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# HEALTH KNOWLEDGE IN A PANDEMIC: COVID-19 PREVENTIVE BEHAVIOR AMONG AKWA IBOM STATE UNIVERSITY STUDENTS

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**ABSTRACT:** This study examined the knowledge, perception and attitude of undergraduates of Akwa Ibom State University, Nigeria about coronavirus preventive measures. A survey research design was adopted in studying a sample of 400 undergraduates selected from a total population of 5838 undergraduates using stratified proportionate sampling technique. Data were generated using a researchers' developed structured questionnaire entitled "Knowledge, Perception and Attitudes about coronavirus questionnaire". The data were analyzed using mean and standard deviation. The results revealed that University undergraduates' knowledge of coronavirus preventive measures is significantly high; they have significantly positive perception of coronavirus disease preventive measures and significantly positive attitude towards coronavirus diseases preventive measures. Thus, it concluded that Akwa Ibom State University undergraduates responded to the demands of the COVID-19 pandemic protocols. It is recommended among others that health education programmes about the coronavirus preventive measures should be promoted to reinforce knowledge, perception and attitude that will positively influence the behaviour adopted by the students regarding the coronavirus diseases preventive measures.
**Keywords:** Knowledge, Perception, Attitude, Coronavirus, preventive measures, Undergraduates

## INTRODUCTION

The Coronavirus pandemic is one of the most serious challenges the world has faced in recent times. The total cost in terms of human lives is yet to unfold. Since the outbreak of the Coronavirus pandemic was announced by the World Health Organization (WHO), on December 31, 2019 in Wuhan, China, the world was never the same. Alongside the cost of lives and deep health crisis, the world is witnessing an economic down fold that will severely impact the wellbeing of large part of the population in the years to come (WHO, 2020). It is disheartening to note that the mortality and morbidity due to this disease has resulted in public health emergencies and other attendant consequences ranging from psychological to economic challenges. It has been called novel coronavirus disease

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by the World Health Organization (Sohrabi, Alsafi, O"Neill, Khan, Kerwan & Al-Jabir, 2020). The novel coronavirus, which is also referred to as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is known to have caused a severe respiratory disease known as coronavirus disease (Covid-19). The contagious virus began its ravaging effect from Wuhan, Hubei Province, China and then around the world (Nemati, Ebrahimi & Nemati, 2020). The surge of Coronavirus in Wuhan, China led to the closure of public places, halting of public transportation, isolation and management of infected persons, all in a bid to curb its spread (Lichtenstein, Ajayi & Egbunike, 2020). Prior to the World Health Organization"s pronouncement of coronavirus as a global public health challenge and pandemic, Yinka and Adebayo (2020) noted that many Nigerians regarded the disease as a distant white man"s infirmity that could never spread to their abode. Without recourse to expert advice and recommendations, Nigerians downplayed the emergence of coronavirus in their territory thereby hesitating the adoption of initial preventive measures which would have saved costs while protecting the citizenry from undue exposure to the virus. With the confirmation of the index of coronavirus case in Lagos, Nigeria on February 20, 2020, other parts of the country including the northcentral region continued their normal routines and social activities without observing the sketchy preventive measures initially outlined by Nigerian Centre for Disease Control (NCDC, 2022). Nemati, Ebrahimi and Nemati (2020) noted that some of the measures that are currently being used to counteract the pandemic may impact our future lives in non-trivial ways. Thus far, the impossibility of targeted isolation of infected individuals and groups has led to policies of social distancing that impose a disproportionately high economic and social cost around the world. The combination of policies such as social distancing, lockdowns, and quarantines, imply a slowdown or even a complete stop in production and consumption activities for an uncertain period of time, crashing markets and potentially leading to the closure of businesses, sending millions of workers" home. Labour, a key factor of production, has been quarantined in most sectors in the economy, borders have been closed and global value chains have been disrupted. Most estimates show a contraction of the level of output globally (Nemati et al, 2020). However, as the novel pandemic (coronavirus) is affecting the economies of many nations globally, it has an unhidden effect on the price of commodities, education, health, tourism, and other facets or sectors that makes the economy, which adversely posed an unavoidable effect on citizens (Bernard, Akaito, Joseph & David, 2020). Without doubt, the outbreak of the pandemic has adversely affected all aspects of human lives with the education sector the most affected and school children from rich and poor families bearing the brunt of it. Yinka and Adebayo (2020) added that the effect of the pandemic is just one out of the many implications of educational inequity in the country. This has been complicated by the sophistication that follows the government directives to schools" heads and proprietors to adopt digital learning platforms, video lesson, massive open online course and broadcast through radio and television, all of which are not easily available and affordable to some class of persons in the society. There have been fundamental changes to society with the emergence of this pandemic. As coronavirus has no specific antiviral drug treatment or vaccine to date, universal safety precautions and mitigating strategies are the only common ways to deal with this global health emergency (Peters, 2020). As coronavirus outbreak posed significant challenges for the public health, research and medical communities, governmental policies and processes were introduced to curtail the spread of the virus across the nations of the world. This included instituting temporary restrictions on travel with dramatic reduction in the number of travelers, self-distancing, self-isolation, quarantine of international travelers, regular hand washing and the use of face masks. These policies have their economic implications to both developed and developing nations, such as Nigeria (Bernard et al, 2020). However, the

