Motivation and Performance of Medical Health Professionals: A study of COVID-19 Experience in Nigeria

Sabiu Salihu Malam[1], Abubakar Isah Baba[2], Yahaya Umar Namahe[3], Abdullahi Bala[4]

[1,2] Department of Public Administration, Umaru Ali Shinkafi Polytechnic, Sokoto

[3] Department of Social Development, Umaru Ali Shinkafi Polytechnic, Sokoto

[4] Department of Accounting, Umaru Ali Shinkafi Polytechnic, Sokoto

Abstract

The paper explored the influence of the of the workplace environment on the performance of medical and healthcare professionals in Nigeria during COVID-19. Only 1582 genuine responses were used out of 2400 questionnaires that were given out to respondents. Smart PLS-SEM 4.0 version was used to evaluate the data, and the results show that the claim of the hypothesis is strongly supported by the result. The study confirmed previous research by showing a positive association between performance and motivation. This finding has implications for administrators, managers, and policy makers in particular, and it has also revealed that employees are always willing to stick around and pursue the goals and objectives of the organization if they are highly motivated. The finding has also contributed to the expansion of motivation and performance literature.

Keywords: Motivation; Performance; Medical Health Professionals; Covid-19; Nigeria

1 Introduction

The COVID-19 epidemic is a recent global catastrophe that defies social theories, metaphysical intuitions, and epidemiological model's scientific presumptions. The pandemic is the worst threat to humanity since the Second World War and a global health disaster. The World Health Organization identified the pandemic as COVID-19 when it first surfaced in Wuhan, Hubei province, China, in December 2019. (Chakraborty, & Maity, 2020, Kura et al 2023). All of history's horrors were dwarfed by the frightening epidemic, which largely encroached on the era of science and technology in the previous century. Over 440,000 people have died and more than 3.9 million people have recovered from COVID-19 instances around the world as of this writing (Mahmud & Rezaul, 2020). In order to prevent the spread of the virus, preventive measures like mandatory lockdowns, mandatory international travel bans, remote office activities, and social seclusion in the form of formal and informal quarantine systems have been implemented, forcing billions of people to stay at home (Anwar, Nasrullah & Hosen, 2020).

When an Italian national in Lagos tested positive for the virus on February 27, 2020, Nigeria, a heavily populated nation in West Africa, formally reported its first index COVID-19 case. A second case of the virus was discovered in a Nigerian individual who had contact with the Italian citizen on March 9, 2020, in Ewekoro, Ogun State. On January 28, the Federal Government of Nigeria gave its citizens assurances that it was prepared to step up security at the nation's five international airports to stop the coronavirus from spreading. Enugu, Lagos, Rivers, Kano, and the FCT airports will be closer to one other, the administration de-

clared (P. M. News,2020). The same day, the Nigeria Centre for Disease Control also made the announcement that a coronavirus group had been established and was prepared to go into action should a case be discovered in Nigeria. The federal government of Nigeria established a Coronavirus Preparedness Group on January 31 in response to the progression of the Covid-19 epidemic in mainland China and other nations across the world. The group's goal is to lessen the virus's effects should it ever move to Nigeria. The World Health Organization recognized 13 other African nations on the same day as having a high risk of the virus spreading, and included Nigeria in that list. A Chinese national who was believed to have coronavirus infection submitted himself to the Lagos State administration on February 26.. He was admitted at Reddington Hospital and was released the following day after testing negative (Maclean, Ruth; Dahir, & Abdi Latif, 2020).

As the present COVID-19 pandemic has once again shown, any health system's ability to function depends on the availability of an adequate number of skilled and motivated healthcare professionals. The COVID-19 issue highlights the crucial role and commitment of frontline healthcare professionals, as well as the pervasive challenge of staff shortages and the significant contribution that doctors and nurses make to the battle against the disease. Additionally, they lack sufficient inspiration and protection and labor in terrifying and demanding circumstances. Evidence from the literature demonstrates that nations around the world have implemented dramatic efforts to reward and inspire the frontline employees. France, for instance, announced in August 2020 that medical professionals would receive a monthly rise of USD 208. (Newswire ,2020). Ghana's government offered a daily stipend of USD 25.6 for contact tracers, USD 4322 in insurance coverage for COVID-19-related illness or death, and a temporary exemption from paying taxes on frontline staff members' monthly salaries (Oyadiran, Agaga & Adebisi, 2020). Throughout the Ebola response, team members in charge of burying Ebola victims in Sierra Leone were paid USD $100 each week. MHPs in Nigeria, on the other hand, typically earn a hazard allowance of less than $20 per month, with no adjustment for the pandemic (Oyadiran, Agaga & Adebisi, 2020). Although doctors have gone on strike, their demands for a higher hazard allowance and more comprehensive life and health insurance have not yet been fully met. Given the dangers that MHPs face in Nigeria, it is clear that a higher pay plan is required (Aliyev,2020).

Frontline medical staff in Nigeria struggle to meet basic needs, as Abiola (2021) accurately notes. And that, together with low pay and miserable working conditions, has led to a significant exodus of physicians. According to reports, more than 33,000 of Nigeria's 75,000 registered doctors have left the country for countries with higher incomes in search of better living and working conditions, leaving a health system that is underserved with a doctor-to-patient ratio of 1:10,000 as opposed to the recommended 1:600 by the World Health Organization. Nigeria has undergone more than three national doctor's strikes in the past year. The government has a variety of requests, including enhanced pandemic response plans, better working conditions, and enough fiscal support for health (Abiola, 2021). In order to enhance MHP performance in Nigeria and to inspire the medical workforce to meet the demands of a potential pandemic breakout, the goal of this research study is to examine the effect of motivation on performance.

