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Online Survey of Knowledge and Perception of Coronavirus Among Young Adults in Southwest, Nigeria

AUTHOR(S): OLANIPEKUN, Olubunmi Adebola
AND
OLANIPEKUN, Tumilara Ayomikun

Abstract

The study investigated the knowledge and perception of coronavirus among young adults in Southwest, Nigeria. The descriptive research design of the survey type was used in the study. The population of the study consisted of young adults presently living in Southwest geopolitical zone of Nigeria. The sample for this study consisted of 400 parents selected using convenience sampling technique. A self-designed questionnaire tagged "Knowledge and Perception of Coronavirus Questionnaire (KPCVQ)" was used to collect needed data for the study. The instrument was subjected to face and content validity through thorough screening by medical experts and experts of Tests and Measurement. The reliability of the instrument was determined by finding the internal consistency of the instrument using Cronbach alpha which yielded a coefficient value of 0.816. The instrument was administered online by the researcher due to the present lockdown and ban on inter-state travelling. The data collected were analysed using descriptive and inferential statistics. The findings of this study revealed that young adults have high level of knowledge and right perception of coronavirus. It was also revealed that knowledge of coronavirus was related to perception of coronavirus. In addition, knowledge of coronavirus among young adults differs based on their educational status and gender while perception of coronavirus among young adults does not differ based on their educational status and gender. Based on the findings, it was recommended among others that agencies of Adult Education through National Orientation Agency (NOA) should embark on sensitisation about the pandemic and negative effect of coronavirus. This will allow young adults who are lowly educated to have adequate knowledge of the virus.

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ABOUT AUTHOR

Author(s):

OLANIPEKUN, Olubunmi Adebola
Department of Adult Education and Community Development,
Ekiti State University, Ado – Ekiti, Nigeria.
Olubunmi.olanipekun@eksu.edu.ng

And

OLANIPEKUN, Tumilara Ayomikun
Department of Nursing Science,
Bowen University, Nigeria.
Olanipekun.tumilara@bowen.edu.ng

Introduction

Coronavirus generally known as Covid-19 was first reported in China, particularly in the city of Wuhan in late December 2019. World Health Organization (WHO) and Chinese authorities worked together and the etiological agent was founded to be a new virus and was named Novel Corona Virus (2019-nCoV). China announced its first coronavirus allied death of a 61-year-old man on 11th January (WHO, 2020a). The infection spread cross wisely the sphere in quick pace over an age of few weeks (WHO, 2020b). As at 26th April, 2020, nearly three million cases of Covid-19 was confirmed have been documented universally with virtually 30 percent retrieval whereas a slight above two hundred thousand have dead owing to the virus. This development made the World Health Organization (WHO) on January 30th 2020 professed coronavirus a "public health emergency of international concern" (Thomas, 2020).

The coronavirus was first accounted in Nigeria on 27th February, 2020 subsequently the eruption of the virus in China. In Nigeria, the first case was an Italian who came from Milan, Italy to Lagos on February 25th, 2020. The first index case was ascertained by Lagos University Teaching Hospital virology laboratory, prior to the relocated to the Infectious Disease Hospital in Yaba, Lagos by personnel of Nigeria Centre for Disease Control. As at 27th April, 2020, Nigeria had accounted one thousand, three hundred and thirty-seven out of which 40 deaths were documented.

Coronavirus could be transferred from animal-to-human and human-to-human. Coronavirus is a respirational virus recognized to cause ailment for example influenza, breathing difficult, headache and severe critical respiratory condition. According to Baud, Qi, Nielsen-Saines, Musso, Pomar and Favre (2020) the coronavirus is transfer from person to person in the course of feco-oral, droplets and direct contact with an incubation period of 2-14 days. Hitherto, no treatment has been suggested clearly for coronavirus. Preventive measure application to control coronavirus is the vital acute interference. Thus, way of spread and prevention methods of the coronavirus, there is necessity for the public to have the rudimentary knowledge.

