# COVID-19 AWARENESS AND PREVENTION AMONG HEALTH INFORMATION MANAGEMENT STUDENTS IN NIGERIA

By

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## Abstract

*This study examines COVID-19 awareness and prevention among Health Information Management Students in Nigeria. The study investigated sources of information to students about COVID-19 as well as students' knowledge about the signs and symptoms of COVID-19. This is quantitative research which employed the descriptive survey design. A total of 630 students of Health Information Management Programme were recruited into the current study through their various whatsapp platforms. Instrument for data collection was developed using an online Google form which was divided into four main parts based on the formulated objectives and research questions. The instrument was administered through the online platform and responses were monitored for two months before proceeding to data analysis. The collected data was analyzed descriptively using frequency counts and percentage distribution, as well as relative importance index. Relative importance index helps to rank the criteria according to their relative importance. Findings revealed the majority 97.5% of the respondents heard about COVID-19 through mass and social media, 91.4% of the respondents heard about COVID-19 through health workers, 90.2% others through government announcement, 87.6% others learnt about COVID-19 through the internet. The results indicate that students believed that shortness of breath was a significant sign and symptom (RII = 0.92), along with fever (RII = 0.91), sneezing (RII = 0.911), and sore throat (RII = 0.89), cough (RII = 0.88), weariness (RII = 0.85), and muscle discomfort (RII = 0.76) are a few more. The study came to the conclusion that even if the students are taught about the disease's indications and symptoms as well as the preventative steps to take, the disease still spreads among them. Many of the students still struggle to adhere properly to the accepted preventive recommendations. Therefore, in order to prevent the pandemic from spreading in schools, the administrators of health information management programs must take every action at their disposal.*

**Key words:** COVID-19, Students, Awareness, Prevention, Health information management, Nigeria.

**Introduction**

COVID-19 is a novel viral disease discovered in the city of Wuhan, Hubei Province, China, in 2019 and is caused by severe acute respiratory syndrome coronavirus. It has been established that the index cases of the disease were a result of the animal to human transmission (Peng et al., 2020). Tool, human-to-human transmission from respiratory droplets and contact with contaminated surfaces has been implicated in subsequent cases (Adhikari et al., 2020; Li et al., 2020). Literature have shown that, this virus is the third known coronavirus to cross the species barrier and cause severe respiratory infections in humans after SARS-CoV in 2003 and the Middle East respiratory syndrome coronavirus virus (MERS-CoV) in 2012 (Perlman, 2020; Huang et al., 2020).

According to the information that is now available, SARS-CoV-2 was first discovered in the same Wuhan City, Hubei Province, China, and has since spread to practically every nation in the world. The World Health Organization's International Health Regulations Emergency Committee called the corona virus outbreak, which began in the past ten years, a "public health emergency of international concern" on January 30, 2020. (WHO, 2020). On March 11, 2020, the World Health Organization proclaimed the illness to be pandemic (Alzoubi et al., 2020), and most nations have since reported cases of COVID-19, including Nigeria.

The onset of symptoms ranges from one to fourteen days, and they include a dry cough, fever, anosmia (loss of smell), weakness, headache, body aches, vomiting, sore throat, and respiratory trouble (Ahmed et al., 2020; Zhang et al., 2020). After getting the virus, some infected people may stay asymptomatic (without symptoms), although among the symptomatic cases, the majority are mild or moderate, with around 10% being severe (Adhikari et al., 2020). Although people of all ages can contract the virus, older people are more susceptible, according to the literature (Ahmed et al., 2020). Other risk factors include obesity, immune-compromising disorders like HIV infection, and underlying medical problems like diabetes mellitus, systemic hypertension, and other heart pathologies.

According to Szymona-Pakowska et al. (2016), understanding the condition entails having a variety of ideas about its causes and aggravating variables, as well as the ability to recognize its symptoms and understand its potential effects. Beliefs regarding COVID-19 are derived from a variety of sources, including stereotypes about other viral infections, official data, social media and the internet, prior personal experiences, and medical sources. Lack of awareness or the fact that the majority of these medical myths are untrue may frequently carry a risk factor (Zhang et al., 2020) One of the earliest studies looking at attitudes and knowledge regarding COVID-19 was conducted in Hubei, China, and found a strong correlation between views toward government attempts to control the outbreak and understanding about COVID-19 (Zhong et al., 2020). According to the research, greater levels of knowledge and education were linked to attitudes favoring COVID-19 preventive measures. 2020 (Zhong et al.; Soo et al.).

Public health measures like sanitation, social isolation, and lockdown have been undertaken in nations all over the world to slow the rapid spread of this infectious disease. Additionally, adherence to governmental recommendations for preventative and quarantine measures by residents may be connected to their knowledge of infection process precautions. On the other hand, information can have an impact on behaviors and attitudes. A person's motivation and emotional state determine whether or not they will react appropriately in a given situation. Positive attitudes and ethical behavior may mediate safe behaviors, preventative actions, and the spread of disease in the COVID-19 outbreak (Zegarra-Valdivia et al., 2020). In order for these

public health measures to be followed, it is imperative that people have a positive awareness, attitude, and practice (AAP) concerning COVID-19 (Singh & Singh, 2020). A crucial element is also how danger is perceived.

