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Journal of Geography and Development is a bi-annual publication. In line with the philosophy of the Department of Geography, Benue State University Makurdi, the Journal was launched to provide an avenue for scholars in Geography and other related fields to publish their research results and engage in the exchange of information on conceptual issues, scholarly debate and ideas which will further the course of maximizing the benefits of human behavior while minimizing cost and damages to human environment.

The journal lays emphasis on result of empirical research and conceptual issues in the different aspects of Geography and spatially related aspect of the environment. There is also a section for School Geography, which is devoted to the improvement of research methods and the teaching of Geography. Articles in this area are also welcomed. As more and more scholars seek to apply the knowledge of Geography to real life issues for the purpose of improving human life, we hope that this journal will continue to be an avenue for such publications.

## Information to Contributors

Journal of Geography and Development is a bi-annual publication. Contributors must provide on a separate page abstracts of not more than 150 words and also observe the following instructions.

1. Every article must be accompanied by a non-refundable fee of N5000.00 in bank draft payable to the editor-in-chief.
2. Contributors are instructed to use only American Psychological Association (APA) style of referencing.
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5. Authors' names and addresses should also be submitted on a separate page.
6. A final accepted and corrected copy of an article **MUST** be submitted as an attachment to our e-mail: [jourgeodev@yahoo.com](mailto:jourgeodev@yahoo.com). Word format, only left justified and with a publication fee of N30,000.00 payable through the journal account:  
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## ASSESSMENT OF STUDENTS PERCEPTION OF THE EFFECTIVENESS OF NON-PHARMACEUTICAL INTERVENTION (NPI) IN THE PREVENTION OF THE SPREAD OF COVID-19

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### **Abstract**

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*The outbreak of the covid-19 pandemic has been one of the most challenging public health issues faced by nations in the 21<sup>st</sup> century, which led to the closure of educational institutions. Hence, the re-opening of learning centers depends on their ability to adopt the various non-pharmaceutical intervention (NPI) measures that will help prevent an outbreak on campus. However, the effectiveness of any measure depends on the cooperation of students, which is enormously affected by their perception of the effectiveness of these measures in ensuring their safety on campus. Thus, there is need to examine the perception of students regarding the effectiveness of the NPI measures. A total of 400 questionnaires were administered across faculties in the university. Data were analyzed using tables, charts and Analysis of Variance (ANOVA). Results showed that some of the NPI measures on campus include the use of facemasks, social distancing, the use of hand sanitizers, and also the erection of handwashing stations around the school campus. Results also revealed that these measures have affected student's socio-economically by increasing the cost of transportation and the price of goods and services. The study concluded that most students believe that the covid-19 pandemic have been exaggerated and that most of the NPI measures provided were not effective in preventing the spread of the pandemic on campus. Therefore, it was recommended that university authority should carry out more sensitization and awareness campaign on the danger posed by covid-19 and the preventive measures needed for individuals to protect themselves, and compliance to these measures should be enforced adequately.*

**Key words:** Covid-19, NPI, Perception, Pandemic, Campus

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### **Introduction**

The last month of the year has always been one that was shrouded in the cloud of festivity, with people all over the world looking back at the achievements of the current year whilst preparing in anticipation for the New Year. The year 2019 however was one that produced a sharp contrast from the norm, creating a misalignment from the known order, with the outbreak of a highly transmittable and pathogenic viral infection caused by Severe Acute

Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), also known as coronavirus or Covid-19 in the city of Wuhan, China (Khan et al, 2020). The turn of the year witnessed a rapid spread of this infection to all parts of the world, and in less than three months was declared a global pandemic by the World Health Organization (WHO) on 11<sup>th</sup> of March, 2020 (Lone & Aijaz, 2020). The global recorded cases of covid-19 as of the 23<sup>rd</sup> of August 2021 is 212,699,920, and the total death toll of 4,448,369 across 222 countries of the world.