It is concerning that medical professionals in Nigeria and other nations are becoming more and more infected with COVID-19. Nigeria, with 401 infected medical personnel, has the largest proportion of infected COVID-19 medical personnel as of mid-May 2020. With 606 health workers infected by the coronavirus as of May 26, 2020, the nation still has the highest rate in the area (Oludamilola, Oluseyi & Friday, 2020). No fewer than 812 healthcare professionals have been infected with the virus, according to current information from the Nigeria Centre for Disease Control (NCDC). Lack of motivation efforts that frequently result in industrial strike activities have an impact on the performance of medical professionals in Nigeria. Due to unpaid salaries and benefits, doctors went on an indefinite strike during the

COVID-19 pandemic.Sadly, rather of offering alternatives, the government is threatening the healthcare workers with a "no work, no pay" decree. Given the risks MHPs in Nigeria face, it is clear that they want a higher compensation package (Aliyev, 2020).

On the empirical side, several studies have examined the safety and welfare of Health workers in combating COVID-19 outbreak in Nigeria (Jimoh, etal., 2020; Chundung, etal., 2020; UNDP 2020; Matthew, et,al. 2020; Ogolodom, et.al, 2020; Singhal ,2020; Aliyev, 2020; Akindare and Okunola, 2021; Oloko, 2021; Abiola, 2021; Itodo, 2020; Moda, 2021; Raghavan, Jabbarkhail and Ahmady,2020; Albahri, etal. 2020; Hoang, et al, 2021), However, only few or none of this study conduct in-depth assessment of the impact of motivation on performance of health workers in entire Nigeria in the amidst of Covid-19 pandemic. The existing studies also fails to provide clear scope and empirical data to support their arguments. There also exist a huge gap in the literature of covid-19, particularly on how to improve on performance of health workers through motivation. Consequently, this study intends to fill this gap by examining the influence of motivation on the performance of medical health professionals in era of covid-19 in all the 6 geo-pollical zones of Nigeria.

2. Literature Review

2.1 Concept of Performance

Performance is the ability of a worker to accomplish a given task based on time and resources allocated by the organization (Sonnentag & Frese, 2005). Mathis and Jackson (2009) believe that performance is related with the value of output, quantity of production, attendance of the task, timeliness of output, efficacy of the work completed and effectiveness of the work achieved. Meanwhile, Mangkunegara and Anwar (2005) define performance as the quantity of excellent work performed by a worker in an organization.

2.2 Concept of Motivation

Motivation refers to the internal and external forces which lead to work-related behavior, and determine its form, intensity, direction and duration (Altindis, 2011). According to Robbins (2003) motivation is the practices that are contained in persuading individuals, direction and continual effort toward achieving a goal.

2.3 Empirical Studies on Motivation and Performance of MHPs

A lot of researches have been carried out on motivation and medical health professional's performance among them are Chmielewska, Stokwiszewski, Filip, and Hermanowski (2020) investigate the connection between certain motivational elements that influence medical practitioners' attitudes toward their jobs at public hospitals and the operational effectiveness of hospitals. The study made use of questionnaires created by the World Health Organization to gauge organizational performance in hospitals using the McKinsey model and assess motivation elements in accordance with Herzberg's theory of motivation. According to the study, "quality and style of supervision"-related motivational factors have the greatest impact on hospitals' organizational performance. The researchers come to the conclusion that in order to provide clear guidelines on how to provide performance feedback to specific physicians, the principles of Individual Performance Review should be incorporated into initiatives intended to enhance the organizational performance of hospitals. Ehiogha, Madukoma, and Unegbu (2020) investigate how resident doctors perform on the job in government teaching hospitals in southwest Nigeria. The health of enterprises is gauged by employee performance. Findings showed that resident doctors' job performance in government teaching hospitals was extraordinarily high. However, there were staffing issues, which always resulted in the resident doctors having to handle a lot of work and stress. The opportunities for advancement

were also limited. It was, therefore, recommended that the management of the teaching hospitals should increase the staff strength of the resident doctors to avoid stress and burnouts.

The goal of Deborah, Muthuri, Senkubuge, and Hongoro's study from 2020 was to compile the motivational factors that healthcare professionals in the EAC reported between 2009 and 2019. Four databases—the Cochrane Library, EBSCOhost, ProQuest, and PubMed—were used to conduct a thorough search. Based on the authors' selection criteria, the eligible articles were chosen and reviewed. 30 studies in all qualified for review. Participants in this systematic review came from all six EAC member countries. Healthcare professionals' reported determinants from six different countries were combined. Determinants at the individual, organizational/structural, and societal levels were reported, revealing the roles of the healthcare worker, healthcare facilities, and the government in terms of health systems, as well as the community or society at large, in fostering the motivation of healthcare workers. For East Africa's health workforce to be strengthened and healthcare worker motivation policies to be informed, monetary and non-monetary factors of healthcare workers' motivation must be reported.

The impact of motivation on employee performance in Catholic hospitals in the Archdiocese of Bamenda was examined by Amaka, Mayin, and Wilfred in 2020. Contrary to predictions, the results demonstrate that material and financial motivation had little effect on output. Therefore, they came to the conclusion that employee performance in Catholic hospitals of the Archdiocese of Bamenda was positively and statistically significantly impacted by motivation. The study suggested that, among other things, Directors should properly appreciate, promote, and shorten the workweeks of employees in Catholic health institutions.

