yes	180	45
		No	220	55
15	Were your physical needs met during isolation?	yes	280	70
		No	120	30
16	Which of these did the government put in place for you as a frontline health worker?	Targeted interventions	140	35
		Good feedback mechanism	20	5
		Incentives	20	5
		Mental health facility to help workers overcome stress or symptoms of Post Traumatic Stress Disorder. PTSD	00	00
		Harzard allowance.	120	30
		PPE's	60	15
		Good working policies.	40	10
17	Do you take holidays regularly?	Yes	60	15
		No	360	85
18	Do you feel COVID-19 was properly managed in Nigeria?	Yes	240	60
		No	160	40
19	Do you think the Nigerian healthcare system will improve soon?	Yes	200	50
		No	200	50
20	Whenever you feel stressed or burned out, where do you go to/ what do you do?	Exercise	00	00
		Pray	80	20
		Meditate	140	35
		Socialize with friends	100	25
		To a place of worship.	00	00
		Watch TV	40	10
		Do nothing.	40	10
21	Where you comfortable referring to your patients as "CASES?".	Yes	100	25

		No	300	75
22	Which do you think is more appropriate with respect to COVID-19.	Social distancing	240	60
		Physical distancing	160	40
23	What areas raised more concern to you during the pandemic?	Lack of incentives	200	50
		Governments’ excellent performance.	120	30
		Community spread	20	5
		Poor preparedness for the pandemic	40	10
		Frequent loss of patient.	00	00
		Governments’ poor performance.	20	5
		Family demands.	00	00
24	How will you rate governments performance during the pandemic?	Excellent	00	00
		Good	60	15
		Average	240	60
		Poor	60	15
		Very poor	40	10

Table 4.2: a table showing the correlation between governments’ performance during the covid 19 pandemic, and areas that raised more concern to the frontline health workers, during the pandemic

Table 4.2: Pearson Correlation Co-efficient Between Variables

		Governments Performance in Tackling the Pandemic	Areas that Raised more Concerns during the Pandemic
Governments Performance in Tackling the Pandemic	Pearson Correlation	1	-.099*
	Sig. (1-tailed)		.024
	N	400	400
Areas that Raised more Concerns during the Pandemic	Pearson Correlation	-.099*	1
	Sig. (1-tailed)	.024	
	N	400	400

*. Correlation is significant at the 0.05 level (1-tailed).

REGRESSION STATISTICS

a. Model summary

Mode	R	R square	Adjusted R square	Standard error of estimates	Change statistics			
					R square change	F change	df1	df2
1	.099	.010	.007	.810	.010	3.954	1	398

Predictors: (constant),areas that raise more concerns to the frontline health workers during the pandemic.

b. Model summary

Model	Change statistics
	Sig. F change
1	.047

Predictors: (Constant) areas that raise more concerns to the frontline health workers during the pandemic.

c. ANOVA

Model	Sum of squares	Df	Mean square	F	sig.
1. Regression	2.597	1	2.597	3.954	.047 _a
Residual	261.403	398	.657		
Total	264.000	399			

a. Predictors: (Constant) areas that raise more concerns to the frontline health workers during the pandemic.

b. Dependent variable: government’s efforts in tackling the pandemic.

Coefficient_a

Model	Unstandardized coefficients		Standardized coefficient	t	Sig.
	B	Standard error	Beta		
1 constant	3.056	.135		22.635	.000

a. Dependent Variable: Government’s efforts in tackling the pandemic.

Coefficient_a

Model	Unstandardized coefficients		Standardized coefficient	t	Sig.
	B	Standard error	Beta		
1, Areas that Raised more Concerns during the Pandemic.	-.072	.036	-.099	-1.989	.047

a. Dependent variable: government’s efforts in tackling the pandemic.

Table 4.3 REGRESSION ANALYSIS RESULT SUMMARY.

Hypothesis (H ₀)	Regression weight	R	R ²	F-Statistics	t – Statistics	P _{value}	Coefficient
There is no significant relationship of (a) on (b).	(a) →(b)	-.099 _a	.010	3.954	-1.989	.047 _a	-.099 _a

Equation: $y = mx + b$: ($y = -.072x + 3.056$). where $t = -1.989$ and coefficient = $-.099$

Equation: $y = mx + b$: ($y = -.072x + 3.056$). where $t = -1.989$ and $\beta = -.099$

Key:

- (a) Dependent variable = government’s performance in tackling the pandemic.
- (b) Predictor variable = areas that raised more concerns to the frontline health workers during the pandemic.
- (c) The findings in the Tables 4.2 and 4.3 above indicate that more concerns to the frontline health workers during the pandemic is determined by Government’s performance in tackling the pandemic. This is used to test the null hypothesis which states:

Hypothesis (H₀) = There is no significant relationship between Government’s performance in tackling the pandemic on areas that raised more concerns to the frontline health workers during the pandemic.