COVID-19 is certainly the most serious public health crisis after the 1918 flu pandemic, but in many regards the worst crisis of humanity considering the system nature of the problem in relation to the globalization of humanity (Chan et al, 2021). The surge of the virus necessitated the lockdown of most countries in the world and a drastic decline in socio-economic activities, forcing numerous sectors, including the educational sector to improvise to online interaction. The opening of the economy by the government gave the green light to institutions to jettison the adoption of online learning and return to physical classes, provided certain measures, which are mostly non-pharmaceutical are kept. These measures include social distancing, sneezing into the elbow, use of face mask within the campus, and provision of various hand washing facilities in strategic places within the campus. Due to the shortage or unavailability of vaccine, NPI is still recognized as the most effective way of preventing the spread of the virus (CDC, 2021).

The success of these measures in preventing the spread of the virus depends on their strict enforcement by the University authorities and also the willingness of students to comply with these measures. Hence, these measures in themselves are not sufficient in ensuring students safety on campus unless they are subjected to strict adherence by all persons coming into the campus environment. One great factor that will determine the success of these measures is the

perception and prevailing public beliefs about the threat posed by the virus to their lives and livelihood.

As observed recently in the University of Lagos, an outbreak of covid-19 on campus will lead to the disruption of academic activities. Hence, it is very important that the various non-pharmaceutical intervention measures adopted by the University administration are adhered to by students. It is reported that undergraduates' compliance to non-pharmaceutical intervention (NPI) in preventing the spread of covid-19 is very low (Shumway et al 2021). A negative perception amongst students will lead to a very low compliance level and negligence of these measures. Therefore, it is important that this study be undertaken in order to determine the factors responsible for shaping the perception and ideology of students regarding the effectiveness of NPI so as to guarantee the safety of both students and officials on campus.

The threat posed by the coronavirus is not one that should be handled with levity. Accurate information is very important in dealing with the threat, considering the fact that it continues to evolve, posing a bigger danger to human health. This necessitates the need for a research-based information on how effective the various preventive measures have been in protecting human lives on campus. The effectiveness of any preventive measure, be it pharmaceutical or non-pharmaceutical depends largely on the response and behavior of the public towards such measures. The potency or accuracy of a particular measure is not only the deciding factor in determining its effectiveness towards preventing an infection or disease. It is thus imperative to consider carrying out a research in this area as this will provide useful and relevant information on the efficiency and potency of these measures and how their effectiveness have been affected by student's perception. This study focused on the perception of students

regarding the effectiveness of non-pharmaceutical intervention in preventing the spread of covid-19 on campus using University of Ilorin as a case study.

## 1. Study Area

According to the university's official website, the University of Ilorin is located in Ilorin, the capital city of Kwara State between latitude  $8.4799^{\circ}\text{N}$  and longitude  $4.5418^{\circ}\text{E}$ , covering an approximate land mass of 5,000 hectares. The University of Ilorin is located at about 500km apart from Nigeria National City (Abuja) and 300km from the nation's economic capital (Lagos). University of Ilorin is located in Ilorin South Local Government, which is one of the three local government areas that makes up Ilorin metropolis. University of Ilorin is a non-profit public higher-education institution located in the urban setting of the large city of Ilorin, Kwara. The University has been recognized as one of the best in the country. It is known for not only investing in the intellectual education of students, but also, it's vital contribution to the moral excellence of its students.