In tertiary hospitals in North-Central Nigeria, Kolawole and Unegbu (2021) assessed the impact of employee motivation on the service delivery of health records professionals. The study used a survey methodology with 600 health records specialists as the study population. The formula for sample size determination for a finite population, as stated by Krejcie and Morgan (2002) and employed by Research Advisors, was used to establish the sample size for the study (2006). The results showed that some of the services provided by health records specialists in tertiary hospitals in North-Central Nigeria include creating, storing, and retrieving patient records, maintaining the confidentiality of health records, and overseeing the hospital's appointment system or control. According to the study's findings, the government should make sure that regulations governing the keeping of medical records in hospitals are created and put into place because most institutions lacked such policies. To encourage health records management specialists to constantly deliver their best effort, the study suggested that the workplace environment be made highly hospitable.

Alimi, Ismaila, Rabi, and Garba (2020) used a descriptive research survey in conjunction with primary and secondary sources of data collection to gather the information needed on the effects of motivation on medical health worker performance. The study's findings revealed a significant association between motivational incentives and worker absenteeism and subpar performance in medical health centers (Hospitals). Based on the above findings, therefore, the present study proposed that

H There is a significant relationship between extrinsic motivation and performance of MHPs

3. Methodology

With the help of research assistants and the Google Questionnaires softwire, the current study disseminated 2400 questionnaires to the medical and health personnel in the six geographical regions of Nigeria. 1600 surveys were recovered from the respondents by phone calls, follow-ups, and research support activities. The remaining (18) were eliminated because to incorrect filling and an outlier problem, as advised by the study of which only 1582, or 65 percent, were used for further investigation ((Ahmad et al., 2019; Ahmed et al., 2020; AlAnazi et al., 2021; Ekpe et al., 2017; Hair, Anderson,Tatham & Black, 1998, Ibrahim et al., 2020; Kura et al., 2015; Kura, 2016; Kura et al., 2016, 2019; Muhammed et al., 2020). Details on demographic features of the respondents are shown in Table 1.

Demographic features of respondents

Item	Frequency	Percentage
Gender		
Male	998	63.0
Female	584	38.0
Age		
21-30	564	35.4
31-40	632	40.5
41-50	322	20.3
51and above	64	4.0
Years of Experience		
1-5	496	31.3
6-10	294	18.5
11-15	284	18.0
16-20	210	13.3
21-25	150	9.4
26-30	130	8.2
31 and above	18	1.1
Marital status		

Married	1251	79.0
Single	331	21.0
Qualification		
Diploma Nursing	780	49.3
Degree	430	27.1
Master Degree	250	15.1
Consultant	122	7.7
Nature of Job		
Administrative/Professional class	72	4.1
Doctors	701	44.3
Nurses	702	44.3
Others	107	8.0

The table above displays the respondents' demographic profile. The respondents were required to provide certain demographic data, including their gender, age, number of years of experience, marital status, level of education, and line of employment. The findings indicate that 998 (65.0 percent) of the MHPs that responded were men, while 584 were women (38.0 percent). This shows that although men still predominate the industry, women are still represented. Regarding the ages of the respondents, 322 workers (25.2%) were between the ages of 41 and 50, 564 respondents (40.5 percent) were between the ages of 31 and 40, 662 respondents (28.7 percent), and 564 respondents (40.5 percent) were between the ages of 21 and 30. Following that are those aged 51 and up, who account for 64 (5.6 percent) of the total responses. Meanwhile, 780 workers (39.6%) have a Diploma/Nursing qualification. Following that, 122 employees (14.4 percent) and 430 employees (29.4 percent) are consultants. A total of 492 respondents had between one and five years of work experience (31.36%), 294 had between six and ten years of work experience (18.1%), 284 had between thirteen and three years of employment (18.1%), 210 had between sixteen and twenty years of work experience (16.4%), 150 had between twenty-one and twenty-five years of work experience (16.4%), and 130 had between twenty-five and thirty years of work experience (16.4%). (1.4 percent). In terms of marital status, 1251 employees (79.1%) are wed, while 361 employees (27.0%) are still unmarried. The MHPs represented all categories or groups in terms of age, years of experience, and marital status. The descriptive data also showed the kind of employment the respondents had. Given that 72.1 percent of the workforce falls into this group, it is clear that administrative and professional work makes up the majority of the employment held by the workforce. With 701 employees, or 44.3 percent of the total, physicians come in second. There were also 107 other staff (8.0%) and 702 nurses (44.3%) in total.

3.1 Instruments

In the study, motivation and performance were examined as independent and dependent factors, respectively. The variables and scales were measured using a seven-point item scale with the following descriptions: 1 = strongly disagree, 2 = somewhat disagree, 3 = disagree, 4 = undecided, 5 = agree, 6 = moderately agree, and 7 = strongly agree. The items were modified from earlier studies; in particular, a scale designed to measure motivation was used (Altindis, 2011). While a scale created by was used to measure performance (Koopman, et al, 2014). To analyze the model and test the study hypothesis, the researchers used multivariate analysis with Smart-PLS version 3. The researcher has the opportunity to evaluate the overall measurement model and look at relationships with their individual measures by using the PLS-SEM modeling method (Hair, Black, Babin & Anderson, 2010). In order to evaluate the measurement and structural models, this work used PLS-SEM techniques.

3.2 Validity and Reliability of Measures

In this study, PLS-SEM algorithms were used to analyze the measurement model and assess the construct's validity and reliability. The standards employed in PLS-SEM analysis to evaluate the goodness of the fit models include reliability and validity assessment of constructs ((Abubakar et al., 2018; Hair, Hult, Ringle, & Sarstedt, 2013; Mashod et al., 2023; Ringim et al., 2018, 2020; Ringim & Reni, 2019). In order to ascertain the measure's internal consistency, the researcher performed a reliability analysis. Table 2 displays the specific findings of the validity and reliability tests based on the Composite reliability and Average Variance Extracted. The table shows that the composite dependability of the model's constructs is above the benchmark of 0.70, with values ranging from 0.853 to 0.916, respectively (Hair et al., 2014). Additionally, the Average Variance Extracted (AVE) is within the range of 0.885 and 0.923, indicating that the minimum threshold of 0.50 is met (Hair, et al., 2013). The Table also included information about the path coefficient's (R2) significance. It demonstrates that the factors for the direct relationship accounted for 382% of the variance. As a result, it was thought that all of the constructs had sufficient reliability.

