

SECONDARY SCHOOL TEACHERS' ATTITUDE TOWARDS UPTAKE OF COVID-19 VACCINATION IN KWARA STATE, NIGERIA

Masud Ibrahim ONIYE, & Musa Siddiq ABDULLAHI

Department of Arts Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria

oniymasud@uilorin.edu.ng¹ abdullahi.ma@unilorin.edu.ng²

Abstract

The coronavirus is a fast-spreading deadly pandemic that has taken away many lives and destabilized the totality of the world economy. The need for strong immunity against it has been the main focus of governments worldwide. This study examined the attitude of secondary school teachers towards uptake of Covid-19 vaccination in Kwara State. The study population was 14,432 secondary school teachers in Kwara State, out of which, 372 respondents were randomly selected from 12 secondary schools across the three senatorial district in the state. The self-designed questionnaire was used to collect data from the respondents; which has a test re-test reliability coefficient of 0.79. Out of the 372 copies of questionnaire administered, 359 copies were valid for data analyses. The descriptive and inferential statistics were used to analyse the data collected for this study. The percentage distribution of the respondents' attitude towards COVID-19 vaccination revealed a negative attitude towards coronavirus vaccination uptake among secondary school teachers in Kwara State. The independent t-test result also revealed that the male and female respondents differed in their attitude towards Covid-19 vaccination ($t = 2.06$; $p = .040 < .05$). It was recommended that the governments and stakeholders in education sector should organize orientation programmes, in shaping the attitude of secondary school teachers positively towards COVID-19 vaccination so that they can display interest in its acceptance and increase their level of willingness to uptake the vaccine.

Keywords: Attitude, Covid-19, Secondary- school, Teachers, vaccination- uptake

Introduction

Coronavirus, otherwise known as Severe Acute Respiratory Syndrome Coronavirus is a disease that emerged in December 2019 in the city called Wuhan in China. It was labelled COVID-19 due to its involvement in 2019 and some of its clinical symptoms include, fatigue, fever, insomnia, pneumonia, dry cough and shortness of breath (Richardson, Hirsch, Narasimhan, Crawford, McGinn & Davidson, 2020). The World Health Organization (2020) declared COVID-19 a pandemic disease and public health issue across the globe in March 2020 as a result of damages it has caused in many countries of the world. It has seriously crippled the economy, health, polity and education systems of different nations.

Since the upsurge of the COVID-19 pandemic, Porterfield (2021) reported that over 2.5 million deaths had been recorded. Specifically, the World Health Organization (2021) estimated that as of December 6, 2021, 265,194,191 COVID-19 cases have been confirmed, including 5,254,116 deaths at the global level. The number of confirmed COVID-19 cases in Africa increase in December 5, 2021 to 8,737,269 and 223,967 deaths (Africa Center for Disease Control and Prevention, 2021). In the report, Gilbert, Pullano, Pinotti, Valdano, Poletto and

Boelle (2020) stated that, in Africa, Nigeria has a high coronavirus susceptibility and highest burden of the outbreak with low capacity to respond to it. Nigeria has recorded 214,317 Coronavirus cases and 2,978 deaths since the epidemic erupted in 2019 (World Health Organization, 2021). In Kwara State, 4,004 cases and 64 deaths have been recorded so far (NCDC, 2021).

Globally, to contain the COVID-19 disease, before the discovery or development of vaccines, several control measures and prevention protocols were put in place. On January 23, 2020, the World Health Organization's advised that "all countries should be prepared for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of the onward spread of Covid-2019 infection and to share full data with WHO." Parts of the preventive measures to curtail the transmission of the disease were travel bans, lockdowns, wearing of face masks, frequent washing of hands with soap and water and social distancing. While these measures were on, medical researchers and pharmaceutical companies were working collectively and assiduously in developing safe and effective vaccines for mass vaccination. Vaccination is an effective way of combating infectious conditions (Manning, Gerolamo, Marino, Hanson-Zalot & Pogorzelska-Maziarz, 2021). In March 2021, 83 vaccines were in the clinical development stage; while 184 were at the pre-clinical development stage (WHO, 2021). Globally, several vaccines have been produced which are safe and effective for human use, including Oxford/AstraZeneca, Pfizer, Janssen, Moderna, Sinopharm, Sinovac and Sputnik V (Dal-R'e, Stephens & Sreeharan, 2021; Jones, Roy & Sputnik, 2021).