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pandemic in Nigeria continued unabated despite the various efforts of individuals, government and organized private sector with 46 803 tested, 8344 confirmed cases and 249 deaths in 3 months (27 February to 27 May 2020) of the pandemic in Nigeria, prompting plans to introduce additional measures. The Nigerian Presidency established the Presidential Task Force (PTF) on coronavirus to manage the outbreak of the disease across the country. The PTF was mandated to work with the Federal Ministry of Health (FMOH) and the Nigerian Center for Disease Control (NCDC) in the implementation of the various initiatives and strategies on coronavirus containment. While FMOH and NCDC were responsible for the implementation of strategies to track the epidemic, to develop management guidelines and to engage and train field workers, the PTF was responsible for local and international relationships, mobilization and management of resources, together with weekly briefings of the President and the Federal Nigerian Government. State and local governments also established similar coronavirus structures that were all answerable to the local State governments of the Nigerian Federation. While the global Coronavirus pandemic ravaged the world since its emergence in 2019, the first case was diagnosed on April 1, 2020, in Akwa Ibom. Since then, Akwa Ibom State government had put in place proactive measures to curb the spread of the virus. According to NCDC (2022), as at July 9, 2022 Akwa Ibom recorded a total of 4989 cases and 44 dead. This increase in the number of cases and dead by day in the state, when considered in the light of the new Delta variant of the virus, which has now been isolated in Nigeria, calls for a renewal of our collective effort at preventing the spread of Coronavirus virus infection in Akwa Ibom State. Undergraduates are students who are studying to obtain Bachelor‟s Degree. Royne (2013) opined that undergraduates would eventually face the real working world after their graduation; as such their health behaviours are usually based on impulse attitude, perception and practice of a healthy behaviour. As observed by the author, the undergraduates have become charmed and obsessed with information on social media and affairs as part of the indispensable conversation topic in their lives. It is evident that perception shapes one‟s knowledge and the adoption of safety measures concerning the transmission of an infection. NCDC (2022) presented data obtained from the perception of individuals regarding coronavirus which could help target interventions needed to improve the knowledge of people regarding Coronavirus. NCDC (20202 also stated that superstitious beliefs have largely shaped the perception of most Nigerians regarding the source and cause of coronavirus. At the onset of the coronavirus outbreak in Nigeria, infected persons belonged to either the political class or high socioeconomic cadre (Chukwuorji & Lorfa, 2020). The characteristic prevalence of coronavirus infection among this group of persons accorded coronavirus the name, „a disease of the rich and mighty‟. Few months into the coronavirus outbreak in Nigeria, perceptions revolved around "immunity" to coronavirus among the religious folks with a disregard of bans on religious gatherings (Lichtenstein, Ajayi & Egbunike, 2020). Such perceptions could have been influenced by several factors. Social media platforms such as WhatsApp, Facebook and Twitter have been used to spread false news on coronavirus, resulting to panic disorder and anxiety among some persons and shunning of safety measures among others. Among many persons, physical distancing, social isolations, restriction of religious and social gatherings have been opined as alien solutions in overcoming the coronavirus pandemic in Nigeria and Africa at large (Olapegba, 2020). In a study conducted by Uyah (2021), it was observed that people's adherence to prevention and measures can be largely affected by the knowledge, attitudes, and practices of preventive measures regarding coronavirus. Several studies have noted that the majority of people in Nigeria are noncompliant with proposed health and safety measures recommended by the World Health Organization (WHO) and respective country health departments. In most Nigerian states, noncompliance is attributable to ignorance and misinformation, thereby