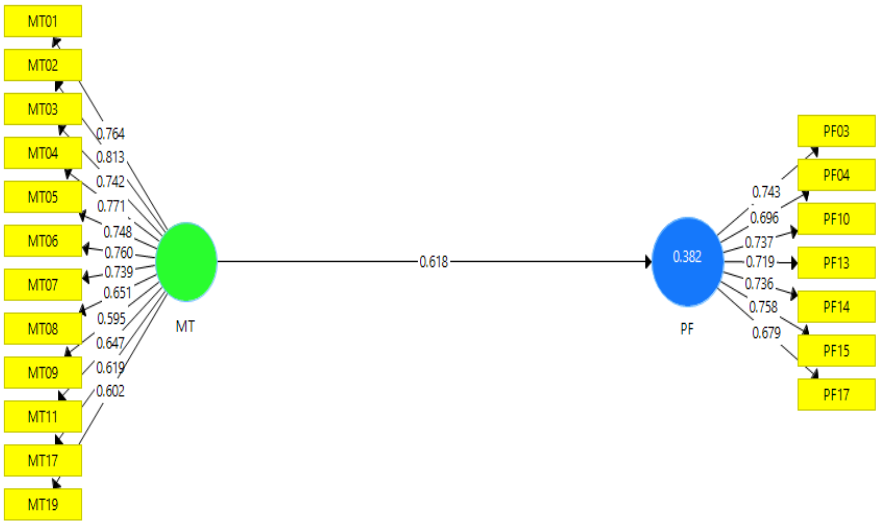


Figure 2 Measurement Model

4. Results

Table 2

Showing the AVE, CR and R^2

Constructs	CR	AVE	R2
Motivation (MT)	0. 916	0. 923	0.382
Performance (PF)	0.853	0.885	

Table 3

Latent Variable Correlations and Square Roots of AVE

Constructs	1	2	3	4
PE	**0.708**			
MT	0.618	**0.724**		

The Fornell and Larcker criterion, one of the most used techniques for proving discriminant validity, was applied in the current investigation. This strategy is accomplished by contrasting the AVE for each individual concept with the squared correlations between the constructs (Fornell & Larcker, 1981). The findings of this study's discriminant validity test using the Fornell and Larcker criterion are presented in Table 3. The indicators measuring the variables show that the squared correlations of all the variables in this study were below the AVE.This demonstrates that both convergent and discriminant validity are up to par.

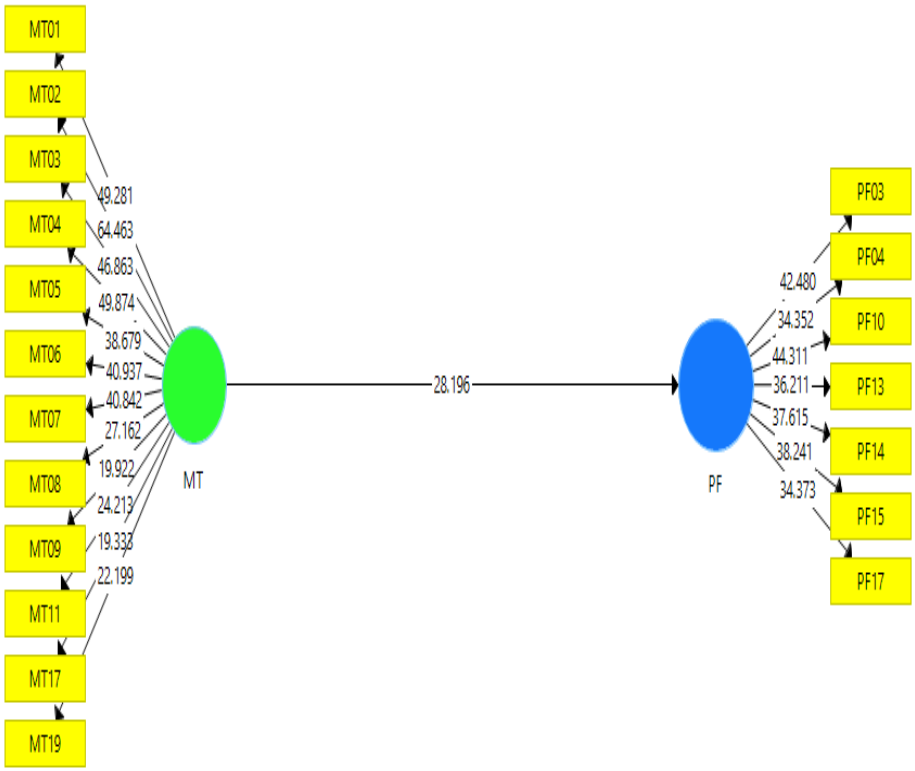


Figure 3 Structural *Model*

4.1 Hypothesis Testing

To test the hypothesis in the current study, the PLS-SEM bootstrapping mechanism was used to measure the path coefficients' significance (se Figure 3). The paper hypothesized that H1. There is a positive relationship between Motivation and performance of medical health workers. The statistical results from PLS-SEM bootstrapping confirmed a significant positive relationship between Motivation and performance MT and PF (ß = 0.018, t = 28.196, p < 0.000). as can be seen in Table 4.