Based on the foregoing, the study investigated the knowledge and perception of coronavirus among young adults in Southwest, Nigeria. The study specifically examined:

i. the level of knowledge of coronavirus among young adults;
ii. the perception of coronavirus among young adults;
iii. the relationship between knowledge and perception of coronavirus among young adults; and
iv. the difference in knowledge and perception of coronavirus among young adults based on their educational status and gender.

Research Questions

The following research questions were raised to guide the study:

1. What is the level of knowledge of coronavirus among young adults in Southwest, Nigeria?
2. What is the perception of coronavirus among young adults in Southwest, Nigeria?

Research Hypotheses

The following null hypotheses were generated for this study:

1. There is no significant relationship between knowledge and perception of coronavirus among young adults in Southwest, Nigeria

2. There is no significant difference in knowledge of coronavirus among young adults based on their educational status
3. There is no significant difference in perception of coronavirus among young adults based on their educational status
4. There is no significant difference in knowledge of coronavirus between male and female young adults
5. There is no significant difference in perception of coronavirus between male and female young adults

Methodology

The descriptive research design of the survey type was used in this study. The population of this study consisted of young adults presently living in Southwest geopolitical zone of Nigeria. The age range of the young adults used in the study was adults above 18 years but less than 45 years old. The sample for this study consisted of 400 parents selected across the six states in Southwest, Nigeria. The sample was selected using convenience sampling technique.

A questionnaire designed by the researcher tagged "Knowledge and Perception of Coronavirus Questionnaire (KPCVQ)" was used to collect the needed data for the study. The instrument was divided into three sections namely Section A, B and C. Section A sought for bio-data of the respondents which included gender and level of education. For purpose of analysis, young adults with no formal education or first school leaving certificate were classified as lowly educated, young adults with secondary education certificate, diplomas and other certificates less than first degree certificate were classified as moderately educated while young adults with first degree and post-graduate certificates were classified as highly educated.

Section B consisted of 25 items which elicited information on knowledge of coronavirus. Two options of Yes or No were provided for items on knowledge of coronavirus with one of the options as correct answer. Respondents who score 70 percent of the 25 item and above were classified as those with high knowledge. Respondents who score from 50 percent to 69 percent of the 25 items were classified as those with moderate knowledge. Respondents who score less than 50 percent of the 25 items were classified as those with low knowledge. Section C consisted of 15 items which elicited information on perception of coronavirus. Sections C was worded on 4 point Likert type scale ranging from Strongly Agree (SA), Agree (A), Disagree (D) to Strongly Disagree (SD).

The instrument was subjected to face and content validity through thorough screening by medical experts and experts of Tests and Measurement. In so doing, all irrelevances and ambiguous items were eliminated each from both sections. The reliability of the instrument was determined by finding the internal consistency through a pilot study conducted outside the sampled locations. Data collected were tested using Cronbach alpha which yielded reliability co-efficient value of 0.816. This reliability co-efficient value was considered adequate for the instrument used in this study.

The instrument was administered online by the researcher due to the present lockdown and ban on inter-state travelling. The data collected were analyzed using descriptive and inferential statistics. The research questions were answered using frequency count, percentages, mean and standard deviation. Hypothesis 1 was tested using Pearson's

Product Moment Correlation while hypotheses 2 – 3 were tested using Analysis of Variance (ANOVA) and hypotheses 4 – 5 were tested using t-test analysis at 0.05 level of significance.

Results

Descriptive Analysis

Research Question 1: What is the level of knowledge of coronavirus among young adults in Southwest, Nigeria?

