

Self-concept and attitude to covid-19 preventive measures in tertiary institutions in

Calabar Metropolis, Cross River State, Nigeria.

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ABSTRACT

Background: This study examines self-concept and attitudes to covid-19 preventive measures among higher education students in Calabar Metropolis in Cross River State, Nigeria. The specific objectives are to examine the nature of student's attitude to Covid-19 preventive measures, the influence of Academic self-concept on attitude to covid-19 preventive measures, the influence of Physical self-concept on attitude to covid-19 preventive measures and the influence of Moral self-concept on attitude to covid-19 preventive measures.

Methodology: The study adopts the survey method and a sample of 500 respondents was randomly selected for the study. The statistical technique used to test hypotheses one was the Student T test while the chi-square technique was used to test hypothesis two, hypothesis three, and hypothesis four.

Results: Findings from the student t- test result revealed that the nature of student's attitude towards covid-19 preventive measures is significantly positive. From the chi-square result, it was revealed there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures, there is a significant influence of physical self-concept on student's attitude towards covid-19 preventive measures and there is a significant influence of moral self-concept on student's attitude towards covid-19 preventive measures.

Recommendations: Based on the results, the study recommends that more information and knowledge about COVID-19 and other COVID-19 protocol especially adequate knowledge regarding the modes of transmission and the common symptoms of COVID-19 should be made available to students, a good understanding of the current status in Nigeria through studies like Knowledge Attitude and Perception is crucial to avoid Nigeria being the next epicenter of the pandemic, among others.

Keywords: *Self- concept, Attitude, Covid-19, Student T- test, Chi-square*

1. INTRODUCTION

Since December 2019, COVID-19 has become a problem globally. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV2), which first surfaced in late 2019 and spread to produce a global pandemic in 2020, is the cause of coronavirus disease (COVID-19). On December 8, 2019, a cluster of patients in Wuhan, Hubei Province, China, experienced pneumonia-like symptoms as a result of the illness (Ayesha, et al., 2023).

Inhaling infected droplets carrying virus particles is the main cause of the disease, according to the World Health Organization (2019). A person who has come into contact with

infected surfaces can also contract it by touching their nose, mouth, or eyes. The list of symptoms also includes gastrointestinal issues, lethargy, malaise, pneumonia, cough, sore throat, and fever.

Many people, including students, expressed their worries about the discomfort associated with routine hand washing, frequent use of hand sanitizers, social withdrawal, and wearing nasal masks - especially because most of them had to wear just one for a lengthy period of time. Some students consciously chose not to wear nose masks, and frequently, when asked by security at the institution gate to do so, the refusal causes the students to have a negative reaction. Additionally, some people complained that the nose mask was causing them headaches, weariness, hypoxia, and poor communication, which made it impossible for them to fully participate in social gatherings and class activities. People who struggle with health conditions like asthma and other respiratory problems reacted poorly since they are susceptible to attacks at any time.

A person's attitude can be defined as their general assessment or feeling toward a specific thing, person, circumstance, or phenomena. A person's thoughts, feelings, and behavioral intentions toward a specific thing are all included in this intricate psychological construct. A multitude of factors, including past experiences, values, cultural background, and social standards, can have an impact on attitudes, which are frequently stated as positive, negative, or neutral evaluations, (Diane, Mackie, and Hogg 1999).

In Nigeria, the government, through the National Center for Diseases and Control (NCDC), issued a number of measures for preventing and controlling COVID-19. These included routine hand washing with soap, social withdrawal, the use of hand sanitizers, and the

use of nose masks - which, before the pandemic, were only worn by people for specific needs, job requirements, pollution, and other places.

The revised dates for school exams, including entrance exams for many prestigious schools, have not yet been determined. While some private educational institutions began offering emergency online learning opportunities, the majority of students in public universities across the nation remained at home idle because they were unable to participate in online learning. A lot of students, particularly those attending public universities, also struggled to pay for laptops and internet packages necessary for online learning.

Despite the efforts of all levels of government, including NCDC, as well as security agencies, non-governmental groups, and other safety-based organizations, the pandemic was still spreading. The main objective of this study is to investigate the influence of self-concept on attitude to covid-19 preventive measures among higher education students in Calabar Metropolis in Cross River State, Nigeria.