The League of Nations affirmed that mass vaccination against the COVID-19 is the direct and simple way out of the pandemic (Lytras & Tsiodras, 2021). This is because vaccine represents one of the significant achievement and one of the preventive measures in public health. Vaccines have been a key strategy for improving health outcomes and life expectancy by controlling and preventing infectious diseases, such as smallpox, poliomyelitis and plague (Harrison & Wu, 2020). According to the World Health Organization (2013), administration of vaccines have prevented over 20 fatal diseases and saved approximately 2–3 million lives yearly. However, to properly prevent the spread of the COVID-19 pandemic, uptake of the vaccines must be widely accepted among the populace. That is, coronavirus herd immunity must be between 50% and 67% (Omer, Yildirim & Forman, 2020). Globally, by December 2020, over 10 billion vaccine doses had been ordered by countries across the globe (Mullard, 2020; So & Woo, 2020). In December 5, 2021, *Richie, Ortiz-Ospina, Beltekian, Methieu, Hasell, Macdonald, et. al. (2020) disseminating the report of the national public health agencies, noted that 8.18 billion doses of COVID-19 vaccines had been administered.*

Beyond trust, the perceived threat or risk posed by a given disease has been shown to predict vaccination attitudes. Recent surveys in the USA, Malaysia and Israel have shown that perceived risk and worry regarding the COVID-19 virus are associated with vaccine acceptance (Dror, Eisenbach & Taiber, 2020). Other factors, such as the perceived benefits and costs as well as efficacy of protective behaviours, are also outlined in models of health behaviour as predictors of engagement in given health behaviour. Agyekum, Afrifa-Anane, Kyei-Arthur and Addo (2021) in Ghana, found that concerns about the safety of vaccines and the adverse side effects of the vaccines as the main factors healthcare practitioners considered for declining the uptake of COVID-19 vaccines. In support of the above, Thompson, Burgess and Naleway (2021) had reiterated that, while there is evidence that currently available vaccines can reduce COVID-19 infections, there is only limited preliminary evidence that vaccination can reduce transmission of

the virus presently. Therefore, the vaccination efficiency campaigns in curtailing the spread of the pandemic are still doubtful until further empirical evidence is established (Aschwanden, 2021).

Statement of the Problem

In managing pandemic, preventive measure is very important and vaccination is one of the most successful and cost-effective COVID-19 preventive protocols (Lurie, Saville, Hatchett & Halton, 2020). The campaigns on effective vaccines have increased its circulation in many countries. However, fulfilling its purpose of curtailing the virus depends on wider acceptance among people. In Nigeria, vaccination against COVID-19 remains low among the general public regardless of their socioeconomic status. As Sun, Lin and Operario (2021) noted that low level of acceptance and negative attitude towards vaccination is a global problem and several factors had been associated with this. For example, in Nigeria, many people believe that the COVID-19 news is fake due to distrust they have had against mass media reports. Lack of confidence in the government decisions, fear of its side effects, the conflicting information on social media and hesitancy among the healthcare professionals could have resulted in people's negative attitude towards the COVID-19 vaccination and deterred them from acceptance. In a situation when politicians and healthcare workers are timid and afraid in taking coronavirus vaccination, how would an ordinary Nigerian, regardless of socioeconomic status, willing and confident to be vaccinated? Thus, the negative attitude was observed from the general population of Kwara State, Nigeria.

Empirical studies such as Josiah and Kantaris (2021); Tobin, Okonofua, Adeke and Obi (2021); Adejumo, Ogundele, Madubuko, Oluwafemi, Okoye, Okonkwo, et. al. (2021); Ilori, Ilori, Awodutire, Ige, Idowu, Balogun and Lawal (2021) and Adigwe (2021) were cross-sectional studies within a large population size of 1000 and above, none has been able to capture secondary school teachers' attitude towards the virus vaccination, particularly, in Kwara State. Therefore, this current study considered it imperative to examine the attitude of secondary school teachers towards uptake of Covid-19 vaccination in Kwara State, Nigeria so that the state government can take a proactive approach to resolve vaccine refusal by creating confidence in the people to maximize effectiveness.