In answering this question, data on knowledge of coronavirus were collected from the responses of the respondents to Section B (items 1 – 25) of the questionnaire. The low level of knowledge of coronavirus was those who scored less than 50% of the 25 item which ranges from 0 to 12. The moderate level was those who scored from 50% to 69% of the 25 items and it ranges from 13 to 17. The high level of knowledge of coronavirus was those who scored 70% and above of the 25 items which ranges from 18 to 25. Level of knowledge of coronavirus was presented in table 1

Table 1: Level of knowledge of coronavirus

Levels of knowledge of coronavirus	No of Respondents	Percent age
Low (0 – 12)	14	3.5
Moderate (13 – 17)	166	41.5
High (18 – 25)	220	55.0
Total	**400**	**100**

Table 1 revealed the level of coronavirus among young adults. Out of 400 respondents, 14 (3.5%) respondents had low level of knowledge of coronavirus while 166 (41.5%) respondents had moderate level of knowledge of coronavirus and 220 (55.0%) respondents had high level of knowledge of coronavirus. The findings showed that the level of knowledge of coronavirus among young adults was high. Figure i further revealed the level of knowledge of coronavirus at a glance

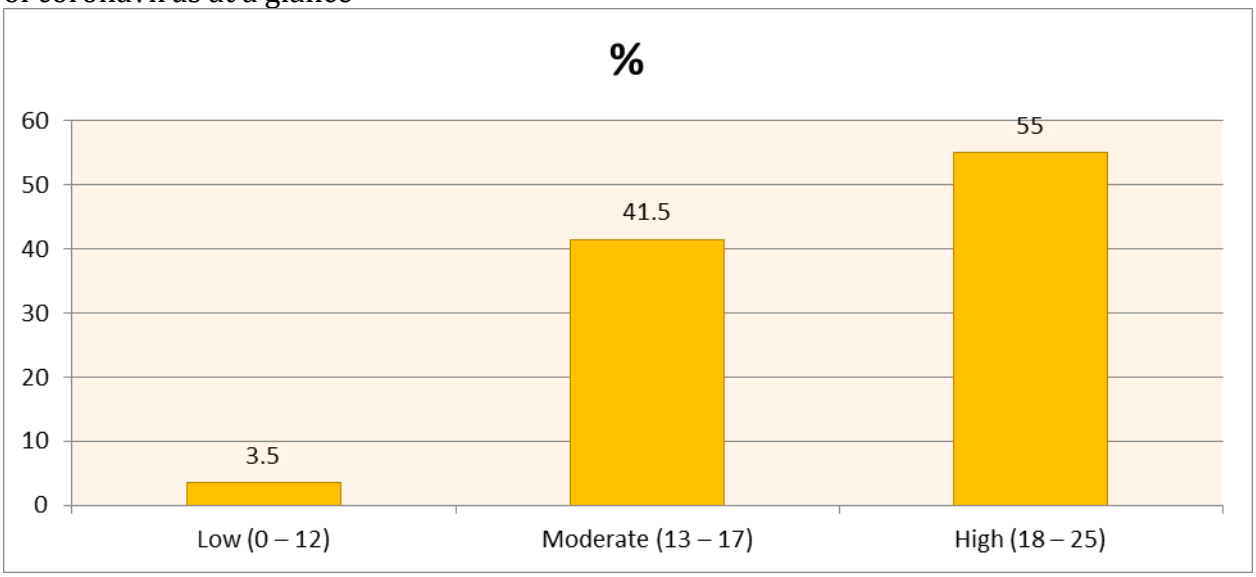

Figure i: Bar Chart showing level of knowledge of coronavirus

Research Question 2: What is the perception of coronavirus among young adults in Southwest, Nigeria?