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raising questions about people‟s knowledge, perception and attitudes towards coronavirus. This situation is particularly of concern for governments and public health experts. This has become a serious problem in the mind of the researchers. It is against this backdrop that this research is conducted to examine the knowledge, perception and attitudes of students of Akwa Ibom State University towards coronavirus. The study was designed to answer the following research questions.

1.     What is the knowledge of University undergraduates on the preventive measures of coronavirus?
2.     What is the perception of university undergraduates on the preventive measures of coronavirus?
3.     What is the attitude of university undergraduates on the preventive measures of coronavirus?

The following hypotheses are formulated and were tested at a 0.05 level of significance:

$H_01$:     Knowledge of University undergraduates on the preventive measures of coronavirus
         is not significantly high.

$H_02$:     University undergraduates‟ perception on the preventive measures of coronavirus is
         not significantly positive.

$H_03$:     University undergraduates‟ attitude on the preventive measures of coronavirus is
Not significantly positive.

The findings of this study would therefore be of immense benefits to students, curriculum planners, government, health authorities and researchers.  To the students, findings on the attitude and practice would positively affect their attitudes and ultimately practices of the preventive measure. The study would strengthen their attitude and practice of coronavirus preventive measures to slow down the spread of this pandemic. Through the finding of this study, curriculum planners would incorporate the impact of this disease into educational studies for the government at various levels to make adequate provisions for learners and their teachers across the globe.  The findings of this study would inform the Government of Akwa Ibom State and health authorities to design robust interventions and policies that are relevant and comprehendible to the inhabitant of this region to tackle the spread of the pandemic. Also Information obtained may be useful in planning, modifying and implementing a coordinated response to current and future epidemics in Nigeria. Finally, the findings of the study would be of great importance to future researchers, especially on matters touching coronavirus pandemic as well as helping in filling-in the gaps in the literature and understanding of the peoples‟ attitudes and practices of the preventive measures. It would serve as a reference material for future researchers.

## METHOD

This study adopted a descriptive survey research design to evaluate the students‟ knowledge, perception and attitudes towards the preventive measures of coronavirus pandemic using a structured questionnaire. The population consists of all the undergraduates in all the eight faculties of the Akwa Ibom State University. As at 2021/2022 session when this study was carried out, the population of undergraduates of Akwa Ibom State University stood at 5,838 students. The sample size for this study was made up of 400 undergraduates representing 7% of the students‟ population. Thus, 7% of the students‟ population in each Faculty was proportionately sampled.  Data for this study were generated using a structured questionnaire titled "Knowledge, Perception and Attitude Coronavirus Prevention Questionnaire" (KPACQ) ($\alpha$ = .879, .734 & .767) developed by the researchers. The questionnaire was designed to measure knowledge, perception and attitude of students towards coronavirus. The questionnaire was designed on a 4-point rating scale of Very High (VH), High (H), Low (L) and Very Low (VL) for knowledge and perception of coronavirus and modified Likert scale of Strongly Agree (SA), Agree (A),