Objectives of the Study

This study examined:

1. The attitude of secondary school teachers towards uptake of COVID-19 vaccination in Kwara State?
2. The difference in the attitude of secondary school teachers towards uptake of covid-19 vaccination in Kwara State based on gender.

Research Questions

The research question answered in this study is as follows:

1. What is the attitude of secondary school teachers towards uptake of COVID-19 vaccination in Kwara State?

Research Hypothesis

The null hypothesis tested in this study stated thus:

HO₁: There will be no significant difference in the attitude of secondary school teachers towards uptake of covid-19 vaccination in Kwara State based on gender.

Methodology

The research design adopted for this study was the descriptive survey. This method is suitable whenever researcher(s) intend to describe the current situations as they exist. Since the study examined the attitude of secondary school teachers towards the uptake of COVID-19 vaccination in Kwara State, descriptive survey was considered appropriate. The population of secondary school teachers in Kwara State was estimated at 14,432 (Kwara State Ministry of Education, 2021). In this regard, 372 teachers (Research Advisor, 2006) were selected for participation in the study. The simple random sampling technique was used to select 2 Local Government Areas from the 3 senatorial districts in the state. Simple random sampling was again used to select 2 schools from the 6 selected Local Government Areas; making a total of 12 schools. For equal representation of the respondents in the study, random sampling technique was used to select 31 respondents from each of the selected 12 secondary schools.

The instrument used for data collection was a questionnaire entitled “Secondary School Teachers Attitude towards Uptake of COVID-19 Scale”. The instrument was a self-developed questionnaire consisting of two main sections. Section ‘A’ covered the demographic characteristics of the respondents; that is, gender and educational attainment; while section ‘B’ consisted of 10 items on attitude towards uptake of COVID-19 vaccination. The questionnaire was structured on a five Point Likert-type scoring format: Strongly Agree = 5; Agree = 4; Neutral = 3; Disagree = 2; and Strongly Disagree = 1. The content validity of the instrument was determined by two medical experts and one measurement and evaluation expert. The test re-test method of reliability was employed and a 0.79 reliability index was obtained. The data obtained were analysed using the descriptive statistics of frequency and percentage; while independent t-test was used to test the hypothesis formulated at a .05 level of significance.

Results

Respondents’ Demographic Profiles

Table 1: Percentage Distribution of Respondents’ Demographic Characteristics

N	Variable	Frequency	Percentage %
1	Gender	Male	174
		Female	185
		Total	372
2	Education	NCE	70
		First Degree	260
		Master’s Degree	26
		Ph.D.	3
		Total	372
			100.0

Table 1 presents the demographic variables of the respondents using percentage. Initially, 372 respondents participated in the study, out of which, 174 (48.5%) were males; while 185 (51.5%) were females, indicating that female teachers are well represented in this study than their male counterparts. With respect to their educational attainment, 70 (19.5%) of the respondents were NCE certificate holders, 260 (72.4%) were First Degree certificate holders, 26 (7.2%) have

Master's Degree; while 3 (0.8%) were Ph.D. holders. Hence, majority of the respondents were holders of first-degree certificate.

Research Question 1: What is the attitude of secondary school teachers towards uptake of COVID-19 vaccination in Kwara State?

Table 2: Mean and Percentage Responses on Attitude towards Uptake of COVID-19 Vaccination