**Statement of the problem**

People of all ages should take seriously the fact that COVID-19 has no complete cure or therapy other than certain recently developed vaccines that are being used to prevent the disease (Ahmed et al., 2020); nonetheless, there are conflicting views on the efficacy of these vaccines. Thus, it can be claimed that the pandemic nature of this virus and its quick dissemination among people necessitate enhanced awareness among students at all levels of education so that they are fully educated about what to do in the event that COVI-19 is reported to have occurred among them. This knowledge will supplement the prevention measures currently implemented by the relevant authorities. The current study therefore aims to determine the level of COVID-19 awareness among Health Information Management. The following research questions are raised to determine the extent of awareness of the signs and symptoms and prevention of the disease.

**Research questions**

1. What are the sources of information to students about COVID-19?
2. What do the students know about the signs and symptoms of COVID-19?
3. What are the preventive measure about COVID-19 known to students?

**Methodology**

The descriptive survey design was used in this quantitative study. Students enrolled in Schools of Health Information Management at Teaching Hospitals and Colleges of Health Sciences at Nigerian universities that provide an optional degree in Health Information Management were the study's target group. Through their numerous Whatsapp platforms, 630 Health Information Management students in all were recruited for the study. All users who had registered on the platform and were willing to participate in the study were randomly chosen to be recruited because the study's main objective was to investigate COVID-19 awareness and prevention among students.

There were 630 students who took part in the study in total. A Google form that was separated into four main sections based on the established objectives and research questions served as the instrument for gathering data. Basically, the third of the four sections was created using examples from the literature that was available for this study. A minimum of one of the three research questions set for this study was addressed by each component of the survey instrument. Before beginning data analysis, the instrument's answers were watched for two months using the professional association's web portal.

The IBM Statistical Package for Social Sciences (SPSS) version 25 was used to examine the data produced. The analysis was split into two parts based on the research objectives posed at the start of the study: socio-demographic factors were descriptively examined using frequency counts and percentage distribution, and the other component was evaluated with a relative importance index. The relative importance index aids in sorting the criteria in order of priority. The relative index is calculated using the formula below.

R.I. = $\sum \frac{W}{A*N}$ or RII = Sum of weights $\frac{W1+W2+W3\ldots\ldots\ldots+Wn}{A*N}$

R.I. = or RII
= Sum of weights
Where:
**W** is the weighting as assigned by each respondent on a scale of one to five, with one implying the least and five the highest. **A** is the highest weight, and **N** is the total number of the sample. Based on the Ranking (R) of Relative Importance Index (RII), the weighted average of the two groups will be determined. Five important levels are transformed from (RII) values: High (H) ($0.74 \leq RII \leq 1$), High-Medium (H-M) ($0.69 \leq RII \leq 1$) and Low (L) ($0.59 \leq RII \leq 1$).

**Result and Discussions**

**Table 1: Socio-Demographic Characteristics**

| **Parameter** | **Classification** | **Frequency** | **Percentage** |
|---|---|---|---|
| Gender | Male | 240 | 38.1 |
| | Female | 390 | 61.9 |
| | **Total** | **630** | **100.0** |
| Age | 16-20 | 85 | 13.5 |
| | 21-24 | 115 | 18.3 |
| | >25 | 430 | 68.3 |
| | **Total** | **630** | **100.0** |
| Level of Study | ND1 | 8 | 1.3 |
| | ND II | 194 | 30.8 |
| | HND 1 | 124 | 19.7 |
| | HND II | 195 | 31.0 |
| | B.Sc. | 109 | 17.3 |
| | **Total** | **630** | **100.0** |
| Have you ever heard about COVID-19? | Yes | 630 | 100.0 |
| | **Total** | **630** | **100.0** |

Table 1 showed that men made up 38.1% of the respondents while women made up 61.9%. In addition, 68.3% of respondents were 25 years of age or older, followed by 18.3% of those between 21 and 24 years, and 13.5% of those between 16 and 20 years. Additionally, 19.7% of respondents were HND I students, followed closely by 30.8% of ND II students and 31.0% of HND students. In addition, 17.3% were B.Sc. students. The chart also showed that every respondent had heard about COVID-19, indicating a high level of public knowledge of the epidemic. The prevalence of COVID-19 worldwide and our commitment to its prevention are other factors that may contribute to this awareness.

**Table 2: Sources of Information about COVID-19**

| | Yes | | No | |
|---|---|---|---|---|
| **Sources of information** | **Frequency** | **Percentage** | **Frequency** | **Percentage** |
| Mass media | 614 | 97.5 | 16 | 2.5 |
| Social Media | 614 | 97.5 | 16 | 2.5 |
| Health workers | 576 | 91.4 | 54 | 8.6 |
| Government announcement | 568 | 90.2 | 62 | 9.8 |
| Internet | 552 | 87.6 | 78 | 12.4 |
| All of the above | 552 | 87.6 | 78 | 12.4 |

According to Table 2, the majority of respondents—97.5%—heard about COVID-19 through the media and social media, followed by 91.4% of respondents who learned about it from healthcare professionals, 90.2% of others who learned about it through a government announcement, and 87.6% of others who learned about it online. These findings showed that the students' familiarity with the COVID-19 pandemic is not a product of their paramedical training but rather of their attention to what is going on around them.