V. DISCUSSION

From the table of results, it shows that of the four hundred respondents to the study, 120(30) of them were males, while 280(70) were females. This result tends to agree with the works of [25] which stated that, ‘women represent close to 70% of the global healthcare workforce’. Similarly, the OECD Report [27] stated that in 2017, almost half of all doctors in Organization for Economic Cooperation and Development (OECD) countries were women. For the country Nigeria, these results reflect the global analogy, and show a similar trend.

On their marital status, 200(50) of the respondents were married while, 200(50) were single. On their age range, majority of the respondents 180(45) had their age range between 41-50 years of age. This also shows that most of the healthcare workers ages are within the risk ages for COVID- 19 as seen in works of [28]. Similarly, [10] mentioned that age is the strongest predictor of a person’s risk of dying, but recently, going by the level of virulence of the new variants of the virus, this seems to be changing even though studies have not fully established it. Other age

groups were reported to have been infected, with numbers not as large as those within the ages of 45 years and above. While those with age range between 31-40 years of age were 140(35), and those with the least age range 21-30 years of age were 80(20). Usually, these age groups are sometimes the least among the healthcare workers and they most times are not medical doctors going by the rate of incessant strikes in the Nigerian university Hospitals. The resultant effects of these strikes are that students in the medical fields end up spending longer than necessary years in the universities. Although all the respondents were health workers, the result shows that only 380(95.0) of them were frontline health workers, 20(5.0) of the respondents were health workers but not frontline health workers.

When asked if they were separated from their families during the Corona pandemic crisis, 340(85.0) of the respondents said yes, while 60(15.0) of the respondents stated that they were separated from their families during this period. This shows that the health care workers did comply with the COVID-19 protocols of isolation, to a large extent to curtail the spread of this virus. The study also gathered that 80(20) of the respondents had lost someone to the COVID-19 pandemic, whereas 320(80.0) of the respondents had not. This may not be a true reflection of good management of the pandemic because the testing rate was very low and not all the causes of death were known.

Enquiries on the loss of patients to COVID-19 during treatment, revealed that 140(35.0) of the respondents agreed to this fact, while 260(65.0) of the respondents said they had not lost any patient to the Corona virus disease.

When asked how they felt at the death of the patients, 60(42.9) of them indicated that they felt withdrawn, whereas 80(57.1) of them felt depressed, others did not say how they felt. Cumulatively, from the study, among those that lost a patient, the tendencies of a Post Traumatic Stress Disorder is likely as the symptoms are obvious, and this requires proper management in order to forestall mental stress. Also according to works of [22] which used Chinese-language versions of standardized instruments to assess levels of depression, anxiety, insomnia, and psychological distress among health care workers caring directly for COVID-19 patients, the results showed that, across all these measures, frontline health care workers caring directly for patients with COVID-19 reported higher levels of severe mental health symptoms than those in secondary roles. In adjusted analyses, women were significantly more likely than men to report severe symptoms of depression, anxiety, and psychological distress, which could be the results of: emotional strain and physical exhaustion, caring for coworkers, shortages of Personal Protective Equipment, concerns about infecting family members with Coronavirus from workplace exposures, shortages of ventilators, anxiety about assuming new or unfamiliar clinical roles and expanded workloads in caring for patients with COVID-19 as well as limited access to mental health services for managing depression, anxiety, and psychological distress.

Mental health professionals will play a vital role in addressing the moderate and severe symptoms in frontline health care workers who experience depression, anxiety, and psychological distress as they provide acute care for patients with COVID-19 and seek to recover from these occupational hazards. Much of the needed mental health care may be provided through tele-health services, including video visits with mental health professionals, mobile apps, online resources, and virtual peer support. Artificial Intelligence could come in handy in such situations.

Enquiries were also made as to whether respondents had all they needed to manage the COVID-19 patients, 120(30.0) of the respondents said they had all they needed, while 280(70.0) of the respondents stated that they did not have all they needed to manage the COVID-19 patients they had. This could be disadvantageous to the mental state of these frontline healthcare workers. Some of the respondents 140(35) said that they have lost a patient directly under their care while 260(65) of the respondents said no patients died under their care.

