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Research Article

Investigating Awareness of Preventive Measures and Preventive Practices of Covid-19 Preventive Measures among Adekunle Ajasin University Students

Adeleke OR[*1], Adegboro JS[2], Olubayo-fatiregun MA[3], Aina SI[4], **Salaam AA[5], Olofintuyi OO[6], Rachael SO[7]**

[1, 2, 4, 6, 7]Department of Human Kinetics and Health Education, Adekunle Ajasin University, Akungba-Akoko
[3]Department of Kinesiology, Health Education and Recreation, Obafemi Awolowo University, Ile-Ife, Nigeria
[5]Department of Physical and Health Education, Emmanuel Alayande College of Education, Oyo, Oyo State

Corresponding Author: Adeleke OR, Department of Human Kinetics and Health Education, Adekunle Ajasin University, Akungba-Akoko. E-mail: olasunkanmi.adeleke@aaua.edu.ng

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Abstract

Background: The World Health Organization (WHO) has endorsed a sequence of preventive measures to terminate the spread of coronavirus diseases and its associated morbidity and mortality all over the world. In Nigeria, these preventive measures have been adopted, on the side of media campaigns to disseminate facts of the measures to the general public.

Aim: To investigate the awareness level of preventive measure and preventive practices of COVID-19 amongst Adekunle Ajasin University students.

Methods: A cross-sectional survey studies design was used. 800 undergraduate students in Adekunle Ajasin University represent the sample. Descriptive and inferential statistics of frequency counts, percentages and Pearson Product Moment Correlation Coefficient (PPMCC) was used to analyze the findings at 0.05 alpha level

Conclusion: Adekunle Ajasin University students have high awareness and high level of preventive practices about COVID-19 preventive measures. The major source of information was from the Nigeria Center for Disease control (NCDC) website. Also, there is a relationship between awareness level and preventive practices of COVID-19 preventive measures r (798) = 0.378, p <0.01. It was therefore recommended that the NCDC should be further strengthened by the Federal Government to continually disseminate health information concerning COVID-19 preventive measures since it is the major source which in turn will encourage preventive practices.

Keywords: Infectious Diseases; Pandemics; COVID-19; Mortality; Preventive Measures

Introduction

Globalization is a complex and multi-faced set of processes which has numerous and enormous influences on human societies worldwide. Globalization has impact without delay and in a roundabout way on health of human population. It poses greater negative effects on fitness with higher danger of infectious disorder. Infectious sickness has been the most vital contributor to human morbidity and mortality [1]. Pandemics of infectious sicknesses have passed off throughout history. Once a pandemic is underway, the effect will also depend on element of human actions. Though the toll on the health of the young, elderly, men, women, and exclusive ethnicities may also differ because of biology, the undernourished and already-ill may be hardest-hit. The ultimate decades witnessed the emergence of numerous new viral respiration tract illnesses that threatens global fitness.

Coronavirus 2019 ailment is an infectious disorder, as a result of novel corona virus the World Health Organization (WHO) officially named the disease COVID-19. The outbreak of coronavirus sickness (COVID-19) has been declared a Public Health Emergency of International Concern (PHEIC) and the virus has now spread to many nations and territories [2& 3]. While loads are still unknown about the causes of COVID-19 virus, we do understand that it is transmitted through direct contact with/from breathing droplets of an infected individual (generated through coughing and sneezing). Individuals also can be infected from touching surfaces infected with the virus and touching their face (e.g., eyes, nose, and mouth). While COVID-19 continues to unfold its miles, it is crucial that communities take action to save them from continuous transmission which will in turn reduce the influence of the outbreak and support preventive measures.

However, there are exceptions, which include SARS and

MERS, which might be particularly spread even though close contact with inflamed people through respiratory droplets from cough or sneezing. With regard to COVID-19, early patients have been suggested to have a link to the Huanan Seafood Market in Wuhan, China, suggesting that those early infections occurred because of animal-to-man or woman transmission. However, later cases were suggested amongst medical workforce and others with no records of exposure to that market or travelling Wuhan, which turned into being taken as an illustration of human-to human transmission [4, 5, 6, 7].

The latest suggestions from Chinese fitness authorities [8] described three fundamental transmission routes for the COVID-19:

1. Droplets transmission,
2. Touch transmission, and
3. Aerosol transmission.

Droplets transmission is said to arise when breathing droplets (as produced when an infected individual coughs or sneezes) are ingested or inhaled with the aid of individuals nearby in close proximity; touch transmission may arise while a person touches a surface or object infected with the virus and ultimately contact their mouth, nose, or eyes; and aerosol transmission may additionally occur whilst breathing droplets blend into the air, forming aerosols and may additionally cause contamination when one inhaled a high dose of aerosols into the lungs in a distinctly closed environment [8, 9, 3].