**Table 3: Knowledge of Signs and Symptoms of COVID-19**

| **Signs and Symptoms** | $\overline{X}$ | **RII** | **Ranking** |
|---|---|---|---|
| Shortness of breath | 2.75 | 0.92 | 1st |
| Fever | 2.74 | 0.91 | 2nd |
| Sneezing | 2.72 | 0.91 | 3rd |
| Sore throat | 2.67 | 0.89 | 4th |
| Cough | 2.65 | 0.88 | 5th |
| Fatigue | 2.54 | 0.85 | 6th |
| Muscle pain | 2.28 | 0.76 | 7th |
| Others | 2.17 | 0.72 | 8th |
| **Weighted mean** | **2.57** | **0.86** | |

**Key: Very True = (3), True = (2), Not Sure = (1), $\overline{X}$ = Mean, RII = Relative Importance Index**

The RII of each item is more than the cutoff point of 0.5, according to Table 3. It demonstrates that among the signs and symptoms, shortness of breath was ranked first (RII = 0.92), followed by fever (RII = 0.91), sneezing (RII = 0.911), and sore throat (RII = 0.89). Cough (RII = 0.88), weariness (RII = 0.85), and muscle discomfort (RII = 0.76) are a few more.

**Table 4: Preventive measures of COVID-19**

| **Preventive measures** | $\overline{X}$ | **RII** | **Ranking** |
|---|---|---|---|
| Use of facemask in the public square | 4.00 | 0.80 | 1st |
| Social and physical distancing | 3.96 | 0.79 | 2nd |
| Avoid touching eyes nose and mouth | 3.94 | 0.79 | 3rd |
| Cover mouth and nose with bent elbow or tissue | 3.90 | 0.78 | 4th |
| Avoid being in the crowd | 3.87 | 0.77 | 5th |
| Regular hand wash | 3.86 | 0.77 | 6th |
| Visit hospitals | 3.73 | 0.75 | 7th |
| Self-isolation | 3.70 | 0.74 | 8th |
| Hugging friends and well wishers | 3.18 | 0.64 | 9th |
| **Weighted mean** | **3.79** | **0.76** | |

**Key: Strongly Agree = (5), Agree = (4), Disagree = (3), Strongly Agree = (2), Undecided = (1)** $\overline{X}$ **= Mean, RII = Relative Importance Index**

Table 4 showed that the RII of every item on the COVID-19 preventive measure exceeded the cutoff point of 0.50. Use of facemask in public is ranked first in terms of relative importance (RII=0.80), then social and physical distance (RII=0.79), touching of the eyes, nose, and mouth (RII = 0.79), and covering of the mouth and nose (RII=0.78). Others include avoiding crowds (RII = 0.77), regularly washing one's hands (RII = 0.77), going to hospitals (RII = 0.75), isolating oneself (RII = 0.74), and hugging loved ones (RII = 0.64). The results of this study showed that health Information Management students majoring in health information management had a high degree of awareness of COVID-19, and that social media and mass media were the most often reported information sources.

**Discussion** of **findings**

In this study, health information management students in Nigeria were asked about their knowledge of COVID-19 and their efforts to prevent it. The study looked into how students learned about COVID-19 and whether they were aware of its symptoms and warning signs. Findings from the study indicated a high level of awareness of the contagious COVID-19 disease and its effects on human beings. This corroborates similar studies that have looked at students' attitudes to COVID-19 prevention among health Information Management in other institutions (Alzoubi et al, 2020). This is encouraging and expected to influence the student's decision on the preventive measures and how such can be taken. The findings corroborated the fact that although the students are paramedics, notwithstanding, it also tells on their level of obedience and responsiveness to the warnings against the spread of the dangerous warning of COVID-19 whose effects respect nobody. Besides, the increase awareness among the students must have been affected by the national and international efforts of government and health care organizations in the areas of awareness creation about the deadly disease. The findings indicated that the student had good knolwdge of the signs and symptoms of the disease. These results are consistent with those of theErfani et al., (2020); Rahman & Sathi (2020) both found that high knowledge of preventive practices about COVID-19.

**Conclusion and Recommendations**

This study showed that Nigerian students studying health information management had a high level of awareness of COVID-19 and prevention. According to the study's findings, students had varying opinions regarding what can be done to stop the pandemic from spreading. We discovered that some people hardly ever wear face masks due to personal preferences, while others did not adhere to the social distancing theory. The study came to the conclusion that even if the students are taught about the disease's indications and symptoms as well as the preventative steps to take, the disease still spreads among them. Many people still struggle to adhere properly to the accepted preventive recommendations. Because of this, the administrators of health information management programs must take all necessary steps to enforce the preventive measures to limit the spread of the disease in school. As a preventative measure against the spread of the disease in the Health Information Management Programmes in Nigeria, they must especially melt out disciplines for the worthy students.

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