Table 4

Table 4.4 Summary of Findings and Hypothesis Testing

Hypoth-eses	**Construct**	**Beta**	**Stand-ard Error**	**T Sta-tistics**	**P-value**	**Decision**
H1	MT -> PF	0.022	0.618	28.196	0.00	Supported

4.2 R-square (R^2)

R-square (R^2) refers to the degree of the predictive accuracy of a model, which is calculated as the squared correlation among the dependent variable's real and projected value (Hair *et al.*, 2014). The R^2 value indicates the collective effects of the independent variables on the dependent variable (Hair *et al.*, 2010; Hair *et al.*, 2006; Hair *et al.*, 2014). Thus, the R^2 value of the independent variable is shown in below.

Coefficient of Determination R-Squared at the construct level

Construct	**R-Squared Value *(R^2)***
Performance	0.382

Though it is difficult to offer a benchmark for the acceptable level of the R^2 value as it mostly depends on the intricacy of a model and the area of specialization, some writers have given some rough standard of R^2 value (Hair *et al.*, 2014). Precisely, Cohen (1988), proposed that R^2 values of 0.2, .13 and .27 indicates weak, moderate and substantial R^2 values. Thus, results in shown above indicated that the R^2 value of performance (.382) is substantial.

4.3 Assessment of Predictive Relevance (Q^2)

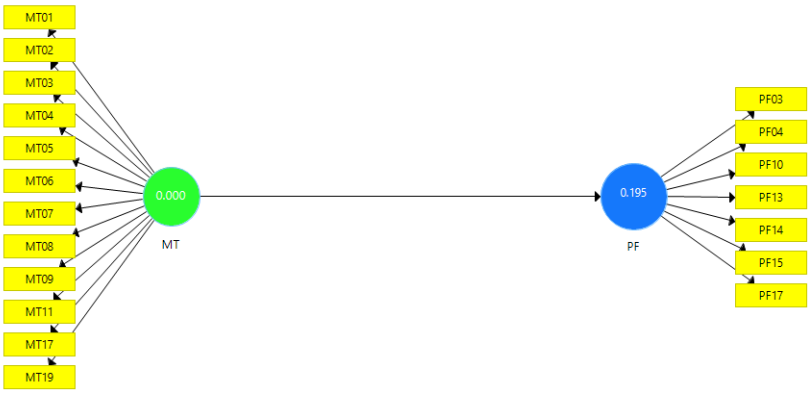
An inner model had to be capable of showing that it could forecast the indicators of the dependent variable, according to the Stone-Geisser criterion, which was used to evaluate the predictive relevance of all the models (Henseler et al., 2009). Additionally, this criterion, according to Hair et al. (2014), serves as a pointer of a model's predictive usefulness. On the

other hand, it can be assumed that this criterion serves as an additional evaluation of how well the model fits into the PLS-SEM analysis (Duarte & Roposo, 2010; Stone 1974). Consequently, the predicted relevance (Q2) demonstrates how well the model, its parameter estimations, and the observed values are created (Chin, 1998).

However, the Stone-Geisser Q2 test, which is measured using blindfolded techniques, can be used to evaluate the predictive relevance Q2 (Hair Jr. et al., 2013; Henseler et al., 2009). In order to obtain the cross-validated redundancy measure for the dependent variable, the current study used the Stone-Geisser test to measure the Q2 while blindfolded (Hair Jr. et al., 2013). According to Henseler et al. (2009), any model with a Q2 value larger than zero is said to have predictive significance; hence, the higher the Q2, the greater the predictive relevance (Duarte & Roposo, 2010). Below is a presentation of the Q2 value that was obtained in this model while blindfolded.

Predictive Relevance: Q-Square at the construct level

Construct	SSO	SSE	I-SSE/SSO
Performance	7308	5883.118	0.195



As can be seen above, the blindfolding result of the cross-validated redundancy (*Q*2) of the latent endogenous variables of the measurement model of this study. The result presents that, the cross-validated redundancy (*Q*2) of performance is higher than zero; which clearly shows the existence of predictive relevance (*Q*2) in the path model (Chin,1998;Hayes,2009).

5. Discussion

The paper surveyed the relationship between Motivation MT and performance PF of medical health workers during corona pandemic in Nigeria. The demographic data of the respondents was carried out using the SPSS software version 23. The PLS-SEM analysis revealed a statistical proof of a significant optimistic association between the latent variables (MT and PF). The Results of study were similar to the results of previous studies on the relationship between the target variables (Baba & Ghazali,2017; Danish,Shahid & Humayon, 2015; Kreye & Kreye, 2016; Makki, & Abid, 2017; Rogstadius et al., 2000; Amaka, Mayin, and Wilfred, 2020; Alimi, Ismaila,Rabi,and Garba, 2020; Kolawole, and Unegbu, 2021; Deborah, Muthuri, Senkubuge and Hongoro, 2020; Chmielewska, Stokwiszewski, Filip and Hermanowski, 2020). This indicates that,Motivation plays significant role towards improving productivity. This is because whenever workers are provided with the needed motivation, they will be feel-

ing contented with their work and have fewer feelings to leave and as well feel more committed to their work and this help to increase their performance. This is in line with Manouchehri, Branch and Katoul (2014), argument, who noted that whenever workers perceived a fairness in their treatment (Reward system) , they tend to exhibit positive behaviors that leads to high commitment to work and prevent turnover intentions which in turn lead to performance in organizations (Manouchehri, Branch & Katoul, 2014).