There is a need to urgently look at the know-how, recognition and practice of preventive measure of people closer to COVID-19. [10] took a look at the highlights of the knowledge, perception and defensive behaviour of Myanmar adults currently practicing regarding to COVID-19. The findings factor out that network has no enough information and inadequate defensive behaviours which could favour infection spread if the sickness would possibly be on the rise. World Health Organization (WHO) has recommended a chain of preventive measures to halt the spread of ailment and its associated morbidity and mortality. In Nigeria, those preventive measures have been adopted, on the side of media campaigns to disseminate facts of the measures to the general public. However, the awareness level of preventive measure and preventive practices of COVID-19 amongst Adekunle Ajasin University students has not been evaluated.

Research Questions

What is the major source of information about COVID-19 preventive measures among Adekunle Ajasin University students?

What is the awareness level of COVID-19 preventive measures among Adekunle Ajasin University students?

What is the level of preventive practices of COVID-19 preventive measures among Adekunle Ajasin University students?

Is there any significant relationship between awareness level and preventive practices of COVID-19 preventive measures among Adekunle Ajasin University students?

Methods

Survey design was employed for this study. The population comprised of all Adekunle Ajasin University students. Virtual snowball sampling technique was used to select 800 respondents who voluntarily participated in the study. Participants are likely to know others who are also students of Adekunle Ajasin University which makes them eligible for inclusion in the study while non-students of Adekunle Ajasin University are excluded from participating in the study. A self-designed questionnaire was used for the study. An on-line semi-structured questionnaire was advanced by the usage of Google forms, with a consent form appended to it. This is because, the members of the population are hidden and difficult to locate as a result on the ongoing COVID-19 lockdown restrictions. Also, these members are closely collected as they are relevant to the subject at hand, hence, the link of the questionnaire was dispatched through emails and students group chats to the contacts of the students as retrieved from the Universitys database. The participants were encouraged to roll out the survey to as many colleagues as possible making it an on line participation. Participants who had access to the internet and were interested participated in the study. The records collection was initiated on 31st March 2020 and closed on 17th April 2020. Cronbachs alpha of content evaluation was used to test the reliability of the instrument with 0.84 scored obtained after a test-retest method. Statistical evaluation was performed by the use of SPSS version 16.0. Descriptive and inferential statistics of frequency counts, percentages and Pearson Product Moment Correlation Coefficient (PPMCC) were used in to analyze the findings.

Results

Table 1 reveals that out of 800 respondents, 24 (3%) of the respondents fall within the age range of 34 years and above while, 376 (47%) fall within the age range 22-25 years; 339 (42.4%) were males, while 461 (57.6%) were females, 76 (9.5%) are Muslims while 724 (90.5%) are Christians; 66 (8.3%) are 600L students while 263 (32.9%) are 400L students.

Table 2 reveals that the respondents got information about COVID-19 preventive measures majorly from the Nigeria Center for Disease control (NCDC), followed by Electronic media and World Health Organization (WHO), while the lowest source of information is from Instagram.

Table 3 presents the responses of respondents based on frequency, percentages and mean of the awareness level and preventive practices of COVID-19 preventive measures. A large number of the respondents strongly agreed that they are aware cleaning touched surfaces and objects frequently, staying at home when feeling sick help, maintaining social distance will help to prevent COVID-19. However, some people believed that consuming boiled ginger into an empty stomach and Gargling salt water, drinking hot tea can kill the virus.

Table 1. Distribution of Respondents by Age, Gender, Religion and Level of Study

VARIABLES	FREQUENCY (%)
AGE	
Below 18 years	32 (4.0)
18 - 21 years	231 (28.9)
22 - 25 years	376 (47.0)
26 - 29 years	105 (13.1)
30 - 33 years	32 (4.0)
34 years and above	24 (3.0)
GENDER	
Male	461 (57.6)
Female	339 (42.4)
RELIGION	
Christianity	724 (90.5)
Islam	76 (9.5)
LEVEL OF STUDY	
100L	125 (15.6)
200L	128 (16.0)
300L	146 (18.3)
400L	263 (32.9)
500L	72 (9.0)
600L	66 (8.3)
TOTAL	800 (100.0)

Table 2. Showing Source of Information about COVID-19 Preventive Measures

Source of Information	Frequency (%)
WHO	120 (15.0)
NCDC	367 (45.9)
Electronic Media	153 (19.1)
Print Media	14 (1.8)
Google	36 (4.5)
Facebook	28 (3.5)
Friends and Family	46 (5.8)
Instagram	12 (1.5)
Twitter	24 (3.0)
Total	800 (100.0)

Furthermore, most people practice preventive measures such as use of hand sanitizers, covering mouth and nose with flexed elbow or tissue while coughing or sneezing, frequent hand washing with soap and clean water, cleaning and disinfecting touched surface frequently every day. Based on the mean value, the frequency of respondents above the mean score (30.35) of awareness level are higher, while 31.98 is the mean score for the level of preventive practices, higher responses were recorded.