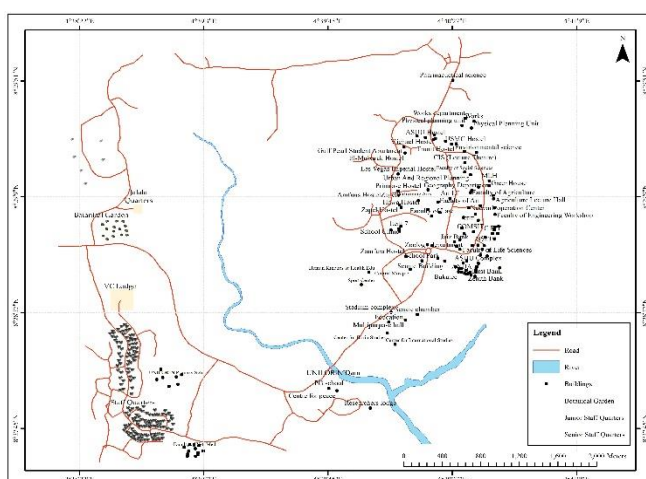


Fig 1 University of Ilorin

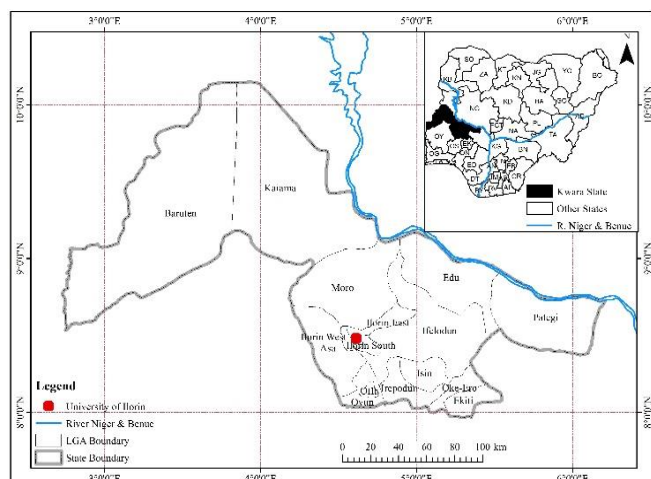


Fig 2. Kwara State showing University of Ilorin

Ilorin

The relief of the university of Ilorin shares similar characteristics with that of Kwara State. Landscape in Kwara state is generally undulating and it is marked by numerous domed or sugar-loaf hills and occasionally flat top ridges. These hills which are developed over the basement complex have their summits ranging from 300m to 600m above sea level. Apart from geology other factors of landform development in Kwara state has reflected in lithology and structure include geomorphological process of deep chemical weathering, weathering by vegetation and fluvial process of erosion and sedimentation. These factors have acted on the rock within the state to form various unit landforms and undulating landscape such as that of the University of Ilorin (Iroye, 2008).

The climate of the University of Ilorin is characterized by both wet and dry seasons, which begin in the late march to October and in November to early march respectively. The total annual rainfall ranges from 800mm to 1200mm with a mean annual temperature of 30°C - 35°C (Oyegun, Jimoh & Iroye, 2007). According to the school's official website, the population of students in the university is said to be over 48,000 undergraduates, they possess a staff strength of 4,474 people aside road transport workers and other petty traders residing in the school, there is also an estimate of over 5,000 postgraduate students, cutting across 90 academic programs. ([www.unilorin.edu.ng](http://www.unilorin.edu.ng)).

Most of the people in the institution are mostly students or staffs of the schools be it academic or non-academic staffs, and they are spread in different locations all over the areas of the school, they are also petty traders who engage in commercial activities within the premises, they are also presence of road transport workers who helps in moving of goods and services. (Kwara State diary, 2016).

## 2. Methods

Primary and secondary data were used in this study. The primary data source includes: Socio-demographic characteristics of the students, Information on the effect of the protective measures on students, Information on the compliance level of students, and Perception of students about the effectiveness of these measures. The secondary data sources were the Population of the students, Various NPI measures on campus and Map of the study area.

The socio-demographic characteristics of the students, information on the effect of the protective measures on students; information on the compliance level of students; and perception of students about the effectiveness of these measures were collected through the use of questionnaire administration. The population of the students and the various NPI measures was obtained from Students Affairs Unit of the university, While, the map of the University was sourced from the Department of Geography and Environmental Management.

The total population of students in University of Ilorin is 41,785. For a reasonable sample size, the Taro Yamane's formula was adopted. Thus,

$$n = \frac{N}{1+N(e)^2} \dots\dots\dots$$

equation 1

Where  $n$  = sample size,

$N$  = population size,

$e$  = error of sampling.