6. Conclusion

The study investigated the influence of motivation on performance of medical health workers during covid-19 in Nigeria. Out of 2400 questionnaires distributed only 1582 valid responses were retrieved from the respondents. The data obtained was analyzed through Smart PLS-SEM version 3 and empirical evidence indicates a strong support for the hypothesis's statements. As an extension of past studies, the present study revealed that there is positive relationship between motivation and performance. This finding has implication particularly to administrators, managers and policy makers in organizations, that motivation should be adequately provided, in addition to that, the finding has also revealed that, workers are always ready to remain and pursue the goals and objectives of the organization if they are provided with needed motivation. Based on the above findings, the paper recommends that inclusion of an intervening variable such moderator or mediator to the model. Similar study should be conducted in other zones of the country with a view to have generation of the findings. Further research can also consider medical health workers in the private sector. In conclusion, based on the foregoing, it can be convincingly said that, the present study has further advanced the value in terms of theoretical, methodological and managerial implications to performance of Nigeria health workers literature.

References

Abubakar, R. A., Kura, K. M., & Ringim, K. J. (2018). Total quality management, firm performance, and the moderating role of competitive intensity. *KASU Journal of Supply Chain Management*, *3*(1), 10–20. http://www.myjurnal.my/filebank/published_article/79534/Ramatufull.pdf

Ahmad, A., Kura, K. M., Bibi, P., Khalid, N., & Jaaffar, A. (2019). Effect of compensation, training and development and manager support on employee commitment: The moderating effect of co-worker support. *RISUS – Journal on Innovation and Sustainability*, *10*(2), 339–355. https://doi.org/https://doi.org/10.23925/2179-3565.2019v10i2p39-55

Ahmed, U., Kura, K. M., Umrani, W. A., & Pahi, M. H. (2020). Modelling the Link Between Developmental Human Resource Practices and Work Engagement: The Moderation Role of Service Climate. *Global Business Review*, *21*(1), 31–53. https://doi.org/https://doi.org/10.1177/0972150919837813

AlAnazi, A. A., Kura, K. M., Suleiman, E. S., & Abubakar, R. A. (2021). Mediating effect of organisational innovation in the prediction of change-oriented leadership on organisational performance. *International Journal of Innovation Science*, *ahead-of-p*(ahead-of-print). https://doi.org/10.1108/ijis-03-2021-0051

Al-hasan, S. M. I & Arriff, T. M. (2019), The Effects of Motivation on Job Performance of Nurses in Jordanian Nursing Hospitals; *International Journal of Engineering Research and Management* (IJERM) Volume-06, Issue-05.

Alimi,B.,Ismaila,U.,Rabi I.,& Garba, A (2020), Consequences of Motivation on Medical Staff Performance of Some Selected Public Hospitals in Maiduguri, Borno State, Nigeria.*African Scholar Journal of Humanities and Social Sciences* (JHSS-6); VOL. 19 NO. 6

Aliyev J. (2020), Nigeria: 113 Healthcare Workers Infected with COVID-19; 2020. Available from: https://www.aa.com.tr/ en/africa/nigeria-113-healthcare-workers-infected-withcovid-19/1

Akindare, O. (2021), Nigeria's Doctors are Striking. Here's Why and What This Means for COVID-19. Available from: https:// www.globalcitizen.org/en/content/nigeria-doctors-strikeCOVID-19-heal

Amaka, E. T.N., Mayin, K. B and Wilfred, M, (2020), The Effect of Motivation on Health Workers' Performance in Four Health Institutions of The Archdiocese f Bamenda, Cameroon; *International Journal of Economics, Commerce and Management;* Vol. VIII, Issue 10,

Andersen, L.L.; Clausen, T.; Mortensen, O.S.; Burr, H.; Holtermann, A. A (2011) prospective cohort study on musculoskeletal risk factors for long-term sickness absence among healthcare workers in eldercare. Int. Arch. Occup. Environ. Health, 85, 615–622.

Anwar, S., Nasrullah, M., & Hosen, M. J. (2020). COVID-19 and Bangladesh: Challenges and how to address them. *Frontiers in Public Health, 8*. 10.3389/fpubh.2020.00154. (PMC free article) (PubMed)

Ayalew et al. (2019), Understanding job satisfaction and motivation among nurses in public health facilities of Ethiopia: a cross-sectional study; *BMC Nursing* 18:46 https://doi.org/10.1186/s12912-019-0373-8

Blomberg, H. & Welander, J. (2019), "A narrative study of newly graduated registered swedish nurses' establishment in the profession and the portrayal of a healthcare organization", *Journal of Health Organization and Management*, Vol. 33 No. 4, pp. 413-425, doi: 10.1108/jhom-09-2018-0251

Bradley, S., Kamwendo, F., Chipeta, E., Chimwaza,W., Pinho, H. D., & McAuliffe, E. (2015). Too few staff, too many patients: A qualitative study of the impact on obstetric care providers and on quality of care in Malawi. BMC Pregnancy and Childbirth, 15 (1), doi: 10.1186/s12884-015-0492-5

Cascella, M. Rajnik, A. Cuomo, S.C. Dulebohn, R.D. Napoli. (2020). Features, Evaluation and Treatment Coronavirus (COVID-19). (1st edition). [Online]. pp. 1-20. Available: https://www.ncbi.nlm.nih.gov/books/NBK554776/.

Center for Disease Control and Prevention (CDC). COVID 19 What you should know. Available at https://www.cdc.gov/coronavirus/2019-ncov/about/symptoms.html

Center for Disease Control and Prevention (CDC). Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease 2019 (COVID-19

Center for Disease Control and Prevention (CDC). Preventing COVID-19 Spread in Communities article.