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**Table 1:** Students" knowledge of the preventive measures of coronavirus (n = 400)

| Knowledge of coronavirus preventive measures | $\overline{X}$ | SD |
|---|---|---|
| Observed | 15.58 | 2.51 |
| Expected | 12.50 | 2.51 |

**Table 2:** Students" perception of the preventive measures of coronavirus (n = 400)

| Perception of coronavirus preventive measures | $\overline{X}$ | SD |
|---|---|---|
| Observed | 15.75 | 2.80 |
| Expected | 12.50 | 2.80 |

Disagree (D), and Strongly Disagree (SD) for attitude of student towards coronavirus. The data collected for the study were analyzed using population t-test, independent t-test and the one-way analysis of variance (ANOVA).

**RESULTS**

**Table 3:** Students" attitude of the preventive measures of coronavirus (n = 400)

| Attitude towards coronavirus preventive measures | $\overline{X}$ | SD |
|---|---|---|
| Observed | 14.48 | 2.58 |
| Expected | 12.50 | 2.80 |

Table 1 shows that the observed mean students" knowledge of 15.58 of the preventive measures of coronavirus in Akwa Ibom State University in higher than the cut-off point of 12.50. This means that the knowledge of the preventive measures of coronavirus amongst Akwa Ibom State University students" is high.

Table 2 shows that the observed mean of students" perception of 15.75 of the preventive measures of coronavirus in Akwa Ibom State University in higher than the cut-off point of 12.50. This means that the perception of the preventive measures of coronavirus amongst Akwa Ibom State University students" is high.

Table 3 shows that the observed mean students" attitude of 14.48 towards the preventive measures of coronavirus in Akwa Ibom State University in higher than the cut-off point of 12.50. This means that the attitude towards the preventive measures of coronavirus amongst Akwa Ibom State University students" is positive.

**Table 4:** Population t-test analysis of the students" knowledge of the preventive measures of coronavirus (n=400)

| Knowledge of the preventive measures of coronavirus | X | SD | t | p-value |
|---|---|---|---|---|
| Observed | 15.58 | 2.51 | | |
| | | | 23.777* | .000 |
| Expected | 12.50 | 2.51 | | |

*Significant at the 0.05 level of significance

Table 4 shows that University Undergraduates" knowledge of the preventive measures of coronavirus is significantly high (t = 23.777; p = 0.000). Hence, the null hypothesis that the knowledge of University

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undergraduates on the preventive measures of coronavirus is not significantly high is rejected at a 0.05 level of significance.

**Table 5:** Population t-test analysis of the students‟ perception of the preventive measures of coronavirus disease (n=400)

| Perception of the preventive measures of coronavirus disease | X | SD | t | p-value |
|---|---|---|---|---|
| Observed | 15.76 | 2.80 | | |
| | | | 22.669* | .000 |
| Expected | 12.50 | 2.80 | | |

*Significant at the 0.05 level of significance

Table 5 shows that University undergraduates have significantly positive perception of the preventive measures of coronavirus disease (t = 22.669; p = 0.000). Hence, the null hypothesis that University undergraduates‟ perception of the preventive measures of coronavirus disease is not significantly positive is rejected at a 0.05 level of significance.

**Table 6**: Population t-test analysis of the attitude towards preventive measures of coronavirus (n=400)

| Attitude towards coronavirus disease | X | SD | t | p-value |
|---|---|---|---|---|
| Observed | 14.48 | 2.58 | | |
| | | | 13.937* | .000 |
| Expected | 12.50 | 2.58 | | |

*Significant at the 0.05 level of significance

Table 6 shows that University undergraduates have significantly positive attitude towards coronavirus preventive measures (t = 13.937; p = 0.000). Hence, the null hypothesis that University undergraduates‟ attitude towards coronavirus preventive measures is not significantly positive is rejected at a 0.05 level of significance.