N	I believe,	SA	A	N	D	SD	Mean	SD
1	It is important to get a vaccine to protect the people from COVID-19	17 (4.7)	118 (32.9)	54 (15.0)	39 (10.9)	131 (36.5)	2.58	1.38
2	Pharmaceutical companies are going to develop safe and effective COVID-19 vaccines	17 (4.7)	135 (37.6)	50 (13.9)	57 (15.9)	100 (27.9)	2.75	1.33
3	I can take the COVID-19 vaccines once it is approved regardless of the country from which it is made	14 (3.9)	84 (23.4)	99 (27.6)	71 (19.8)	91 (25.3)	2.61	1.20
4	Side effects will not prevent me from taking a vaccine for the prevention of COVID-19	13 (3.6)	106 (29.5)	70 (19.5)	51 (14.2)	119 (33.1)	2.56	1.31
5	Most people will wish to take the COVID-19 vaccine once licensed in Nigeria	13 (3.6)	97 (27.0)	59 (16.4)	66 (18.4)	124 (34.5)	2.47	1.30
6	I have preference for the vaccines than natural immunity	11 (3.1)	78 (21.7)	86 (24.0)	77 (21.4)	107 (29.8)	2.47	1.21
7	I attended a conference, seminar, or other training program on vaccination last year	15 (4.2)	88 (24.5)	102 (28.4)	51 (14.2)	103 (28.7)	2.61	1.24
8	Healthcare workers should first be vaccinated against COVID-19	11 (3.1)	116 (32.3)	62 (17.3)	52 (14.5)	118 (32.9)	2.58	1.31
9	Vaccines protect against infectious disease	10 (2.8)	104 (29.0)	68 (18.9)	44 (12.3)	133 (37.0)	2.48	1.32
10	I recommend and promote vaccination to people	12 (3.3)	94 (26.2)	80 (22.3)	56 (15.6)	117 (32.6)	2.52	1.27

Note: All value in parentheses () are in percentage

Table 2 shows that the attitude of teachers towards COVID-19 vaccination is negative. This is indicated by the percentage responses on the items that skewed to the right side (between “Disagree = D” and “Strongly Disagree = SD” responses) of the table. Because all the items are worded in positive forms, the skewness of responses to the right indicates disagreement to the positive items on the COVID-19 vaccination. The mean values also indicated a similar negative attitude among the respondents as mean values of all the items were below the 3.00 benchmark mean value. It is thus inferred from the above that, there is negative attitude of secondary school teachers towards COVID-19 vaccinations in Kwara State.

H₀₁: *There is no significant difference in the attitude of secondary school teachers towards uptake of Covid-19 vaccination in Kwara State based on gender.*

Table 3: Independent t-test Result Showing Difference in Respondents' Attitude towards Uptake of Covid-19 Vaccination Based on Gender

Gender	N	Mean	SD	df	Cal. t	p-value
Male	174	26.72	9.57	357	2.06*	0.040
Female	185	24.63	9.65			

* Sig. at $p < 0.05$

Table 3 shows that at a degree of freedom (df) of 357, the calculated t-value of 2.06 is statistically significant ($p = 0.040 < 0.05$). The hypothesis which states that there is no significant difference in the attitude of secondary school teachers towards uptake of covid-19 vaccination in Kwara State based on gender is thus rejected. Therefore, male and female respondents were different in their attitude towards Covid-19 vaccination.

Discussion

The first finding of this study indicated that there is negative attitude of secondary school teachers towards COVID-19 vaccinations in Kwara State. This finding suggests that the high level of advertisement and awareness created to encourage wide herd immunity among the general public is less effective in changing the attitude of teachers towards the COVID-19 vaccination. It might not be far from the truth that teachers were among those Nigerians who believe in non-existence of the virus or disease, that it has always being exaggerated by the media. As shown in table 2, the teachers believed that it is not important to take the vaccine, they are afraid of its side effects and they preferred natural immunity to the vaccines. This perhaps forms part of the reasons why many rarely comply with the prevention protocols in the school environment. This current finding is in line with the finding of Adetayo, Sanni and Aborisade (2021) which revealed that which revealed negative attitude towards COVID-19 vaccination among the university students.

On the other hand, the finding by Domnich, Grassi, Fallani, Spurio, Bruzzone, Panatto, Marozzi, Cambiaggi, Vasco, Orsi and Icardi (2021) indicated a positive attitude of the people towards vaccination. Perhaps, difference in locale and the level to which the pandemic wreak havoc in African is lower to the developed nation like Italy. This current finding might be an indication that a great challenge lies ahead, because with teachers' negative attitude, it might be difficult for the Nigerian society to achieve herd immunity that could put total stoppage to the spread and transmission of Covid-19. As Ke, Romero-Severson, Sanche and Hengartner (2021) estimated, the percentage of the population that must be vaccinated in order to reach herd immunity could be as high as 82.5%. The negative attitude of the educated individuals might get other citizens discouraged from believing in the effectiveness of vaccinations in warding-off contagious disease like Covid-19.