Table 2: Perception of coronavirus among young adults

S/N	Items	N	Mean	S.D
1.	Coronavirus is just one of the common disease we have around	400	2.24	0.73
2.	Coronavirus is a means by Federal Government to get funds from World Health	400	1.80	0.84
3.	Despite the social distancing rule, I still attend my social programmes	400	1.60	0.70
4.	Enforcing face masks is just a means to make money by businessmen	400	2.04	0.70
5.	I still allow my close friends visit me in the house	400	1.73	0.72
6.	There is a local cure for Coronavirus	400	2.38	0.85
7.	Data of infected people from the government on Coronavirus are not factual	400	2.78	0.77
8.	Coronavirus is a disease common among the whites	400	2.07	0.79
9.	Coronavirus is a disease of the rich men	400	2.26	0.81
10.	Home treatment of Coronavirus is advisable than informing the Government	400	1.90	0.67
11.	Coronavirus is a not black man's disease	400	1.71	0.64
12.	The publicity on Coronavirus is just an opportunity for politicians to loot our national resources	400	1.81	0.64
13.	Coronavirus is not as deadly as publicised	400	2.30	0.70
14.	The lockdown of movement in most places is not necessary	400	2.27	0.75
15.	The virus has no cure in any part of the world	400	1.70	0.78
		Average	**2.04**	

Mean Cut-off: 2.50

Table 2 revealed the perception of coronavirus among young adults in Southwest, Nigeria. Using the criterion mean score of 2.50 as cut-off to determine the affirmative of each statement, the respondents accepted only item 7 while others items which were stated in negative forms are rejected. This implies that most of the respondents have the right perception about coronavirus.

Testing of Hypotheses

Hypothesis 1: There is no significant relationship between knowledge and perception of coronavirus among young adults in Southwest, Nigeria

Table 3: Relationship between knowledge and perception of coronavirus

Variables	N	Mean	Stand Dev	r-cal	P-value
Knowledge of Coronavirus	400	18.04	3.49	0.532*	0.000
Perception of Coronavirus	400	30.57	6.15		

*P<0.05

Table 3 showed relationship between knowledge and perception of coronavirus. The r-calculated value of 0.532 is significant because the p-value of 0.000 was less than 0.05 level of significance i.e. 0.000<0.005 (r = 0.532, n = 400, *p=0.000*). This indicated that there was significant relationship between knowledge and perception of coronavirus among young adults in Southwest, Nigeria. The null hypothesis was rejected. This implies that knowledge of coronavirus is moderately related to perception of coronavirus

Hypothesis 2: There is no significant difference in knowledge of coronavirus among young adults based on their educational status

Table 4: Analysis of Variance (ANOVA) for difference in knowledge of coronavirus among young adults based on their educational status

Groups	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	317.551	2	158.776	13.860*	.000
Within Groups	4547.959	397	11.456		
Total	4865.510	399			

* P < 0.05

The result presented in table 4 showed that F-cal value of 13.860 is significant because the P value (0.000) < 0.05 at 0.05. Hence, the null hypothesis is rejected. This implies that there is significant difference in knowledge of coronavirus among young adults based on their educational status. In order to investigate the source of the differences observed, Post – hoc analysis (Scheffe) with mean difference was carried out.

Table 5: Scheffe Post – hoc test and mean for observed difference in knowledge of coronavirus among young adults based on their educational status

Groups	N	Mean	Lowly Educated	Moderately Educated	Highly Educated
			17.23	17.94	19.48
Lowly Educated	165	17.23			
Moderately Educated	134	17.94			
Highly Educated	101	19.48	*	*	

* P < 0.05

In table 5, significant differences were found between knowledge of coronavirus among young adults who are highly educated and moderately educated; and young adults who are highly educated and lowly educated. However, no significant difference was found between knowledge of coronavirus among young adults who are moderately educated and lowly educated.

It can be concluded that young adults who are highly educated have more knowledge of coronavirus than those who were moderately and lowly educated.

Hypothesis 3: There is no significant difference in perception of coronavirus among young adults based on their educational status

Table 6: Analysis of Variance (ANOVA) for difference in perception of coronavirus among young adults based on their educational status

Groups	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	5.374	2	2.687	0.071	.932
Within Groups	15068.524	397	37.956		
Total	15073.897	399			

P > 0.05

The result presented in table 6 showed that F-cal value of 0.071 is not significant because the P value (0.932) > 0.05 at 0.05. Hence, the null hypothesis is not rejected. This implies that there is no significant difference in perception of coronavirus among young adults based on their educational status.

