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INVESTIGATING HEXACO PERSONALITY TRAITS, PERCEIVED THREAT AND COVID-19 VACCINE ACCEPTANCE AMONG UNDERGRADUATES IN A NIGERIAN UNIVERSITY

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Abstract

The role of personality traits and perceived threat on COVID-19 vaccine acceptance among undergraduates is relatively scarce. The study investigated the role of personality traits and perceived threat on COVID-19 vaccine acceptance among 374 (age = 18-28 years, M =23.23 years, SD = 2.57 years) undergraduates in Obafemi Awolowo University, Ile-Ife, Nigeria. A cross-sectional survey design was utilized. A self-administered questionnaire was used to gather information about socio-demographics, HEXACO personality traits, perceived threat and COVID-19 Vaccine acceptance. Results showed a significant influence of personality traits on COVID-19 vaccine acceptance. Findings also revealed that perceived threat significantly predict COVID-19 vaccine acceptance among undergraduates. Result further showed that there was a significant influence of religion on COVID-19 vaccine acceptance (t (372) = -2.13, p = .034, 95% CI (-6.44, -.25), d = 0.22.) These results emphasize the importance of HEXACO personality traits and perceived threat when considering program targeted at COVID-19 vaccine acceptance among undergraduates.

Keywords

COVID-19 acceptance, HEXACO personality traits, perceived threat

Introduction

Due to the overwhelming strain it has placed on many countries' health sectors, particularly Nigeria, the coronavirus disease of 2019 (COVID-19) pandemic has continued to draw attention on a global scale (WHO, 2020). The World Health Organization (WHO, 2020) designated the rare human coronavirus illness (COVID-19) epidemic as a Public Health Emergency of International Concern (PHEIC) on January 30, 2020. The pandemic began in Wuhan, China, on December 8, 2019. Evidence suggests that as of November 2021, there were 662 million recorded incidents of COVID-19 documented globally, with an estimated 5 million deaths due to it. This has caused issues in the fields of psychology, sociology, and the economy all around the world (WHO, 2021). Around 2,000 deaths from COVID-19 were recorded in Nigeria along with approximately 214,000 cases (Olu-Abiodun, Abiodun, & Okafor, in 2022; NCDC, 2021). Regarding the transmission of COVID-19, the World Health Organization (2020) identified Nigeria as one of the 13 high-risk African nations. During this period, Nigeria was rated as one of the vulnerable African countries, due to current shortages of health personnel, brain drain and lack of modern medical facilities in the healthcare system.

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The consequences of COVID-19 pandemic could be severe without any effective strategies to combat the pandemic. As a result, it becomes absolutely crucial that people get their COVID-19 vaccinations in order to stop the pandemic and restore normalcy to the globe (Yamey et al., 2020). In order to attain high uptake, Steffens et al. (2022) postulated that acceptability of COVID-19 vaccinations is crucial, since low acceptance can negatively impact uptake if given enough consideration. Olu-Abiodun et al. (2022) report that many Nigerians do not accept the virus' existence despite the government's introduction of measures including testing, social distance, a state-wide lockdown, the wearing of face masks, and isolation of infected individuals. There is also ample evidence that vaccine adoption in Nigeria has been quite low (Olu-Abiodun et al., 2022). According to studies (NPHCDA, 2021; Olu-Abiodun et al., 2022) as of November 19th, 2021, around 6-million Nigerians had received their first dosage of the COVID-19 vaccination and approximately 3.4 million had received their second dose, raising the anticipated number of unvaccinated people to approximately 200 million, hence 97.15% of the overall population. Concerns like views of effectiveness and safety, danger of sickness, societal norms, motivating reasons, false information, and practical considerations, but not limited, have been identified by scholars to have profound influence on COVID-19 vaccine acceptance (Steffens et al, 2022). However, much cognizance has not been given to the role played by behavioural attributes such as HEXACO-personality traits and perceived threat in predicting COVID-19 acceptance particularly among undergraduates. Therefore, this study is an attempt to investigate the predictive role of HEXACO-personality traits and perceived threat on COVID-19 vaccine acceptance among undergraduates.