Of all the respondents that agreed to losing a patient directly under their care, 80(57.1) of them said that they discussed it with someone, while 60(42.9) of them said they did not discuss this with anyone. A further analysis on this showed that majority 60(75) of those that discussed it were females who agreed that they discussed it with their spouses. This finding agrees with the recent works of [22], which showed that women were significantly more likely than men to report severe symptoms of depression, anxiety, and psychological distress, and their discussing it with their spouses could be indications for a therapist. The few 20(25) males who also discussed it did this either with their friends or a National Centre for Disease Control (NCDC) official but not their spouses.

Among those who discussed losing a patient under their care, 80(80) of them said they felt better after the discussion, while 20(20) said nothing changed about how they felt, even after they discussed it. This shows the effectiveness and need of a good therapist.

Results obtained also revealed that some of the respondents, 180(45) claimed that they needed to separate from their families and this affected them emotionally. This could be corrected by the production of facilities for video visits by the hospitals which are usually not available. Android phones could be used as substitutes. However, 220(55.0) of the respondents claimed that they were not affected emotionally by the separation, even though 280(70) claimed their needs were met while working. Additionally, 120(30) claimed their needs were not met, which is indicative of the gap in the healthcare system in Nigeria, which needs to be corrected for effective operations in crisis situations.

When asked about the infrastructure the government put in place to help tackle the pandemic, most 140(35.0) of the respondents indicated that the government gave targeted interventions, while others 120(30.0) agreed that hazard

allowance was also given even though the amount was not stated, but on a general note it was too small. Few 60(15.0) of the respondents said PPEs were in place, while some 40(10.0) agreed that there was a good working environment in place.

A handful 20(5.0) of the respondents agreed that incentives and good feedback mechanisms respectively were in place, but no respondents alluded to the fact that mental health facility to help frontline health workers overcome stress or Post Traumatic Stress Disorder (PTSD) was in place to help the frontline health workers, which is a major aim of this study.

Meanwhile the studies showed that few 60(15.0) of the respondents take regular holidays while many of them 340(85) agreed that they do not go for regular holidays. This could be the result of shortage of healthcare workers in the country since many of those qualified go in search of greener pastures outside Nigeria basically due to poor working conditions. From their own opinions, majority 240(60) of the respondents believed that COVID-19 was properly managed, 160(40.0) of the respondents said it was not properly managed.

About half 200(50) of the respondents believed that the healthcare system in Nigeria performed averagely, while 120(30) of them indicated that it performed poorly, and 40(10.0) of those that responded said that the healthcare care system in Nigeria performed very poorly. This rates the Nigerian health care system, as average.

When asked if they believed that the healthcare system in Nigeria will improve soon, 200(50.0) of those that responded said yes that it will improve soon, and another 200(50.0) said that they do not believe that it will improve anytime soon, indicating that it has a 50/50 chances of improvement.

In order to understand how the frontline health workers managed their stressed moments, notably, 140(35.0) of the respondents said they meditate when stressed out or feeling burnout, 100(25.0) said they socialized, 80(20.0) agreed to resorting to praying when they felt stressed out, while 40(10.0) either do nothing or watch television. Respectively, this is a pointer to the fact that feeling burnout needed a way to lighten up, (feel better, or have a sense of relief) and there should be a deliberate creation of an institution for this purpose, specifically for frontline healthcare workers in Nigeria.

Majority of the frontline healthcare workers, 300(75.0) were not comfortable with referring to their patients as “CASES” depending on how many patients they had, while 100(25.0) said they were comfortable referring to their patients as “CASES”. Apart from this, while trying to enlighten others on preventive measures, most of the respondents 240(60) preferred to use the phrase “social distancing”, while only 160(40) said they preferred to use the phrase “physical distancing.” More enlightenment is thus required on this because social distancing indicates a

disconnect between individuals while physical distancing shows that individuals are still connected but are just few meters away from each other.

Majority of the respondents 200(50) confirmed that areas that were more of concern to them were the lack of incentives, and some 40(10.0) said it was poor preparedness for the pandemic, while only 20(5.0) of the respondents said government’s poor performance and community spread respectively, were more of concern to them. Some 120(30.0) respondents said that government’s excellent performance was what drew their attention.

On a general note, majority of the respondents 240(60) said that government performed averagely in tackling the pandemic, while 40(10.0) of those that responded said that the government performed poorly. This has been a popular opinion despite the lack of necessary medical facilities.

Pearson correlation was used to evaluate the relationship between variables. The correlation matrix is an important indicator that tests the linear relationship, between variables. Table 4.2 above presents the correlation matrix of the variables.