The paper is structured into five sections. After this introductory section, section two reviews related literature on the sub-variables. The methodology is discussed in the third section. Section four comprises results and discussion of findings, and finally, section five draws conclusions based on the findings and recommends the way forward.

2. LITERATURE REVIEW

2.1 Conceptual literature

2.1.1 Nature of Attitude

Sorenso in Mangal (2008) asserts that conspiracy theories and false information may have an impact on students' attitudes: False information and conspiracy theories concerning COVID-19 have been circulated by certain students, which has caused confusion and damaged people's faith in medical professionals and authorities. Some students have opposed or refused to follow public health regulations, such as wearing masks or receiving vaccinations, which could help to curb the spread of the virus thus make it more challenging to contain the pandemic.

2.1.2 Academic self-concept

The term "academic self-concept" refers to a person's attitudes, perceptions, and beliefs regarding their own aptitude and competency in various academic fields. Academic performance, past experiences, feedback from teachers, peers, and parents, among other things, can all have an impact on how students perceive themselves in the classroom. In numerous ways, including judgments of academic competence, flexibility in adjusting to different learning contexts, and perceptions of support, academic self-concept can affect attitudes regarding COVID-19 and its effects on education. Strong academic self-concept increases students' perceptions of support from instructors, peers, and families as well as their propensity to seek out further help when necessary. Students who have a poor academic self-concept, on the other hand, could feel unsupported and be less likely to ask for assistance (Graven, 2008).

In general, students' perceptions toward COVID-19 and its effects on education can be significantly shaped by their academic self-concept. Teachers and parents should support and encourage pupils and work with them to keep a positive and resilient attitude towards their academic success. (Yoon, 1996)

2.1.3 Physical self-concept

The term "physical self-concept" relates to a person's attitudes, beliefs, and perceptions regarding their own physical attributes, capacities, and state of health. Various factors, such as past events, physical activity and performance, and other people's opinions, can have an impact on one's physical self-concept. Several factors, including physical self-concept, can impact how people feel about COVID-19: In conclusion, views concerning COVID-19 and its effects on daily life can be influenced by one's physical self-concept. People should strive to keep a healthy and resilient view of their bodies and seek out assistance when necessary.

2.1.4 Moral self-concept

The term "moral self-concept" refers to a person's attitudes, sentiments, and views on their own moral nature, principles, and ideals. This aspect of a person's self-concept expresses their morality and sense of right and evil. Upbringing, cultural norms, personal experiences, exposure to other ethical systems, and moral principles are just a few of the variables that might have an impact on one's moral self-concept. Because they may act in accordance with their moral views and ideals, people's moral self-concepts can affect how they behave and how they make decisions.

A person's moral self-concept is seen as a crucial component of their personal identity and can have a big impact on how they feel about themselves. It may also affect a person's interactions with others because people are drawn to and associate with those who hold similar moral principles and views, (Kohlberg, 1984). In conclusion, a student's moral self-concept can have a big impact on how they feel about COVID-19 preventive measures by affecting how important they think these measures are and how motivated they are to follow them, (Schwartz, 1992).

2.2 Empirical literature

2.2.1 Academic self-concept and attitude to covid-19 preventive measures

Erfani, Shahriarirad, Ranjbar, Mirahmadizadeh and Moghadami (2020) carried out a population –based survey on the knowledge, attitude and practice toward the novel coronavirus (COVID-19) outbreak in Iran. The findings revealed a significant connection between higher education and knowledge, attitude, and practice. Also the findings of the multiple linear regression analysis validate that there is a significantly link between lower education level and lower knowledge scores.

Alves, Samorinha and Precioso (2020) evaluated knowledge, attitudes and behaviors about COVID-19 among higher education students in Portugal and results from the study indicated that students who had good knowledge about COVID-19, correctly answered 13.06 questions out of 14 and possessed favorable attitudes toward preventive behaviors. Students reported always engaging in, on average, 5.81 of the 12 behavior analyzed. Females had higher levels of knowledge, more positive attitudes and engaged in more precautionary behaviors than males.