Hypothesis 4: There is no significant difference in knowledge of coronavirus between male and female young adults

Table 7: t-test Analysis for difference in knowledge of coronavirus between male and female young adults

Variations	**N**	**Mean**	**SD**	**df**	**t_{cal}**	**P**
Male	173	17.20	3.26	398	4.282*	0.00
Female	227	18.67	3.53			

*P<0.05

Table 7 shows that the t-cal value of 4.282 is significant because the P value (0.00) < 0.05. This implies that null hypothesis is rejected. Hence, there is significant difference in knowledge of coronavirus between male and female young adults. There was mean difference of 1.47 in favour of female young adults. This implies that female young adults have more knowledge of coronavirus than male young adults.

Hypothesis 5: There is no significant difference in perception of coronavirus between male and female young adults

Table 8: t-test Analysis for difference in perception of coronavirus between male and female young adults

Variations	**N**	**Mean**	**SD**	**df**	**t_{cal}**	**P**
Male	173	30.58	6.08	398	0.032	0.974
Female	227	30.56	6.21			

P>0.05

Table 8 shows that the t-cal value of 0.032 is not significant because the P value (0.974) > 0.05. This implies that null hypothesis is not rejected. Hence, there is no significant difference in perception of coronavirus between male and female young adults.

Discussion

The findings of the study showed that the level of knowledge of coronavirus among young adults was high. The probable reason might be because of the high level of literacy among young adults in Southwest, Nigeria. It was also revealed that most of the respondents have the right perception about coronavirus in Southwest, Nigeria. The probable reason might be due to the wide publicity given coronavirus by the government. This finding is in consonance with the observation of Bhagavathula and Shehab (2020) who concluded that the pandemic nature of the virus made people have the right perception of coronavirus.

The study further revealed that there was significant relationship between knowledge and perception of coronavirus among young adults in Southwest, Nigeria. This implies that knowledge of coronavirus is related to perception of coronavirus as an increase in knowledge of coronavirus will lead to increase in right perception of coronavirus. This finding aligns with

the submission of Bhagavathula, Aldhalee, Rahmani, Mahabadi & Bandari (2020) as they concluded that knowledge and perception of coronavirus were related

It was revealed that there was significant difference in knowledge of coronavirus among young adults based on their educational status. Young adults who were highly educated have more knowledge of coronavirus than those who were moderately and lowly educated. The probable reason for this finding could be because the highly young educated adults have access to information than those who were moderately and lowly educated. The findings of the study, however, showed that there was no significant difference in perception of coronavirus among young adults based on their educational status. The pandemic nature of virus could be the reason why young adults have the right perception of coronavirus irrespective of their educational status.

The findings of the study showed that there was significant difference in knowledge of coronavirus between male and female young adults. There was mean difference of 1.47 in favour of female young adults. This implies that female young adults have more knowledge of coronavirus than male young adults. Conclusively, it is revealed that there was no significant difference in perception of coronavirus between male and female young adults.

Conclusion

Sequel to the findings of this study, it is concluded that young adults have high level of knowledge and right perception of coronavirus. It is also concluded that knowledge of coronavirus was related to perception of coronavirus. In addition, it is concluded that highly educated young adults have more knowledge of coronavirus than young adults who were moderately and lowly educated. Also, female young adults have more knowledge of coronavirus than male young adults. However, it is concluded that perception of coronavirus among young adults do not differ based on their educational status and gender.

Recommendations

The following recommendations were made based on the findings of the study.

1. The government should intensify more effort in creating awareness about the spread, prevention and effect of coronavirus.
2. Agencies of Adult Education through National Orientation Agency (NOA) should embark on sensitisation about the pandemic and negative effect of coronavirus. This will allow young adults who are lowly educated to have adequate knowledge of the virus.

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