This study allows for error of sampling on 0.05, hence the sample size shows as follow;

$$\begin{aligned}n &= \frac{41785}{1 + 41785(0.05)^2} \\&= \frac{41785}{104.4625} \\&\therefore n = 400\end{aligned}$$

Therefore, the sample size for this study was put at 400. Thus, a total number of 400 questionnaires were distributed across different faculties of the university. The questionnaires were administered using the simple random sampling techniques because of the nature of the sample population. Questionnaires were administered to students in each faculty in proportion to their population. This was achieved by dividing the population of each faculty by the total population of the students and multiplying the value by the sample size (400), for example, Faculty of Agriculture

$$\frac{5128}{41785} \times 400 = 49$$

Data were collected and analyzed using both the descriptive and inferential statistical method. The descriptive statistical method (tables, frequencies and percentages) were used to analyze the NPI measures on campus, effect of NPI on student's livelihood and student's compliance to these measures. Analysis of Variance and tables were used to determine the variation in student's perception.

### **3. Results and Discussion**

The study established the various non-pharmaceutical intervention measures on campus, the different ways these measures have affected the livelihood of students on campus, the compliance of students to these measures and the perception of students about the

effectiveness of these measures. The data was obtained through self-administered questionnaires. The questionnaires were given out and retrieved. A total of 400 questionnaires were analyzed.

### ***Demographic Information***

The demographic information of the respondents was based on gender, age, religion and current level of students (see table 1). Accordingly, 67% of males were sampled and females were (33%). This indicate that more males participated in this survey than females. Also, 72% of age group of students sampled were between the age of 21 to 30 years, while students sampled between the age of 15 to 20 years and 31 to 40 years were 24% and 5% respectively. The Islamic religion (54%) was the most practiced religion followed by the Christianity religion which is 45% of the sample size and the Traditional religion (2%). Essentially, 15% of the students were at 100 level, while 17%, 21%, and 9% were at 200, 300, and 500 level respectively. Majority of the correspondence (38%) were at 400 level.

**Table 1: Demographic Information of Students**

| <b>Demographic Information</b> | <b>Frequency</b> | <b>Percentage</b> |
|--------------------------------|------------------|-------------------|
| <b>Gender</b>                  |                  |                   |
| Male                           | 267              | 67%               |
| Female                         | 133              | 33%               |
| <b>Total</b>                   | <b>400</b>       | <b>100%</b>       |
| <b>Age Group</b>               |                  |                   |
| 15 - 20 years                  | 95               | 24%               |
| 21 - 30 years                  | 286              | 72%               |
| 31 - 40 years                  | 19               | 5%                |
| <b>Total</b>                   | <b>400</b>       | <b>100%</b>       |
| <b>Religion</b>                |                  |                   |
| Christianity                   | 178              | 45%               |
| Islam                          | 214              | 54%               |
| Traditional                    | 8                | 2%                |
| <b>Total</b>                   | <b>400</b>       | <b>100%</b>       |
| <b>Current Level</b>           |                  |                   |
| 100L                           | 60               | 15%               |
| 200L                           | 67               | 17%               |
| 300L                           | 82               | 21%               |
| 400L                           | 153              | 38%               |
| 500L                           | 38               | 9%                |
| <b>Total</b>                   | <b>400</b>       | <b>100%</b>       |

**Source:** Author's Fieldwork., 2022

### ***Various Non-Pharmaceutical Intervention Measures Identified on Campus***

Some preventive measures were taken by the University prior to the resumption of students, these includes the distribution of face masks, mobilization and awareness in Sentu village in Ilorin south LGA (a border community with the university of Ilorin), provision of sanitizer dispenser in the administrative building, offices of Deans and HOD's (see plate 1), and publication of covid-19 awareness article on the university website (see [www.unilorin.edu.ng](http://www.unilorin.edu.ng)). The personal protective measures adopted by the university after the resumption of students includes regular use of facemasks within the university campus (see plate 2), procurement of personal alcohol-based hand sanitizer (see plate 3), avoiding

overcrowded places and practice of social distancing (see plate 4), and erection of handwashing stations in faculties and strategic positions within the campus (see plate 5).