An investigation into knowledge, perceptions, and attitudes towards the COVID-19 pandemic in Peru was conducted by Zegarra-Valdivia, Chino-Vilca, and Ames-Guerrero (2020), The results of the logistic regression showed a strong correlation between education and knowledge of the virus ($p=0.031$). In spite of people reporting having sufficient knowledge of the expected symptoms and methods of virus transmission in COVID-19 disease, their study found that there is a significant perceived susceptibility to contract the aforementioned virus, with stigmatized behavior showing up in 59.1% of cases and fear of contracting the virus from others showing up in 70.2% of cases.

Alharbi, Alharbi, Khayyat, Aldaadi and Afifi (2021) assessed knowledge, perceptions, and attitudes concerning COVID-19 infection control measures among dental students in Saudi Arabia. From the results, only 24.2% of the 327 dental students who answered the questionnaires had taken part in training on COVID-19, despite the fact that 92.4% of them had received instruction in infection control in dental practice. The majority of students demonstrated sufficient knowledge about the ways in which COVID-19 spreads and its typical symptoms, as evidenced by statistically significant total mean knowledge scores among students in various academic years ($p < 0.05$). Also, 92.7 percent of the students believed that using rubber dams or saliva ejectors with a high volume could lessen the risk of illness transmission. However, 58.4% of the students disagreed that it was best to avoid intraoral dental radiography in order to lower the risk of infection transmission.

Hatabu, Mao, Zhou, Kawashita, Wen, Ueda, Takagi and Tian (2020) evaluated knowledge, attitudes and practices (KAP) toward COVID-19 among university students in Japan. The study's conclusions revealed that Japanese university students' KAP was generally high. All respondents (100%) demonstrated awareness of how to avoid confined quarters, crowded places, and close environments. The majority of respondents (96.4% for both) indicated that they wash their hands frequently or at least occasionally. A positive attitude toward early drug administration was also demonstrated by 68.5% of respondents. The logistic regressions revealed associations between knowledge or attitudes regarding the COVID-19 and gender, main subjects, education level, country, residence, and psychological variables (private self-consciousness and extroversion) ($p < 0.05$).

The knowledge, attitude, and practices (KAP) of higher education students in India regarding COVID-19 were examined by Padmanaban, Rajendran, Davis, and Velayutham

(2021). The study's findings showed that 65.5% of respondents had a high level of knowledge about the illness. Notably, 66.7% of them demonstrated desirable COVID-19 mitigation actions, and 71.0% of them had a favorable attitude toward the disease.

The findings also revealed a significant relationship between KAP and some of the investigated socio-demographic characteristics. For the majority of students, the most vital source of information on covid-19 was social media (81.0%), followed by TV (79.0%), newspapers (56.0%), friends (42.0%), family (40.0%), and authentic sources (25.0%) as their primary source of knowledge on COVID-19. It is regrettable to note that just a small percentage of pupils used reliable sources to learn about COVID-19. A significant positive association between KAP variables was also found.

Lee, Kang, and You (2021) conducted a study in South Korea on knowledge, attitudes, and practices (KAP) toward COVID-19: a cross-sectional study and it was discovered that efficacy belief was the most significant and influential practice factor. It served as a mediator between knowledge and each of the three preventive behaviors (using facial masks, washing hands, and avoiding crowded areas).

2.2.2 Physical self-concept and attitude to covid-19 preventive measures

The self-concept of teenagers before and after a lockdown period was examined in relation to gender and the type/amount of physical exercise or sports by González-Valero, Zurita-Ortega, Lindell-Postigo, Conde-Pipó, Grosz, and Badicu (2020). The study's results showed that, although there were no differences during the COVID-19 lockdown, boys had greater physical and emotional self-concepts than girls had before the lockdown. The results showed that physical exercise was associated with a good self-concept both before and after the COVID-19 lockdown.

In their investigation into the knowledge, attitudes, and practices of university students in Mizan Tepi University regarding Covid-19 and related factors, Angelo, Alemayehu, and Dach (2021) found that 315 of the students (78.4%) mentioned the virus as the cause, 306 (76.1%) mentioned respiratory droplets and close contact as the method of transmission, the majority (58.2%) correctly identified the incubation period, and only 153 (38.1%) knew that generally speaking, people are susceptible to covid-19.