There is ample evidence that personality had a significant impact on behaviours throughout the pandemic (Costantini et al., 2022; Zettler et al., 2021). Personality traits, according to Costantini et al. (2022), are complex structures that include more detailed behavioural, cognitive, and emotional markers that are represented by individual items in personality tests. The HEXACO personality factor of honesty-humility was notable as one of the best significant correlates of adherence with mitigation-measures. According to evidence from empirical investigations (Zettler et al., 2021). Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) are the six dimensions that make up the HEXACO model of personality (O). Costantini et al. (2022) explored the relationships between HEXACO personality and COVID-19 mitigation behaviours.

After determining the optimal degree of analysis, they used regularized regressions and out-of-sample prediction to assess novel relationships (HEXACO traits, facets, items). HEXACO qualities were the best at predicting cleanliness and distance, while aspects were the most accurate in predicting going out. The findings indicate that the characteristic or components of honesty-humility were the most effective predictors of safer behaviours (Costantini et al., 2022).

Consequently, it is anticipated that in this study, HEXACO-personality will probably be able to predict whether or not COVID-19 vaccination acceptance.

How an individual feel threatened and impacted by the COVID-19 pandemic is relevant when addressing COVID-19 related behaviours. Perceived threat may be defined as an individual’s cognitive assessment of the likelihood a danger situation will affect them. In literature, perception of a threat is positively associated with intention to undertake protective actions (Sheeran et al., 2014). Existing research found that the pandemic was seen as a threat more often than other infectious illness (Karlsson et al., 2021).

The best indicator of COVID-19 vaccination intentions was confidence in the safety of the anticipated vaccination. As a result, individuals who perceived they had COVID-19 were

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also slightly more motivated to get the vaccine (Karlsson et al., 2021). Therefore, in this present study, it is expected that perceived threat is likely to have a predictive value on COVID-19 vaccine acceptance.

Furthermore, there is evidence suggesting that religion has a significant influence on people's decisions about preventive behaviour, such as vaccination. For instance, studies have found that religion predict individuals' choices of becoming vaccinated (Kasstan, 2021; Lahev, Shahrabani, Rosenbolm &Tsutsui, 2021). Therefore, this study will seek to investigate religion as a likely factor affecting acceptance of vaccine among undergraduates.

The Current Study

The current study examined how HEXACO personality traits and perceived threat would have a predictive value on COVID-19 vaccine acceptance among undergraduates' students. Based on this assumption, we formulated the following hypotheses for the study:

i. HEXACO personality traits will significantly predict COVID-19 vaccine acceptance

ii. Perceived threat will significantly predict COVID-19 vaccine acceptance.

iii. There will be a significant difference between Christian and Islam undergraduates in COVID-19 vaccine acceptance.

Method

Participants

A cross-sectional survey design was employed in this investigation. Participants were 374 undergraduate students, who ranged in age from 18 to 28 years (M = 23.23 years, SD = 2.57 years). 48.7% of participants (n = 182) were males. A summary of the demographic information is presented in Table I

Measures

Demographic Information: The demographic questionnaire contained questions for participants to indicate their age, gender, marital status and religion affiliations.

HEXACO Personality

Personality was assessed using the 24-item Short HEXACO Inventory designed by De Vries (2014). The scale has five personality domains of Honesty-Humility (H), extraversion (X), Agreeableness (A), Conscientiousness (C) and Openness to Experience (O). Item 6, 12R, 18R, 24R; 5, 11R, 17R, and 23 measures the domain of Honesty-Humility, item 4R, 10, 16, and 22R measure the domain of extraversion. Item 3R, 9R, 15, and 21 measure agreeableness. Item 2, 8R, 14, and 20 measure Conscientiousness while item 1, 7R, 13, and 19 measures Openness to experience. The scale also comprised items such as "I can look at painting for a long time". The items were rated on a five-point scale from 1= strongly to 5= strongly agree. The scale was scored on a separate score on each domain and scored in English Language. The scale has also been validated in Nigeria, for instance Ilevbare, Fagbenro and Adediran (2021) reported a reliability of .84 for the HEXACO scale among Nigerian sample. The author reports a reliability of .81 for the composite score of the scale while in the present study we reported a reliability of .93

Perceived Threat

Perceived threat was measured using 3-item Perceived Coronavirus Threat Questionnaire developed by Conway (2020). It uses a 5-point Likert-type response format

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with values ranging from Never = 0 to Always = 4 responding to questions. Sample of item includes: "thinking about COVID-19 makes me feel threatened; I am not afraid of the coronavirus (COVID-19); I am stressed around other people because I worry I'll catch the coronavirus (COVID-19)". A Cronbach alpha reliability of .98 was reported for the scale.