Chakraborty, I., & Maity, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. *Science of the Total Environment, 138882*. 10.1016/j.scitotenv.2020.138882. [PMC free article] [PubMed]

Chmielewska, M. Stokwiszewski , J. Filip, J. & Hermanowski, T. (2020), Motivation factors affecting the job attitude of medical doctors and the organizational performance of public hospitals in Warsaw, Poland; *BMC Health Services Research* https://doi.org/10.1186/s12913-020-0557

Daneshkohan, A., et al, (2015), Factors Affecting Job Motivation among Health Workers: A Study from Iran; *Global Journal of Health Science*; Vol. 7, No. 3

Deborah, R. N.., Muthuri , K., Senkubuge, F., &Hongoro, C. (2020), Determinants of Motivation among Healthcare Workers in the East African Community between 2009–2019: A Systematic Review

Deng SQ1, Peng HJ (2020). Characteristics of and Public Health Responses to the Coronavirus Disease 2019 Outbreak in China. *Journal of Clinical Medicine* 9(2), 575; https://doi.org/10.3390/jcm9020575

Ehioghae, M., Madukoma, E., Unegbu, E. V. (2020), Job performance of resident doctors in government teaching hospitals in South-western Nigeria; *Journal of Library Services and Technologies*, 2(1), 17-29, (Print) 2636-7424 (Online) Available online at credencepressltd.com DOI: 10.47524/jlst.v2i1.2

Ekpe, I., Mat, N., Ahmad, A., & Kura, K. M. (2017). Effect of crowd-funding on entrepreneurial intentions among academic staff of Nigerian universities. *International Journal of Management in Education*, *11*(4). https://doi.org/10.1504/IJMIE.2017.086891

Etukumana ,E. A and Orie, J. B (2017), Health workers' perception on the work, working conditions, compensation, and carer development in a Nigerian tertiary hospital *Nigerian Journal of Family Practice* vol. 8

European Centre for Disease Prevention and Control (ECDC). COVID-19 situation updates worldwide, Epidemiological update. Available at; https://www.ecdc.europa.eu/en/geographical- distribution- 2019- ncov-cases

Franco LM, Bennett S, Kanfer R. (2002), Health sector reform and public sector health worker motivation: a conceptual framework. *Soc Sci Med*. ;54: 1255–66

Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). Multivariate data analysis: *A Global Perspective*, *7*.

Hair, J. F., Jr., Black, W. C., Babin, B. J., Andersen, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed). Upper Saddle River: Pearson Prentice Hall.

Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1998). *Multivariate Data Analysis* (5 ed.). . US: Prentice-Hall PTR.

Hair, J.F., Ringle, C.M. & Sarsterdt, M. (2012). Partial Least Squres; The better application to structural equation modeling. *Long Range Planning*, *45*(5–6), 312–319.

Hair, J.F., Ringle, C.M. & Sarsterdt, M. (2013). Partial Least squares Structural equation modeling: Rigorous application, better relation and higher acceptance. *Long Planning*, *46*, 1–12.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *The Journal of Marketing Theory and Practice*, *19*(2), 139–152. https://doi.org/10.2753/MTP1069-6679190202

Ibrahim, N. A., Kura, K. M., & Dasuki, S. I. (2020). Problematic internet use and health outcomes: Does trait self-control matter? *International Journal of Management Studies*, *27*(2), 77–96. http://ijms.uum.edu.my/images/IJMSvol27no2july2020/77-96.pdf

James, E. O., & Iyabo, A. Y. (2019), Motivation and Job Performance Among Nurses' In The University of Calabar Teaching Hospital, Calabar Cross River State *International Journal of Nursing, Midwife and Health Related Cases* Vol.5, No.2, pp.1-18,

Kigwangalla, H. A. (2007), Job Motivation and Associated Factors among Health Workers in Urban Public Hospitals in Tanzania, Master's Thesis in Business Administration, Blekinge Institute of Technology

Kolawole, A.Y., Unegbu, V. E. (2021). Influence of employee motivation on service delivery of health records professionals in tertiary hospitals in North- Central Nigeria. *Inter. J. Acad. Res. Educ. Rev*. 9(4): 196-205

Kura, K. M. (2016). Re-examining the relationship between perceived workgroup norms, self-regulatory efficacy and deviant workplace behaviour. *African Journal of Economic and Management Studies*, *7*(3), 379–396. https://doi.org/10.1108/AJEMS-08-2014-0055

Kura, K. M., Shamsudin, F. M., & Chauhan, A. (2015). Does Self-Regulatory Efficacy Matter? Effects of Punishment Certainty and Punishment Severity on Organizational Deviance. *SAGE Open*, *5*(2), 1–14. https://doi.org/doi:10.1177/2158244015591822

Kura, K. M., Shamsudin, F. M. F. M., & Chauhan, A. (2016). Organisational trust as a mediator between perceived organisational support and constructive deviance. *International Journal of Business and Society*, *17*(1), 1–18. https://doi.org/10.33736/ijbs.506.2016

Kura, K. M., Shamsudin, F. M., Umrani, W. A., & Salleh, N. M. (2019). Linking Human Resource Development Practices to Counterproductive Work Behaviour: Does Employee Engagement Matter. *Journal of African Business*, *20*(4), 472–488. https://doi.org/10.1080/15228916.2019.1583974

Lai C-C, Shih T-P, Ko W-C, Tang H-J, Hsueh P-R (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID19): the epidemic and the challenges. *Int J Antimicrob Agents*. 105924.