Further findings revealed that 257 (63.9%) of the study participants named fever and dry cough as the primary clinical manifestations of the Covid-19, while 244 (60.7%) said the use of non-pharmacological methods is crucial for prevention and the majority (74.4%) were aware that wearing face masks can lessen transmission. In addition, 171 (42.5%) believed that all people infected with the Covid-19 show clinical manifestation. The majority of respondents (71.4%) were aware that the disease can be spread by contaminating the eye, nose, or mouth with contagious bacteria, while 154 (38.3%) believed that the global mortality rate from Covid-19 is below 5%. 173 (43.0%) believed that eating garlic or onions cannot prevent the disease, 162 (40.3%) said that taking antibiotics is the best treatment for Covid-19, and 205 (51.0%) said that there is a protective vaccine or cure.

In their study, Lee, Kang, and You (2021) showed that respondents thought interaction with or eating wild animals could spread the COVID-19 virus. Only 27.9% of respondents correctly identified the claim as untrue; 42.2% agreed with the claim, and 29.9% were unsure. The majority of respondents (48.8%) indicated that wearing a general medical mask aids in prevention, however 39.7% gave inaccurate responses and 11.5% did not respond.

2.2.3 Moral self-concept and attitude to covid-19 preventive measures

A study on the knowledge, attitude, and practice survey of the COVID-19 pandemic in Northern Nigeria was conducted by Habib, Dayyab, Iliyasu, and Habib in 2021. Results from the study showed that, in terms of attitudes toward religious norms, 77.77% agreed that the lesser pilgrimage should be canceled as a means to stop the disease's spread, while 23.64% acknowledged that the greater pilgrimage (Hajj) should continue despite the existence of the ongoing pandemic. Even if it was uncomfortable for them, almost 50% of the respondents insisted on going to Friday congregational prayers. Although 66% of respondents said they always practice social distance from those who are coughing or sneezing, 28% said specific races are more susceptible to the illness. Nearly 70% of respondents said they would accept a vaccine, and 39% said they would be ready to pay for it if it weren't provided for free.

In their investigation of university students' knowledge, attitudes, and practices toward Covid-19 and related factors at Mizan Tepi University, Angelo, Alemayehu, and Dach (2021) found that 47%, 54%, and 42.8% of the students, respectively, had good knowledge, a positive attitude toward Covid-19, and good practice in using the software. It was found that 221 (55.0%) of the students did not wear a face mask, 246 (61.4%) did not gather in locations where a large number of individuals were present, and 258 (64.2%) of the students committed to routinely washing their hands. 224 (55.7%) of the students also practiced coughing properly. The majority (60.6%) did not maintain social distance, 209 (52.0%) of the study participants did not take proactive action when contacting an active Covid-19 case, while 265 (65.9%) avoided meeting with cured Covid-19 patients and 206 (51.2%) responded to take proactive action when exhibiting Covid-19 symptoms.

Also from the results, about half of the students said they were concerned about getting Covid-19, and 182 (45.3%) said only risk groups and elderly people should use preventative

measures. The majority of people - 258 (66.7%) agree that people should go to the hospital as soon as they have symptoms, while 275 (68.4%) also think that people should limit their movement to stop the spread of sickness. 158 (39.3%) believe that students who live on campus are particularly susceptible to the Covid-19 virus, 250 people (51.0%) agreed that the outbreak had an effect on their research, while 184 people (45.8%) believed that consuming raw vegetables and wild animals had no effect on the transmission.

2.3 Theoretical framework

2.3.1 Self-concept Theory by Alfred Adler (1912)

Alfred Adler developed the self-concept theory in 1912. Adlerian theory's fundamental principle is the idea that lifestyle affects behavior. The notion stressed that consciousness served as the core of personality. He believed that man was a conscious being, typically mindful of his motivations, and capable of planning and directing his acts while fully conscious of the ramifications for his own self-realization.