**Plate 1: Sanitizer Dispenser at Senate Building**  
**Source:** Author's Fieldwork



**Plate 2: Picture showing a student using facemask**

These numerous NPI measures are meant to ensure the safety of students on campus upon resumption and also ensure that a robust structure is in place to deal with the pandemic in case of any outbreak.



**Plate 3: An Alcohol-based Hand Sanitizer**  
**Source:** Author's Fieldwork, 2022



**Plate 4: Students practicing social distancing**  
**Source:** Author's Fieldwork, 2022



**Plate 1: A handwashing point**

**Source:** Author's Fieldwork, 2022

This kind of development was also posited by Galvan *et al*, (2020) that the adoption of these measures should be promoted by university authorities, and compliance should be encouraged, as this can greatly mitigate the risk of an outbreak on campus.

### ***Impact of Non-Pharmaceutical Intervention Measures on Students***

The socio-economic effects of the identified NPI measures on campus on the price of goods and services was studied. A high percentage 79% (316) of the respondents are of the opinion that these NPI measures resulted to the increase in price of goods and services, while 21% (84) are not of this opinion.

This result corroborates with the opinion of Oseni *et al* (2020) and Ajibo (2020) that the NPI measures contributed immensely to the present economic challenges in the country, leading to the increase in the prices of goods and services. The socio-economic impact of the NPI measures on the cost of transportation reveals that 74% (297) of the students believed that the adoption of NPI measures has led to the increase in the cost of transportation, while 26% (103) do not agree. The reason for this opinion can be traced to the practice of social distancing in commercial transport, which has led to the reduction in the number of passengers and therefore increase the fares. Before the covid -19 pandemic, a shuttle bus (koro) convey ten passengers with a fare of seventy naira (₦70), while during the pandemic, the carrying capacity of the shuttle buses was reduced to eight and the fares increased to a hundred naira (₦100). This aligns with the position of Mogaji, (2020) that the various non-pharmaceutical intervention measures have led to the increase in the cost of transportation within the country.

### ***Impact of NPI Measures on Social Interaction***

The effect of NPI measures such as social distancing and the use of facemasks reveals that these measures have not constituted a hindrance to social interaction within the university of Ilorin. Most (54%) of the students claim that the practice of these NPI measures have not affected their social interaction in any way, while 46% of the students believed that these measures has hinder their interaction. This result contrast with the findings of Ozili (2020) that NPI measures have greatly hindered social interaction. The root of this variance may be traced to the difference in age groups surveyed as well as differing preventive measures in terms of travel restriction and ban on social events. While this survey focuses on students which are mostly of youthful age, and whose large percentage of social interaction are digital,

Ozili's research cuts across various age groups and also include more NPI measures that are not considered in this research such as the lockdown and curfew.

### ***Impact of NPI measures on income level***

The effect of NPI measures on the income level of students. The survey reveals that minority (22%) of the students claim that their level of income remains unchanged, 46% of the respondents experienced an increase in their income level, while 32% opined that there is reduction in the income level. These findings infer that the presence of the NPI measures have directly or indirectly contributed to the income of students. However, this may not necessarily result in an improved standard of living for the students due to the corresponding increase in cost of living. Joab-Peterside (2021) opinion differ on this, his research highlighted the reduction in income level as one of the major repercussions of the NPI restrictions. This may be due to the ease of restriction that is now in place at the time this study was conducted compared to that of Joab-Peterside's.

### ***Compliance of Students to NPI Measures***

As indicated in Table 2 on the frequency of students' attendance to lectures per week. The result showed that most (34%) of the students come to school about three times a week, 26% comes to school four times in a week, while 12%, 22% and 7% comes to school once, twice and more than four times a week respectively.