COVID-19 Vaccine Acceptance

The vaccine acceptance was measured using the Motors of COVID-19 Vaccination Acceptance Scale (MoVac-COVID19S). This research instrument was developed by Chen et al. (2021). This instrument entails nine positively worded items and three negatively worded items. The scores for the MoVac-COVID19S items range from 1 to 7, with 7 representing the greatest score. Chen et al. (2021) stated that the MoVac-COVID19S had a strong internal consistency in both the 9-item version ($\omega = 0.921$) and the 12-item version ($\omega = 0.898$) among Chinese University students. Moreover, the MoVac-COVID19S (9-item and 12-item variants) factor structure was in good agreement with CME theory. Comparative fit index = 0.984, Tucker-Lewis index = 0.971, root mean square error of approximation = 0.088, normalized root mean square residual = 0.058 were all indices reported to be excellent (Chen et al, 2021). This study also reported a Cronbach alpha of .86 was reported for MoVac-COVID19S.

Procedure

After obtaining University institutional review board approval, participants were recruited from Obafemi Awolowo University, Ile-Ife, Nigeria. Participants were undergraduate students enrolled in various faculties across the university. Participants completed the consent form and questionnaires in hard copy. Participants in this study just resumed their face-to-face classes after compulsory first (Harmattan) semester online classes during COVID-19 restriction measures in Nigeria. No participant personal information was recorded during the study, and all responses were given in anonymous form. The survey was given in the same sequence for each participant. Time to completion ranged from 20 to 30 minutes, and on completion, participants were given a token of a hand sanitizer.

Statistical analyses

Data were coded and exported into a Statistical Packages for Social Sciences (IBM SPSS version 24). Mean, standard deviation, and percentages were used as descriptive statistics to evaluate participant demographic data, and zero order correlation, multiple regression, SEM, and independent sample t-test were used as inferential statistics to test the study's hypotheses.

Results

Table 1. Participants Socio-demographics in the Study (N = 374)

Variable	Level	Frequency (%)	Mean (SD)
Age			23.23 (2.57)
Gender	Male	182 (48.7)	
	Female	192 (51.3)	
Marital status	Never Married	349 (93.3)	
	Married	25 (6.7)	
Religion	Christianity	207 (55.3)	
	Islam	167 (44.7)	

Source: Author's Field Survey, 2021

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The demographic characteristics of participants presented in Table 1 revealed that the mean age and Standard deviation of participants is 23.23(2.57). The gender revealed that there were more female (51.3%) than male participants (48.7%). The distribution by marital status showed that majority of the participants were never married (93.3%) while few were married (6.7%). In terms of religion affiliation, majority of the participants practiced Christianity (55.3%) while (44.7%) claim practicing Islam.

Table 2: Summary of correlations matrix between personality traits, perceived threat and COVID-19 vaccine acceptance

Variables	Mean	SD	1	2	3	4	5	6	7
1. Honesty Humility	25.14	5.84	1						
2. Extraversion	12.07	3.40	.76**	1					
3. Agreeableness	11.45	2.67	.86**	.86**	1				
4. Conscientiousness	11.29	2.48	.79**	.57**	.70**	1			
5. Openness to Experience	12.99	2.93	.56**	.30**	.55**	.78**	1		
6. Perceived threat	12.26	5.85	.53**	.07	.10	.21*	.00	1	
7. Vaccine acceptance	68.31	15.21	.66**	.76**	.83**	.74**	.71**	-.23**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
SD- standard deviations

Results of the correlation analysis in Table 2 revealed a positive relationship between honesty-humility and vaccine acceptance (r = .66, p<.05), signifying high level of honesty-humility tends to increase in COVID-19 vaccine acceptance. Also significant association between extraversion and vaccine acceptance (r = .76, p<.01). This also means that high extraversion tends to high vaccine acceptance. A significant link was also established between agreeableness and COVID-19 vaccine acceptance (r = .83, p<.01). Also, there was significant positive connection between conscientiousness and COVID-19 vaccine acceptance (r = .74, p<.01). Furthermore, there was a positive connection between openness to experience and vaccine acceptance (r = .71, p<.01). Finally, there was significant negative relationship between perceived threat and COVID-19 vaccine acceptance (r = -.23, p<.01). This means that participants with high perceived threat tend to have decreased COVID-19 vaccine acceptance.