According to the theory, everyone is born with a sense of incompleteness and inadequacy; as a result, the fear of inferiority serves as the driving force behind attempts to establish oneself or achieve dominance. He realized there were several different lifestyles for reaching their objective. The idea is pertinent to this study since it allows people to become mindful of the causes, effects, and COVID-19 control measures. As a result, people become more forceful and create a stronger desire to stop the virus from spreading both during and after the epidemic.

2.3.2 Dissonance Theory of Attitude by Festinger and Carlsmith (1959).

Festinger and Carlsmith (1959) proposed the dissonance theory of attitude. The theory emphasizes counter attitudinal behavior. According to the theorist, cognitive dissonance is

when there are opposing attitudes, ideas, or behaviors present. This results in a sensation of discomfort, which prompts a change in one's attitudes, beliefs, or behaviors to alleviate the discomfort and return things to normal, etc. The theory also emphasizes that people have an innate desire to keep all of their attitudes and beliefs in harmony and to avoid dissonance. A person's internal influences may cause their attitude to shift. The idea of cognitive consistency is crucial in this situation. The foundation of this theory is the notion that if there is a discrepancy between two cognitions, we seek consistency in our attitudes and beliefs.

The theory contends that irrational and occasionally maladaptive conduct might result from a strong drive to preserve cognitive consistency. According to Festinger, we have a great deal of knowledge about ourselves and the outside world; when these beliefs conflict, a disparity develops, causing a condition of tension known as cognitive dissonance. Given that experiencing dissonance is unpleasant, we are driven to lessen or eliminate it and achieve consonance (i.e., agreement or a balance), typically by changing our cognitions. Cognitive dissonance can be lessened or eliminated by only adding new cognitions as well as altering existing ones.

The theory is pertinent to this study because it emphasizes how important it is for people to maintain harmony in their attitudes and beliefs in order to avoid dissonance (or disharmony), and how this harmony may change as a result of a person's internal consistency with regard to effective covid-19 control measures..

3. MATERIALS AND METHODS

3.1 Research design

This study adopted the survey research design to establish the influence of self-concept and attitude to covid-19 preventive measures. The survey research design entails the selection

and study of samples chosen from the population to discover the relative incidence, distribution and interrelations of the variables.

3.2 Area of the study

The research areas of the study include University of Calabar, Cross River State University of Technology (CRUTECH) and College of Health Technology, Calabar.

3.3 Population of the study

The population of the study comprised of 500 higher education students in University of Calabar, Cross River State University of Technology (CRUTECH) and College of Health Technology, Calabar. 250 students from University of Calabar, 150 students from Cross River State University of Technology (CRUTECH) and 100 students from College of Health Technology, Calabar.

3.4 Sampling technique and Sample

The study adopted the stratified random sampling. This is done by dividing the entire population into homogeneous groups called strata. Stratified random sampling allowed the researchers to obtain a sample population that best represents the entire population being studied. The populations were divided into sub-sets by splitting them into different faculties, institutes and departments. The sample for this study comprised five hundred (500) students. This represents one hundred percent (100%) of the total number of 500 students chosen from University of Calabar, Cross River State University of Technology (CRUTECH) and College of Health Technology, Calabar.

3.5 Reliability of the instrument

The data was subjected to reliability analysis using the Cronbach-Alpha method to determine the internal consistency of the instrument. Report for each sub-scale yielded reliability coefficients ranges from 0.76 to 0.88

3.6 Procedure for data analysis

The data collected were analyzed using the simple percentage, the students' T test and the Chi-square analysis.

4. RESULTS AND DISCUSSIONS

4.1 Presentation of results

4.1.1 Hypothesis one

The nature of student's attitude towards covid-19 preventive measures is not significantly positive or favourable

To test this hypothesis, a Simple percentage was used. The result of the analysis is presented in below:

Table 1: Percentage Summary of respondents

Questionnaire	Responses according to Categories	Total	Percentage (%)
No. returned	493	493	98.6
Not returned	7	7	1.4
Total	500	500	100

Source: Field Survey by the Researcher, 2023

From table 4.3, 500 questionnaires were administered to respondents and out of this number, 493 questionnaires were returned while 7 questionnaires were not returned. The total number of questionnaire returned was 493 representing 98.6 per cent while the total number

of questionnaire not returned were 7, representing 1.4 per cent of the respondents who did not return their questionnaire.