**Table 2: Showing the Distribution of Responses on Attendance Level Per Week**

| <b>Attendance Per week</b> | <b>Frequency</b> | <b>Percentage</b> |
|----------------------------|------------------|-------------------|
| Once                       | 49               | 12%               |
| Twice                      | 86               | 22%               |
| Three times                | 134              | 34%               |
| Four times                 | 104              | 26%               |
| More than four times       | 27               | 7%                |

**Source: Authors Fieldwork, 2022**

The outcome of this survey may have been affected by the adoption of online lectures adopted by the university of Ilorin during the lockdown period and also when schools were reopened. Also, 52% of the students use facemasks before entering the school premises (see table 3), 5% always put on the facemasks on campus, 20% use facemasks during lecture hours, 18% are on facemasks when interacting with colleagues, while 8% claimed to never use their facemasks. This implies that majority of the respondents put on their facemasks before entering the school premises (see plate 6).

**Table 3: Showing the Distribution of Responses on the Use of Facemask on Campus**

| <b>When do you use your nose mask on campus?</b> | <b>Frequency</b> | <b>Percentage</b> |
|--------------------------------------------------|------------------|-------------------|
| Never                                            | 33               | 8%                |
| During Lectures                                  | 82               | 20%               |
| Entering School Premises                         | 208              | 52%               |
| Interacting with Colleagues                      | 72               | 18%               |
| Always                                           | 21               | 5%                |

Sources: Authors Fieldwork, 2022

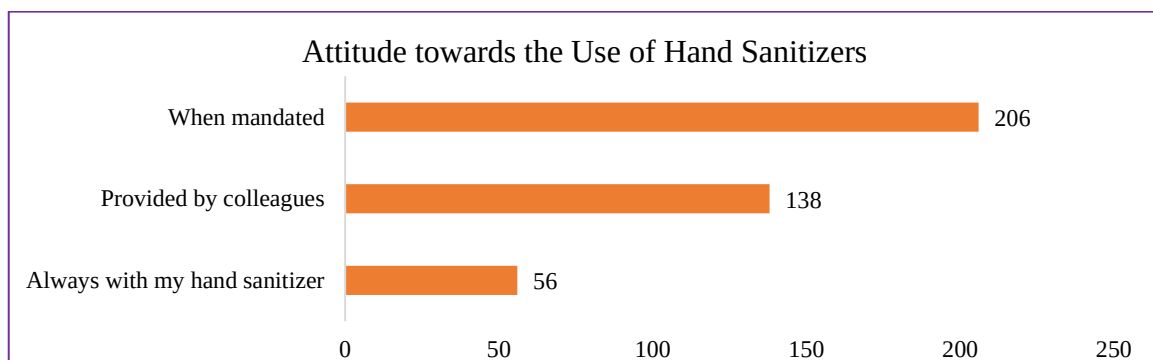
The strict enforcement of the use of facemask at the school main gate can be attributed for the high compliance rate. However, this level of enforcement is not replicated within the school premises unless when entering administrative buildings and offices, which explain the low level of compliance to this measure during activities within the campus.



**Plate 6: Security agent enforcing the use of facemasks at the university gate**

**Source:** Author's Fieldwork

On the use of hand sanitizers, 52% (206) of the respondents make use of hand sanitizers on campus when mandated, 35% (138) claim to use it when provided by colleagues, while 14% (56) are always with a hand sanitizer (see figure 3). This suggest that only few of the students own a hand sanitizer and majority of the students only use the hand sanitizer when they come across one, either when mandated or provided by colleagues.



**Figure 3: Attitude of Students Toward the Use of Hand Sanitizers.**

**Source:** Author's Fieldwork, 2022

This may be due by the financial constraint of procuring a personal hand sanitizer, lack of enforcement of use and lack of belief among students about the efficacy of the sanitizer in preventing them from covid-19. This result corroborates with the opinion of Apanga *et al* (2020) that the use of hand sanitizer is not a popular preventive measure among students.

On social distancing, majority (75%) of the students claim to not practice social distancing during lectures (see table 4). This may be attributed to the limited capacity of the lecture halls to accommodate large number of students. Also, most (72%) of the students posited they do not practice social distancing in buses and cabs. This shows that students do not perceive the reduction in shuttle bus carrying capacity as sufficient enough to provide enough social distancing. This may also be attributed to the peculiar problem of transportation in the school. In most cases, there is scarcity of buses on campus to convey students to and from. In the same vein, the attitude of students towards the practice of social distancing during their interaction with colleagues indicated that 71% of the students do not practice social distancing when interacting with their colleagues.