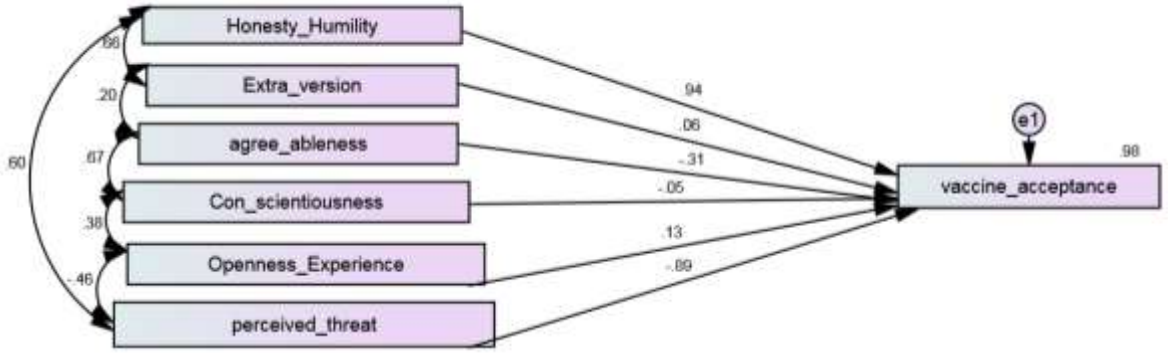


Figure 1. Simple model showing the prediction of COVID-I9 vaccine acceptance from personality traits and perceived threat

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Table 3: Final model fit measures

Measures	Estimate	Threshold	Interpretation
$\chi 2$ / df	2.211	Between 1-3	satisfactory
GFI	0.973	>0.95	satisfactory
CFI	0.915	>0.90	satisfactory
NFI	0.940	>0.90	satisfactory
RMSEA	0.052	<0.07	satisfactory

Note: $\chi 2$/df, normed chi-square statistic; GFI, goodness-of-fit index; CFI, comparative fit index; NFI: Normalized Fit Index; RMSEA: Root Mean Square Error of Approximation

Table 3 above indicates that the structural model met the requirement for a model fit according to Hair et al. (2010). The current study achieves a satisfactory fit of $\chi 2$ /df = 2.211; GFI =0.973; CFI=0.915; NFI=0.940; RMSEA =0.052. Thus, the hypothesis process was done in order to interpret the structural relationships among variables.

Hypothesis Testing

Table 4: Summary table of the direct effects of HEXACO personality traits and perceived threat on vaccine acceptance

			β	S.E.	C.R.	P
Vaccine acceptance	<---	Honesty-Humility	.94	.097	38.122	***
Vaccine acceptance	<---	Extraversion	.06	.129	3.250	.001
Vaccine acceptance	<---	Agreeableness	-.31	.088	-26.931	***
Vaccine acceptance	<---	Conscientiousness	-.05	.117	-4.034	***
Vaccine acceptance	<---	Openness to experience	.13	.108	8.911	***
Vaccine acceptance	<---	Perceived threat	-.89	.058	-42.157	***

The result of the hypothesis found that Honesty-humility (β = .94, p<.01) independently predicts COVID-19 vaccine acceptance. The result also shows that Extraversion (β = .06, p<.01) predicts COVID-19 vaccine acceptance. Also, Agreeableness trait (β = -.309, p<.01) predicts vaccine acceptance. Conscientiousness (β = -.05, p<.01) significantly predicts vaccine acceptance. Furthermore, Openness to experience (β = .12, p<.01) predicts COVID-19 vaccine acceptance. Perceived threat (β = -.89, p<.05) predicts vaccine acceptance. Also, in Figure 1 the R^2 =0.98 indicates that the independent variables (personality traits and perceived threat) explained 98% variation in the dependent variable (COVI9-19 vaccine acceptance).