Test of hypothesis one:

Hypothesis one: The nature of student's attitude towards covid-19 preventive measures is not significantly positive or favourable

This hypothesis was tested using the population t-test as follows:

Table 2: Students T-test computation of the nature of student's attitude towards covid-19 preventive measures

X	(X - X) ²	Y	(Y - Y) ²
190	28.1	85	0.4
175	13.1	43	83.2
167	5.1	93	8.4
152	19.8	81	7.2
156	11.8	148	63.4
152	19.8	37	95.2
155	13.8	102	17.4
148	27.8	88	3.4
£ = 1295	£ = 129.3	£ = 677	£ - 278.6
X = 161.9		Y = 84.6	

Ho: The nature of student's attitude towards Covid-19 preventive measures is not significantly positive.

Using the student's t – TEST Formula:

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{\delta x^2}{NX} + \frac{\delta y^2}{NY}}}$$

We obtain:

$$\delta x = \sqrt{\frac{\sum (X - \bar{X})^2}{N - 1}} = \frac{129.3}{18} = 18.4$$

7

$$\sigma_y = \sqrt{\frac{\sum (Y - \bar{Y})^2}{N-1}} = \frac{278.6}{7} = 39.8$$

The t formula above becomes:

$$\begin{aligned} & \frac{161.9 - 84.6}{\sqrt{\frac{(18.4)^2}{8} + \frac{(39.8)^2}{8}}} \\ &= \frac{77.3}{\sqrt{42.3 + 198}} \\ &= \frac{77.3}{\sqrt{240.3}} \\ &= \frac{77.3}{15.517731793} \end{aligned}$$

∴ t = 4.98 = Calculated value

$$D/F = NX + NY - 2 = (8 + 8) - 2 = 14$$

At 0.05 Table Value = 2.15

Decision: Since the calculated value is greater than the table value, we reject H_0 and conclude that the nature of student's attitude towards Covid- 19 preventive measures is significantly positive.

4.1.2 Hypothesis two

Table 4.8: Summary of Chi-square computation of the relationship between Academic self-concept and student's attitude towards covid-19 preventive measures.

Table 4.3: Table 4: Summary of Chi-square computation of the relationship between Academic self-concept and student's attitude towards covid-19 preventive measures.

Test Statistics

	Academic self-concept and student's attitude towards covid-19 preventive measures.
Chi-Square	430.519 ^a
Df	14
Asymp. Sig.	.000

Hypothesis two: There is no significant influence of academic self-concept on student's attitude towards covid-19 preventive measures.

To test this hypothesis, the Chi-Square was used.

From the result of the analysis in Table 4.8 since the chi-square calculated value of 430.519 is greater than the table value of 23.68 at 14 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and concluded that

there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures.

4.1.3: Hypothesis three

Table 4: Summary of Chi-square computation of the relationship between Physical self-concept and student's attitude towards covid-19 preventive measures.

Test Statistics

	Physical self-concept and student's attitude towards covid-19 preventive measures.
Chi-Square	210.318 ^a
Df	15
Asymp. Sig.	.000

Hypothesis three: There is no significant influence of physical self-concept on student's attitude towards covid-19 preventive measures.

To test this hypothesis, the Chi-Square was used.

From the result of the analysis in Table 4.9 since the chi-square calculated value of 210.318 is greater than the table value of 25.00 at 15 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and concluded that there is a significant influence of physical self-concept on student's attitude towards covid-19 preventive measures.

4.1.4: Hypothesis four

Table 5: Summary of Chi-square computation of the relationship between Moral self-concept and student's attitude towards covid-19 preventive measures.

Test Statistics

	Moral self-concept and student's attitude towards covid-19 preventive measures.
Chi-Square	293.791 ^a
Df	15
Asymp. Sig.	.000

Hypothesis four: There is no significant influence of moral self-concept on student's attitude towards covid-19 preventive measures.

To test this hypothesis, the Chi-Square was used.

From the result of the analysis in Table 4.11 since the chi-square calculated value of 293.791 is greater than the table value of 25.00 at 15 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and concluded that there is a significant influence of moral self-concept on student's attitude towards covid-19 preventive measures.