Leshabari, M. T.Eustace P.Y.Muhondwa M.A.Mwangu, Naboth A.A.Mbembati (2008), Motivation of Health Care Workers In Tanzania: A Case Study of Muhimbili National Hospital; *East African Journal of Public Health* Volume 5 Number 1

Maclean, Ruth; Dahir, Abdi Latif (2020), "Nigeria Responds to First Coronavirus Case in Sub-Saharan Africa". The New York Times. 28 February 2020. Available at https://www.nytimes.com/2020/02/28/world/ africa/nigeria-coronavirus.html

Mahmud, A., & Aniza. (2015). Factors associated with the brain-drain phenomenon of doctors from the public sector to the private sector in Selangor and Kuala Lumpur. *International Journal of Public Health and Clinical Sciences*, 2(1), 46-60

Mahmud, A., Rezaul I. (2020), Social Stigma as a Barrier to Covid-19 Responses to Community Well-Being in Bangladesh; Int Journal of Com WB. 2020 Aug 10: 1–7

Mashod, H., Kura, K. M., & Ringim, K. J. (2023). *Towards a conceptual framework for the moderating effect of grit on the relationship between psychological capital and graduate employability*. *14*(1), 19–35. https://doi.org/https10.23925/2179-3565.2023v14i1p19-35

Muhammed, Y., Ringim, K. J., & Kura, K. M. (2020). Moderating role of perceived social support on the relationship between entrepreneurship education and entrepreneurial intention. *Journal of Entrepreneurship and Business*, *8*(1), 104–119. https://doi.org/https://doi.org/10.17687/JEB.0801.09

Newswire (2020). France Raises Pay for Health Care Workers by More than €8 Billion; 2020. Available from: https://www.france24. com/en/20200713-france-raises-pay-for-health-care-workersby-more-th

Nigam A, Huising R, Golden BR. Improving hospital efficiency: a process model of organizational change commitments. *Med Care Res Rev*. 2014;71: 21–42.

Nigeria Centre for Disease Control. First Case of Corona virus Disease Confirmed in Nigeria [Internet]. 2020 [cited 2021 Apr 1]. Available from: https://ncdc.gov.ng/news/227/first-caseof-corona-virus-disease-confirmed-in-ni

Nigeria Centre for Disease Control. COVID-19 Outbreak In Nigeria Situation Report S/N 54. Abuja; 2021. [Internet]. 2020 [cited 2021 Apr 23]. Available from: https://ncdc.gov.ng/diseases/sitreps/?cat=14&name=An%20update%20of%20COVID 19%20outbreak%20i

Oloko F. Strike Called Off after FG Met Some of Our Demands Resident Doctors; 2021. Available from: https://www.punchng. com/strike-called-off-after-fg-met-some-of-our-demandsresid

Osungbemiro, B.W.; Adejumo, O.A.; Akinbodewa, A.A.; Adelosoye, A.A. (2016), Assessment of Occupational Health Safety and Hazard among Government Health Workers in Ondo City, Southwest Nigeria. *Br. J. Med. Med. Res.* 13, 1–8. [CrossRef]

Oyadiran OT, Agaga LA, Adebisi YA, (2020), Lucero-Prisno DE 3rd. Nigeria, COVID-19 and the dearth of health workers. J Glob Health 2

Ringim, K. J., Abdullahi, N., & Kura, K. M. (2020). Impact of supply chain management practices on competitive advantage and performance of food and beverages organizations in Brunei Darussalam. *KASU Journal of Supply Chain Management*, *1*(1), 21–47. http://www.journal.kasu.edu.ng/index.php/KJSCM/article/view/372/321

Ringim, K. J., Ibrahim, F., & Kura, K. M. (2018). Application of hill's strategy development framework on fast food restaurant business in Brunei Darussalam. In N. H. Abu, E. M. Elias, S. N. M. Zamani, & A. Noordin (Eds.), *Proceedings of the 2nd Conference on Technology & Operations Management (2ndCTOM)* (pp. 198–210). Universiti Utara Malaysia.

Ringim, K. J., & Reni, A. (2019). Mediating Effect of Social Media on the Consumer Buying Behavior of Cosmetic Products. In *Advances in Economics, Business and Management Research (AEBMR)* (Vol. 92, Issue Icame 2018, pp. 119–126).

Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al (20202). World Health Organization declares global emergency: a review of the 2019 novel coronavirus (COVID-19). Int J Surg. 71–6

Sonnentag, S., & Frese, M. (2005). Performance Concepts and Performance Theory. *Psychological Management of Individual Performance*, *16*(43), 1–25. https://doi.org/10.1002/0470013419.ch1

Yahaya, K. A & Unegbu V. E, (2021) Influence of employee motivation on service delivery of health records professionals in tertiary hospitals in North- Central Nigeria *International Journal of Academic Research in Education and Review* Vol. 9(4), pp. 196-205, doi: 10.14662/Ijarer2021.145

Yáñez-Araque, B.; Gómez-Cantarino, S.; Gutiérrez-Broncano, S.; López-Ruiz, V.-R. (2021) Examining the Determinants of Healthcare Workers' Performance: A Configurational Analysis during COVID-19 Times. *Int. J. Environ. Res. Public Health*, 18, 5671. https:// doi.org/10.3390/ijerph1811567

Weldegebriel, Z., Yohannes Ejigu, Y., Weldegebreal, F.and Woldie, M., (2016), Motivation of health workers and associated factors in public hospitals of West Amhara, Northwest Ethiopia; Patient Preference and Adherence

World Health Organization (2006). World health report 2006: working together for health. Geneva: WHO; 2006.

World Health Organization (2020) (WHO). “Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations.” WHO Scientific brief: https://www.who.int/newsroom/commentaries/detail/modes-oftransmission-of-virus-causing-covid-19-implications-for-ipcprecaution-recomm

Zhong, Luo, Li, Zhang, Liu, (2020) Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *Int J Biol Sc*i. 1745–52.