**Table 4: Practice of Social Distancing on Campus**

| <b>Attitude towards the Practice of Social Distancing</b> | <b>Frequency</b> | <b>Percentage</b> |
|-----------------------------------------------------------|------------------|-------------------|
| <b>During lectures</b>                                    |                  |                   |
| Yes                                                       | 76               | 19%               |
| No                                                        | 324              | 81%               |
| <b>In transport facilities ( shuttle buses and cabs)</b>  |                  |                   |
| Yes                                                       | 87               | 22%               |
| No                                                        | 313              | 78%               |
| <b>Interaction with colleagues</b>                        |                  |                   |
| Yes                                                       | 117              | 29%               |
| No                                                        | 283              | 71%               |

**Source:** Author's Fieldwork, 2022

The result of this study differs from the findings of Blake *et al*, (2021) reported a high level of compliance to social distancing among students. Barrett & Cheung, (2021) also reported, a high

level of willingness to comply to social distancing among students, although there are various hindrances to their compliance.

### ***Perception of Students about the Covid-19 Pandemic and the Effectiveness of the NPI Measures***

This study requested students to express their perception about the covid-19 pandemic based on the following statements using the key (where: 1 - strongly disagree; 2 – disagree; 3 – undecided; 4 – agree, 5 – strongly agree).

**Table 5: Perception of Students about the Covid-19 Pandemic**

| S/N | What is your perception about the covid-19 pandemic? | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree | Mean  |
|-----|------------------------------------------------------|-------------------|----------|-----------|-------|----------------|-------|
| 1.  | Covid-19 is a scam and does not exist at all         | 47%               | 38%      | -         | 10%   | 5%             | 1.195 |
| 2.  | Covid-19 exist but not in Nigeria                    | 33%               | 41%      | -         | 16%   | 7%             | 2.14  |
| 3.  | Covid-19 exist but its severity has been exaggerated | 12%               | 11%      | 3%        | 33%   | 41%            | 3.8   |
| 4.  | Covid-19 exist but I'm not susceptible to it         | 16%               | 19%      | -         | 31%   | 34%            | 2.83  |

**Source:** Author's Fieldwork., 2022

As indicated in table 5, majority of the respondents strongly disagreed that covid-19 is a scam and does not exist at all, and the notion that covid-19 does not exist in Nigeria, while majority agreed that covid-19 exist but its severity has been exaggerated and covid-19 exists but they are not susceptible to it. This partially align with the investigation of Yusuf *et al*, (2022), who reports that many Nigerians believe that the covid-19 pandemic is a scam which the government used to loot public fund, while others believe that the severity has been largely exaggerated. Yusuf *et al*, (2022) also reported that most people included the covid-19 pandemic

in the same category with the Ebola virus, which did not cause any meaningful harm in Nigeria, and hence they are not susceptible to it.

#### Analysis of Variance (ANOVA) on the Student's Perception of Covid-19 Pandemic

In order find out statistically whether or not there is a meaningful difference in the students' perception of covid-19 pandemic, an analysis of variance was performed. Where the hypothesis tested are:

Ho: There is no significant difference in the student's perception of covid-19 pandemic.

H1: There is significant difference in the student's perception of covid-19 pandemic.