**Discussion of Findings**

The result of testing hypothesis one showed that University Undergraduates‟ knowledge of the preventive measures of coronavirus is significantly high. The result is not surprising as the preventive measures of Coronavirus resulted in a total lock down of every activity the world over. They were stopped from all academic activities during the pandemic. They are thus very aware of Coronavirus pandemic as it was a world phenomenon as well as the negative implications of coronavirus in Nigeria. They are aware of the reality of Coronavirus pandemic; aware of the number of death as a result of the pandemic; and know of the mode of it transmission as presented by the Nigerian Centre for Disease Control (NCDC). They are aware of the protocols specified by the Presidential Task Force on Coronavirus and were using the nose masks, keeping social distance as well as the use of alcohol-base hand sanitizers. This finding collaborates with earlier finding by Mohamed (2021) whose study revealed that the undergraduates were well acquainted with coronavirus knowledge. In collaboration too of this finding is that of Gregory (2021) whose study indicated that a higher level of knowledge towards the Coronavirus pandemic exists. The result of testing hypothesis two revealed that University undergraduates have significantly positive perception of the preventive measures of coronavirus disease. This result is not shocking although many Nigerians at the inception perceived coronavirus as a distant white man‟s infirmity that could never spread to their abode and downplayed the emergence of coronavirus in their territory thereby hesitating the adoption of

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initial preventive measures which would have saved costs while protecting the citizenry from undue exposure to the virus. With the confirmation of the index of coronavirus case in many cities perceived adhering to preventive measures could stop the spread of the pandemic. From the finding, a greater proportion of the respondents agreed that to a very large extent, they believe that use of nose mask can prevent the spread of Coronavirus; believe that regular hand washing with hand sanitizer can curb the spread of Coronavirus; believe that social distancing can curb the spread of Coronavirus; believe that avoiding large crows could stop the spread of coronavirus; and believe that being vaccinated is good measure for stopping the spread of Coronavirus.  In agreement with this finding was earlier finding by Josiah (2020) whose study revealed a positive perception about preventive measures of Coronavirus by the people. In collaboration too, Adewale and Owolewa (2021) in their study found a significant positive perception of the people on the preventive measures of coronavirus disease.  The result of testing hypothesis three revealed that University undergraduates have significantly positive attitude towards coronavirus preventive measures. This result is not surprising because students" attitude is seen in their expression of support and adherence to preventive measures. Students" attitude towards preventive measures of Coronavirus is shaped by their belief that it paramount in overcoming the spread of the pandemic. From the findings, the respondents agreed that if they had their way, no student would be allowed into the school without nose mask; all the students would be compelled to own personal alcohol-based hand sanitizer; all social gathering in the university should be stopped until Coronavirus is phased out; students who refuse to wash their hands regularly and used hand sanitizer would be suspended; and that it is not difficult to adhere with the Coronavirus protocol. This finding agreed with earlier finding by Egbi (2020) whose study showed that 90% of the participants demonstrated positive attitude towards coronavirus with regard to preventive and control measures. In contradiction, Adenubi, Adebowale and Oloye (2020) in their study discovered that the overall attitude level of people toward coronavirus preventive measures was poor. From their study, there was no correlation between the knowledge level score and respondents" attitude towards the preventive measures of the coronavirus.

**CONCLUSION**

From the findings of this study, it was evident that University undergraduates have high level of knowledge on the preventive measures of coronavirus disease, and equally have positive perception on the preventive measures of coronavirus. It was also evident that the students have positive attitude towards coronavirus preventive measures and have a high level of practicing these preventive measures. Therefore, it is concluded that Akwa Ibom University undergraduates responded positively to Covid-19 protocols and can cope in the period of the coronavirus pandemic.

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