4.2 Discussions of findings

4.2.1 The nature of student's attitude to Covid-19 preventive measures

The result of the first hypothesis revealed that the nature of student's attitude in higher education in Calabar Metropolis towards covid-19 preventive measures is significantly positive

or favourable. The result of the finding support the finding of Alves et al (2020), Hatabu et al (2020), Padmanaban (2021) and Angelo et al (2021) whose findings all concurred that there is a positive attitude towards COVID-19 among the students and respondents sampled in their respective studies. This finding implies that the students possessed more knowledge about COVID-19, thus they should continue to avoid enclosed spaces, crowded areas, and close situations. Furthermore, they are used to washing their hands or wearing masks, early drug administration as well as observing every other COVID-19 protocol.

4.2.2 Academic self-concept and student's attitude towards covid-19 preventive measures

The result of the second hypothesis revealed that since the chi-square calculated value of 430.519 is greater than the table value of 23.68 at 14 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and conclude that there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures.

The result of this finding is in line with the views of Erfani et al (2020) who asserted that there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures. The result of this finding also supports the opinions of Alves et al (2020), Zegara-Valvida (2020) and Hatabu et al (2020) who all stressed that there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures. This finding may be that student's academic knowledge have made them to have more information about the COVID-19 pandemic hence affecting their attitudes towards covid-19 preventive measures.

4.2.3 Physical self-concept and student's attitude towards covid-19 preventive measures

The result of the third hypothesis revealed that since the chi-square calculated value of 210.318 is greater than the table value of 25.00 at 15 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and conclude that there is a significant influence of physical self-concept on student's attitude towards covid-19 preventive measures. The result of this finding is in line with the view of Gonzalez-Valdero et al (2020) who affirmed that there is a significant influence of physical self-concept on student's attitude towards covid-19 preventive measures. This outcome may be that students of tertiary institutions in Calabar Metropolis have the ability to observe all COVID-19 protocol hence affecting their attitudes towards covid-19 preventive measures.

4.2.4 Moral self-concept and student's attitude towards covid-19 preventive measures

The result of the fourth hypothesis revealed that since the chi-square calculated value of 293.791 is greater than the table value of 25.00 at 15 degree of freedom and the p-value of 0.000 is less than 0.05 chosen significance level we therefore reject the null hypothesis and conclude that there is a significant influence of moral self-concept on student's attitude towards covid-19 preventive measures. The result of this finding is in agreement with the view of Habib *et al* (2021) who study showed that that there is a significant influence of moral self-concept on student's attitude towards covid-19 preventive measures. This finding suggests that students in higher institutions in Calabar Metropils have good principles that made them to have more information especially adequate knowledge regarding the modes of transmission and the common symptoms of COVID-19 thus affecting their attitudes towards covid-19 preventive measures.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

This research examines self-concept and attitudes to covid-19 preventive measures among higher education students in Calabar Metropolis in Cross River State, Nigeria. The sample comprised 500 students that were drawn from University of Calabar, Cross River State University of Technology (CRUTECH) and College of Health Technology, Calabar. It was concluded from the findings of the study that the nature of student's attitude towards covid-19 preventive measures is significantly positive or favourable, there is a significant influence of academic self-concept on student's attitude towards covid-19 preventive measures, there is a significant influence of physical self-concept on student's attitude towards covid-19 preventive measures and there is a significant influence of moral self-concept on student's attitude towards covid-19 preventive measures.

5.2 Recommendations

Based on the findings of the study, the following recommendations were made:

- i. More information and knowledge about COVID-19 and other COVID-19 protocol especially adequate knowledge regarding the modes of transmission and the common symptoms of COVID-19 should be made available to students so as to ensure that the nature of student's attitude towards covid-19 preventive measures will still remain significantly positive or favourable
- ii A good understanding of the current status in Nigeria through studies like Knowledge Attitude and Perception is crucial to avoid Nigeria being the next epicenter of the pandemic.

- iii. For the students and the entire populace to follow standard infection prevention and control measures adequately, governments need to gain the trust of citizens by strengthening the health systems and improving surveillance activities in detecting cases, so as to offer the optimum health services to the populace.

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