The result is showed in table 4.9 below:

**Table 6: Analysis of Variance (ANOVA) on the Student's Perception of Covid-19 Pandemic**

| ANOVA                      |           |           |           |          |                |               |
|----------------------------|-----------|-----------|-----------|----------|----------------|---------------|
| <i>Source of Variation</i> | <i>SS</i> | <i>df</i> | <i>MS</i> | <i>F</i> | <i>P-value</i> | <i>F crit</i> |
| Between Groups             | 1925.3    | 4         | 481.325   | 2.555482 | 0.081976       | 3.055568      |
| Within Groups              | 2825.25   | 15        | 188.35    |          |                |               |
| Total                      | 4750.55   | 19        |           |          |                |               |

Source Authors Fieldwork, 2022

Table 6 shows the ANOVA test result,  $F = 2.56$  with a  $P$ -value of 0.082. Thus,  $p \leq 0.05$ . This reveals that the hypothesis, which states that there is a significant difference in the student's perception of covid-19 pandemic, is accepted. This conforms with the position of Cori *et al* (2020) that there is a significant difference in public perception of the covid-19 pandemic. This difference may result from variance in cultural and religious beliefs among students. Students were also requested to express their perception on the effectiveness of non-pharmaceutical intervention measures based on the following statements using the key (not effective, moderately effective and very effective).

The study reveal that majority of the respondents perceive that the use of facemask, hand sanitizers and the hand washing facilities are moderately effective to the prevention of covid-19, while social distancing on campus is not effective in the prevention of covid-19 (table 7).

**Table 7: Perception on the Effectiveness of this Non-pharmaceutical Measures**

| S/N | PREVENTIVE MEASURES     | Not effective | Moderately effective | Very effective |
|-----|-------------------------|---------------|----------------------|----------------|
| 1.  | Social distancing       | 48%           | 32%                  | 20%            |
| 2.  | Use of facemask         | 16%           | 61%                  | 23%            |
| 3.  | Use of hand sanitizer   | 56%           | 32%                  | 12%            |
| 4.  | Hand washing facilities | 52%           | 40%                  | 8%             |

**Source:** Author's Fieldwork, 2022

This finding is not in agreement with the position of World Health Organization (2020), Center for Disease Control (2020) and also Nigeria Center for Disease Control (2020) who are of the opinion that these measures play a very important role in curbing and mitigating the spread of the covid-19 virus. For example, Prajapati *et al*, (2022) reveals that the WHO recommends alcohol-based hand sanitizer as an effective means of protecting one's self from contacting the virus. The variation that exists between the recommendation of health agencies and the perception of students should be a cause for concern, as perception will always have an effect on the level of compliance. However, the system by which these measures are implemented can be the reason for the difference in position between students and health agencies.

## 5. Conclusion

The study examined the perception of students regarding the effectiveness of Non-Pharmaceutical Intervention in preventing the spread of covid-19 on campus. The results presented are exploratory as respondents indicated their knowledge, compliance and perception of the NPI in the prevention of covid-19. Covid-19 preventive measures were put in place prior to resumption, while some which rely on the students to take personal actions were recommended upon resumption. These measures however resulted to the increase in prices of

goods and services and cost of transportation. Although there was an increase in income level amongst students, this did not translate into a better standard of living due to the commiserate increase in cost of living. However, the social interaction of students was not affected by these measures due to the prevalence of social media. The compliance of students to these NPI measures are however not encouraging as their attitude towards the personal protective measures such as use of facemasks, social distancing, use of hand sanitizers and regular handwashing were negative. This was majorly because of their believe that the said measures play a very little role in keeping them safe.

## **6. Recommendation and Policy Measures**

Following the findings made from this study, it was recommended that university authorities should carry out more sensitization and awareness campaign on the danger posed by covid-19 and the preventive measures needed for individuals to stay safe and healthy. University authorities should ensure that students are not taken advantage of by providers of goods and services on campus by putting a price control system in place. The cost of transportation should also be regulated by the authority so as to make sure any prospective increment is still within affordable range. Compliance to the various NPI measures should be enforced beyond the entry point of the university. NPI measures should also be enforced in classrooms, cafeteria, offices and other places within the campus. Also, the management should provide conducive lecture halls that can facilitate compliance to NPI measures such as social distancing, sanitizer dispenser and the use of facemasks. Billboards and posters explaining the severity of the pandemic and encouraging compliance to the preventive measures should be displayed within the school environment. The campus department of health should also be adequately equipped with required facilities that can help deal with the pandemic in case of any outbreak.

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