The independent t-test result revealed that there is no significant difference in the uptake of covid-19 vaccination among secondary school teachers in Kwara State based on gender. This means that male and female respondents were different in their attitude towards Covid-19 vaccination. The mean values in Table 3 shows that the males ($x = 26.72$) were more negative in their attitude than their female counterparts ($x = 24.63$). This finding is line with the study of Green, Abdullah, Vered and Nitzan (2021) whose finding revealed that there is difference in male

and female's attitude towards Covid-19 vaccination. This finding concurred with the previous study perhaps, because they were conducted among respondents with similar age group. In contrast, the finding by El-Elimat, AbuAlSamen, Almomani, Al-Sawalha and Alali (2021) indicated no gender difference in the respondents' attitude towards Covid-19.

Conclusion

This study concluded that attitude towards vaccination is negative among secondary school teachers in Kwara State and the respondents were differed in attitude based on gender. Hence, gender gap played a role in shaping teachers' attitude towards Covid-19 positively.

Recommendations

It was recommended based on the findings of this study that:

1. The government and education stakeholders should collectively work, through organisation of orientation programmes, in shaping the attitude of secondary school teachers positively towards COVID-19 vaccination so that they can display interest in its acceptance and increase their level of willingness to uptake the vaccine.
2. Government should double its effort to convince teachers about the efficacy of the vaccine as a way of improving its acceptability and uptake of same.

References

- Adetayo, A. J., Sanni, B. A. & Aborisade, M. O. (2021). *COVID-19 vaccine knowledge, attitude and acceptance among students in selected universities in Nigeria*. Retrieved from <https://doi.org/10.2991/dsahmj.k.211014.001> on 12/11/ 2021.
- Agyekum, M. W., Afrifa-Anane, G. F., Kyei-Arthur, F. & Addo, B. (2021). Acceptability of COVID-19 vaccination among health care workers in Ghana. *Hindawi: Advances in Public Health*, 1-8.
- Aschwanden, C. (2021). Five reasons why COVID herd immunity is probably impossible. *Nature*, 591, 520–532.
- Dal-R'e, R., Stephens, R. & Sreeharan, N. (2021). Let me choose my COVID-19 vaccine. *European Journal of International Medicine*, 87: 104-105.
- Domnich, A., Grassi, R., Fallani, E., Spurio, A., Bruzzone, B., Panatto, D., Marozzi, B., Cambiaggi, M., Vasco, A., Orsi, A. & Icardi, G. (2021). Changes in attitudes and beliefs concerning vaccination and influenza vaccines between the first and second COVID-19 pandemic waves: A longitudinal study. *Vaccines*, 9, 1016. Retrieved from <https://doi.org/10.3390/vaccines9091016> on 13/11/2021.
- Dror, A. A., Eisenbach, N. & Taiber, S. (2020). Vaccine hesitancy: The next challenge in the fight against COVID-19. *European Journal of Epidemiology*, 35: 775–779.
- El-Elimat, T., AbuAlSamen, M. M., Almomani, B. A., Al-Sawalha, N. A. & Alali, F. Q. (2021). Acceptance and attitudes toward COVID-19 vaccines: A cross-sectional study from Jordan. *PLOS ONE*. Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0250555>.
- Gilbert, M., Pullano, G., Pinotti, F., Valdano, E., Poletto, C. & Boelle, P. Y. (2020). Preparedness and vulnerability of African countries against importations of COVID-19: A modelling study. *Lancet*, 395, 871-877.