Table 5: Summary Table of Independent t-test of religion on COVID-19 vaccine acceptance

DV	Religion	N	Mean	SD	df	t	p	95%CI	Cohen's d
Vaccine acceptance	Christianity	207	66.81	15.23	372	-2.13	.034	[-6.44, -.25]	0.22
	Islam	167	70.16	15.02					

The result on Table 5 showed that the differences between participants who practiced Christianity scores (N = 207, *M* = 66.81, SD = 15.23) and those who practiced Islam scores (N = 167, *M* = 70.16, SD = 15.02) on COVID-19 vaccine acceptance were statistically significant, t (372) = -2.13, p = .034, 95% CI (-6.44, -.25), d = 0.22. This means that participants who practice Islam significantly score highly on vaccine acceptance than

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participants who practiced Christianity with a small effect size as shown by the Cohen's d value of 0.22.

Discussion

The current study investigated the degree to which COVID-19 vaccine acceptance was predicted by HEXACO personality traits and perceived threat in a sample of undergraduate students in Nigeria. Specifically, the study hypothesized that HEXACO personality traits and perceived threat would be positively linked to COVID-19 vaccine acceptance. In terms of religion, we hypothesized that there will be a significant difference between Christian and Islam undergraduates in their COVID-19 vaccine acceptance. Results provided support for these hypotheses. First, findings revealed that HEXACO personality dimension of honesty-humility independently predict COVID-19 vaccine acceptance while extraversion, agreeableness, conscientiousness, openness to experience also significantly predict COVID-19 vaccine acceptance. This outcome suggests that individual who are high on honesty-humility traits will lead to increase in COVID-19 vaccine acceptance and such individual see the need to be vaccinated as beneficial to them. These findings are consistent with prior studies that found HEXACO personality dimensions of honesty-humility to be the best measure of safer-behaviours and COVID-19 mitigation measures (Costantini et al., 2022; Zettler et al., 2021). Our study directly informs the development of psychological interventions that can improve COVID-19 vaccine acceptance among undergraduates by identifying the personality dimensions that can further boost COVID-19 mitigation behaviour.

Second, there was a significant prediction of perceived threat on COVID-19 vaccine acceptance among participants. Findings indicate a negative correlation between perceived threat and COVID-19 vaccine acceptance. This outcome implies that participants with high perceived COVID-19 threat tend to have a generally low acceptance rate of COVID-19 vaccine. These findings partially support studies of Karlsson et al. (2021) that provided empirical evidence that those who perceived the virus as a severe infection were also slightly more intent on taking a COVID-19 vaccine. This finding further confirms the beliefs and attitudes of many individuals that taking COVID-19 vaccines would result to life threatening related diseases and malfunctioning. Therefore, it is very important that proper sensitization program should be organized targeting young adults across higher institutions of learning. This would correct the impression that administering COVID-19 vaccine is harmful and for them to appreciate benefits associated with COVID-19 vaccines.

Third, there was a statistically difference between Christian and Islam undergraduates on COVID-19 vaccine acceptance. This finding indicates that participants who practice Islam significantly score higher on COVID-19 vaccine acceptance than those who practiced Christianity. The outcome partially supports studies of Lahav et al. (2021) which found that those with strong religious convictions are less likely to get vaccinated than nonreligious people. Findings also collaborated with the works of Kasstan (2021) that demonstrated that religion predicts the extent of becoming vaccinated by individuals. In Nigeria, the dominant religion faiths are Christianity and Islam while others are traditional worshippers. The fact that undergraduates who practice Christianity score lower than their counterparts of different religious faiths in COVID-19 vaccine acceptance may be attributed to strong religious beliefs that gives priority to divine healings among Christian faith.

Limitation and suggestion for future studies

This study is limited by its implementation at a single university in Nigeria and its small sample size, both of which make it impossible to generalize these results to the broader population of undergraduates in higher institutions across all the geopolitical zones in Nigeria.

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Also, the cross-sectional survey design of this study prohibits causality to be determined among the variables. A longitudinal study design may help us to establish causality among variables of interest. Also, because the questionnaire is self-reported, participants' answers to the test items might be impacted by social desirability and other demand factors, which could result in incorrect reporting in the study area. Consequently, to assess the current study of this kind, future research should make use of more objective and behavioural measures. Future studies should prioritize vulnerable groups that are more susceptible to infection and use qualitative methodologies to study people's perspectives, attitudes, and beliefs regarding acceptance of the COVID-19 vaccination.