From Table 4.2 above, it shows that government’s performance in tackling the pandemic and the areas that raised more concerns to the frontline health workers during the pandemic has a strong relationship and statistically significant but negatively correlated which is -0.099 , at 0.05 level of significance. This empirically implies that as government’s performance increases there will be less areas of concern among the frontline health workers which has the tendency of positively influencing the mental health of the frontline health workers, as seen in Table 4.2 above. It further implies that the relationship truly exists among the sampled population and that it did not randomly occur.

In order to further establish the significant relationships and the test of goodness to fit on government’s performance in tackling the pandemic and the areas that raised more concerns to the frontline health workers during the pandemic, regression analysis was conducted.

The Table 4.3 above summarizes the regression results. As indicated in the regression statistics the R-Square is 0.010, which suggests a positive relationship between the dependent variable that is: government’s performance in tackling the pandemic and the independent variable: areas that raised more concerns to the frontline health workers during the pandemic. The F – statistics shows that the equation or model employed is statistically significant at a value of 3.594 with P_{value} of 0.047 which means that the relationship between government’s performance in tackling the pandemic and the areas that raised more concerns to the frontline health workers during the pandemic is statistically significant ($p < 0.05$ level is statistically significant).

The judgment and estimation on these results however, is based on the dependent variable as well as the appropriate expectation where the ratio will be taken into consideration.

Government's performance in tackling the pandemic is found to be negative and significant at a t -ratio of -1.989, It also has a negative impact on areas that raised more concerns to the frontline health workers during the pandemic, having the value of its coefficient as -0.099. The sign indicates that the coefficient of concerns to the frontline health workers during the pandemic is negatively and significantly related to Government's performance in tackling the pandemic.

Empirically, the result implies that Government's performance in tackling the pandemic is significantly negative on the areas that raised more concerns to the frontline health workers during the pandemic, which shows that 1% of the concern was accounted for by the government's performance in tackling the pandemic.

Test of Hypothesis

H₀: There is no significant relationship between Government's performance in tackling the pandemic on areas that raised more concerns to the frontline health workers during the pandemic.

The decision rule is that, accept the null hypothesis if the correlation between variables is positive (+), and to reject null hypothesis if the result is negative (-).

From the above analysis shown in Table 4.2 and 4.3, it is clear that the variables have strong negative significant relationship of -.099* on Government's performance in tackling the pandemic on areas that raised more concerns to the frontline health workers during the pandemic at < 0.5 significance. For this reason the null hypothesis is rejected and the alternative accepted which means: There is significant relationship between Government's performances in tackling the pandemic on areas that raised more concerns to the frontline health workers during the pandemic.

VI. CONCLUSION

This work assembles the impact of COVID-19 on frontline health workers. The findings from the studies show that, various factors such as the lack of PPEs, lack of incentives, and lack of policies to deal with mental health symptoms such as anxiety and depression place the frontline health workers at risk of the COVID-19 infection itself, apart from placing them on the pedestal of mental health injury or psychological distress. This work clearly shows the need for a mental health clinic or therapy for the frontline health workers themselves. These findings also warrant further research in order to put in place good mental health policies for frontline health workers in Nigeria as well as globally.

RECOMMENDATIONS

1. Mental health policies for frontline health workers should be made to cut across federal, state, and local government areas to boost the health care systems in Nigeria, with the following considerations.
 - (a) Decent healthy and safe working conditions should be provided in the context of COVID-19 for frontline health workers. .
 - (b) There should be provision of mental health and psychological support facilities for frontline health workers.
 - (c) There should be the implementation of surveillance measures to detect critical incidents and alleviate their impacts on the mental health of frontline health workers.
 - (d) Full implementation of the WHO and ILO recommendations for prevention of fatigue during an emergency situation should be made, with consideration to rotate workers from high risk to low risk functions.
 - (e) Policies on mental health by the federal government should as a matter of urgency, ensure the availability of, and facilitate access to confidential mental health and psychosocial support services for frontline health workers, which should include remote and onsite services.
 - (f) Government should also provide a mechanism for early and confidential management of anxiety and depression and other mental health conditions as first- line intervention.
 - (g) Lastly stigmatization of frontline health workers who have had mental health conditions should be avoided, with stringent consequences for offenders.
2. A COVID-19 tele health program should be made available to all health facilities in Nigeria to aid information dissemination.
3. Financial revamping of healthcare systems in the country should be made to attend to issues that raise concerns to the healthcare workers, for example, incentives linked to high quality care using a value-based payment strategy.

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