- Green, M. S., Abdullah, R., Vered, S. & Nitzan, D. (2021). A study of ethnic, gender and educational differences in attitudes toward COVID-19 vaccines in Israel – implications for vaccination implementation policies. *Israel Journal of Health Policy Research*, 10 (26). Retrieved from <https://ijhpr.biomedcentral.com/articles/10.1186/s13584-021-00458-w>.
- Harrison, E. A. & Wu, J. W. (2020). Vaccine confidence in the time of covid-19. *European Journal of Epidemiology*, 35 (4), 325–330.
- Jones, I., Roy, P. & Sputnik, V. (2021). COVID-19 vaccine candidate appears safe and effective. *Lancet*, 397 (10275), 642-643.
- Ke, R., Romero-Severson, E., Sanche, S. & Hengartner, N. (2021). Estimating the reproductive number R0 of SARS-CoV-2 in the United States and eight European countries and implications for vaccination. *Journal Theory & Biology*, 517, 110621.
- Lurie, N., Saville, M., Hatchett, R. & Halton, J. (2020). Developing Covid-19 vaccines at pandemic speed. *New England Journal of Medicine*, 382 (21), 1969-1973. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/32227757/> on 24/11/2021.
- Lytras, T. & Tsiodras, S. (2021). Lockdowns and the COVID-19 pandemic: what is the endgame? *Scand Journal of Public Health*, 49, 37–40.
- Manning, M. L., Gerolamo, A. M., Marino, M. A., Hanson-Zalot, M. E. & Pogorzelska-Maziarz, M. (2021). COVID-19 vaccination readiness among nurse faculty and student nurses. *Nursing Outlook*, 69 (4), 565-573. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/33610324/> on 12/10/2021.
- Mullard, A. (2020). How COVID vaccines are being divided up around the world. *Nature*. doi:10.1038/d41586-020-03370-6.
- NCDC (2021). *COVID-19 Nigeria: Confirmed cases by state*. Retrieved from <https://covid19.ncdc.gov.ng/> on 2/10/2021.
- Omer, S. B., Yildirim, I. & Forman, H. P. (2020). Herd immunity and implications for SARS-CoV-2 Control. *JAMA*, 324 (20), 2095–2096. Retrieved from <https://doi.org/10.1001/jama.2020.20892> on 12/12/2021.
- Porterfield, C. (2021). Global coronavirus death Toll tops 2.5 million: Though new fatalities have dropped. *Forbes*. Retrieved from <https://www.forbes.com/sites/carlieporterfield/2021/02/25/global-coronavirusdeath-toll-tops-25-million-though-new-fatalities-have-dropped/> on 12/11/2021.
- Research Advisor (2006). *Sample size table: From the research advisor*. Retrieved from <https://www.research-advisors.com/tools/SampleSize.htm> on 12/12/2018.
- Richardson, S., Hirsch, J. S., Narasimhan, M., Crawford, J. M., McGinn, T. & Davidson, K. W. (2020). Presenting characteristics, comorbidities, and outcomes among 5,700 patients hospitalized with covid-19 in the New York City area. *JAMA*, 323 (20), 2052–2059.
- Richie, H., Ortiz-Ospina, E., Beltekian, D., Methieu, E., Hasell, J., Macdonald, B., et al. (5 March 2020). *Coronavirus (COVID-19) vaccinations: Statistics and research*. Our World in Data.
- So, A. D. & Woo, J. (2020). Reserving coronavirus disease 2019 vaccines for global access: Cross sectional analysis. *British Medical Journal*, 371, 47-50.
- Sun, S., Lin, D. & Operario, D. (2021). Interest in COVID-19 vaccine trials participation among young adults in China: willingness, reasons for hesitancy, and demographic and psychosocial determinants. *Prev Med Rep*, 22, 10-18.

- Thompson, M. G., Burgess, J. L. & Naleway, A. L., Tyner, H., Yoon, S. K., Meece, J. et. al. (2021). Prevention and attenuation of Covid-19 with the BNT162b2 and Mrna-1273 vaccine. *New England Journal of Medicine*, 385, 320-329.
- World Health Organization (2020). *The push for a covid-19 vaccine*. Geneva: WHO. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines> on 26/11/2021.
- World Health Organisation (2021). *Nigeria Coronavirus COVID-19 cases*. Retrieved from <https://tradingeconomics.com/nigeria/coronavirus-cases> on 12/11/2021.
- World Health Organisation (2021). *COVID-19: Landscape of Novel coronavirus candidate vaccine development worldwide*. Geneva, Switzerland: WHO. Retrieved from <https://cdn.who.int/publications/default-source/blue-print-on-2/10/2021>.
- World Health Organisation (2021). *WHO Coronavirus (COVID-19) dashboard*. Retrieved from <https://covid19.who.int/> on 13/12/2021.