Conclusions

Despite its limitations, the present study yields additional evidence to support a need for further research that examined the predictive role of HEXACO personality traits and perceived threat on COVID-19 vaccine acceptance. In particular, HEXACO personality dimensions of honesty-humility, extraversion, agreeableness, conscientiousness, openness to experience significantly predict COVID-19 vaccine acceptance among undergraduates. The study discovered a substantial inverse relationship between perceived threat and COVID-19 vaccination acceptance, indicating that people who perceive the COVID-19 threat as being highly tend to have low levels of overall COVID-19 vaccine acceptance. Also, the study's undergraduate participants' acceptance rates for the COVID-19 vaccination varied according to their religious beliefs. With these findings, psychological interventions can be developed to increase acceptance of COVID-19 vaccine.

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Author’s contribution

FMI conceived and designed the study. FMI was involved in statistical analyses, FMI wrote the introduction, methods and results; and contributed to the discussion. AKD was responsible for data collection. The successive drafts were improved upon with input from all authors, who also approved the final version.

Conflict of interest

There are no declared conflicts of interest between the authors' research, writing, or publishing of this work

REFERENCES

CDC. COVID-19 Nigeria Abuja: Nigeria Centre for Disease Control; 2021 [Available from: https://covid19.ncdc.gov.ng/.

Chen I.H, Ahorsu. D.K, & Ko N.Y, et al. (2021). Adapting the motors of influenza vaccination acceptance scale into the motors of COVID-19 vaccination acceptance scale: psychometric evaluation among mainland Chinese university students. *Vaccine, 39*(32): 4510–4515. doi:10.1016/j.vaccine.2021.06.044

Costantini, G. et al. (2022). Personality in a naturally occurring strong situation: Unique effects of HEXACO traits on COVID-19 mitigation. *Acta Psychologica 224*, http//doi.org/10.1016/j.actpsy.2022.103529

De Vries, R. E. (2014). The 24-item Brief HEXACO Inventory (BHI). *Journal of Research in Personality, 47*, 871-880.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Englewood Cliffs: Prentice Hall.

Ilevbare, F. M., Fagbenro, D., & Adediran, G. (2021). Personality Traits, Mental Health and Driving Anger

DOI: 10.2478/eras-2023-0004

among Commercial Drivers in Lagos Metropolis, Nigeria. *Ife Social Sciences Review, 29*(2), 72-80.

Karlsson, L.C, et al. (2021). Fearing the disease or the vaccine: The case of COVID-19. *Personality and Individual Differences 172*, 1-11

Kasstan, B. (2021). "If a rabbi did say 'you have to vaccinate', we wouldn't": unveiling the secular logics of religious exemption and opposition to vaccination. *Social Sciences and Medicine*. https://doi.org/10.1016/j.socscimed.2021.114052

National Primary Health Care Development Agency (NPHCDA, 2021). *COVID-19 vaccination update*. Abuja. Available from https://nphcda.gov/ng/

Olu-Abiodun O, Abiodun O, & Okafor N. (2022) COVID-19 vaccination in Nigeria: A rapid review of vaccine acceptance rate and the associated factors. *PLoS ONE 17*(5), e0267691. https://doi.org/10.1371/journal.pone.0267691

Sheeran, P., Harris, P. R., & Epton, T. (2014). Does heightening risk appraisals change people's intentions and behaviour? A meta-analysis of experimental studies. *Psychological. Bulletin, 140*, 511–543. doi: 10.1037/a0033065S

Steffens, M.S; Ballivant, B; Bolsewicz; K; King; C & Beard; F. (2022). Factors influencing COVID-19 Vaccine Acceptance in High income Countries prior to Vaccine Approval and Rollout: A Narrative Review. *International Journal of Public Health*, doi.10.3389//ijph.2022.1604221

World Health Organization (WHO, 2021). *Coronavirus (COVID-19) dashboard Geneva*: World Health Organization. Available from: https://covid19.who.int/.

Yamey, G, Schäferhoff, M, Hatchett, R, Pate, M, Zhao, F, & McDade, K. K. Ensuring Global Access to COVID-19 Vaccines. *The Lancet* (2020) 395(10234): 1405–6. doi:10.1016/s0140-6736(20)30763-7

Zettler, I., Schild, C., Lilleholt, L., Kroencke, L., Utesch, T., Moshagen, M., Bohm, R., Back, M., & Geukes, K. (2021). The role of personality in COVID-19-related perceptions, evaluations, and behaviours: Findings across five samples, nine traits, and 17 criteria. *Social Psychological and Personality Science*. https://doi.org/10.1177/19485506211001680.