Table 4 reveals a significant positive relationship between awareness level and preventive practices of COVID-19 preventive measures; r (798) = 0.378, p <0.01. The table further reveals that the level of awareness of COVID-19 preventive measures will increase the level of preventive practices.

Discussion and Conclusion

This survey provides an insight on the level of awareness and preventive practices of COVID-19 preventive measures at the time of the outbreak in 2020. This study included a sample of Adekunle Ajasin University students. Males were predominant in this sample, which might be explained because the number of male students who enrolled yearly into various universities in Nigeria is higher than the number of female students based on the latest National Bureau of Statistics (2019).

The result of this study revealed that the Nigeria Center for Disease Control (NCDC) was the most commonly used source of information concerning COVID-19 preventive measures (45.9%) and the most endorsed channel for a COVID-19 awareness campaign, followed by Electronic media (19.1%). Social media platforms such as Google, Facebook and Twitter were less used as a source of valid health information. Meanwhile, 4.5% of the respondents also preferred their family and friends as a good source for preventive measures information on COVID-19. It is widely known that no cure or vaccine that has been discovered for this deadly coronavirus disease, therefore, it is expedient to take necessary precautionary measures and the best prevention is to avoid being exposed to the virus [11]. However, the findings of [12] negates our result, as it was concluded that the internet was the most commonly used source of information (39.5%) and the most endorsed channel for a MERS awareness campaign. This is majorly because Saudi communities had relied on the internet for information for many decades. They preferred their physicians as the preferred source of information (45.6%), followed by other health care providers (31.3%).

The role health authorities such as CDC, WHO, public health specialists, as authoritative sources of information on diseases makes them to be the most preferred information source because they provide effective source of preventative health information and promotion of healthy lifestyles. The CDC and WHO as a reliable source of information on coronavirus issued detailed guidelines on the use of face masks in the community, during care at home, and in the health care settings of COVID-19 on precautions and protective measures for prevention such as use of face masks; covering coughs and sneezes with tissues that are then safely disposed of (or, if no tissues are available, use a flexed elbow to cover the cough or sneeze); regular hand washing with soap or disinfection with hand sanitizer containing at least 60% alcohol (if soap and water are not available); avoidance of contact with infected people and maintaining an appropriate distance as much as possible; and refraining from touching eyes, nose, and mouth with unwashed hands [13, 9]. According to WHO, social distance and self-isolation; and lockdown are two important nationwide social measures.

From this study, we found out there is a high level of awareness (52.1%) and high level of preventive practices (50.5%) of COVID-19 preventive measures. Most of the undergraduate students were aware of measures put in place to stop the spread and reducing the risks of contracting coronavirus disease, were able to correctly disagree with the myths and

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Table 3. Showing the Level of Awareness and Preventive Practices of COVID-19 Preventive Measures

Items	Strongly Agree	Agree	Disagree	Strongly Disagree	
Awareness (LOA)					Level
Consuming Boiled Ginger into an Empty Stomach Can Kill the COVID-19 Virus.	122 (15.3%)	351 (43.9%)	261 (32.6%)	66 (8.3%)	High Awareness = 417 (52.1%) Low Awareness = 383 (47.9%)
Drinking Lemon With Hot Water Can be Used to Prevent COVID-19 Virus	76 (9.5%)	191 (23.9%)	399 (49.9)	134 (16.8)	
Gargling Salt Water, Drinking Hot Tea Will Help to Prevent COVID-19 Virus.	80 (10%)	239 (29.9%)	369 (46.1%)	112 (14%)	
Lock Down and Travel Restriction Help in Reducing the Spread of COVID-19 Virus.	474 (59.3%)	284 (35.5%)	24 (3%)	18 (2.3%)	
Drinking of Alcohol Will Help to Kill the COVID-19 Virus.	194 (24.3%)	366 (45.8%)	198 (24.8%)	42 (5.3%)	
Maintaining Social Distance Help in Preventing the COVID-19 Virus From Spreading	508 (63.5%)	276 (34.5%)	8 (1%)	8 (1%)	
Washing of Hands often With Soap And Water Help in Preventing COVID-19 Virus.	484 (60.5%)	302 (37.8%)	12 (1.5%)	2 (3%)	
Staying at Home When Feeling Sick Help to Prevent COVID-19 Virus for Spreading	272 (34%)	240 (30%)	178 (22.3%)	110 (13.8%)	
Cleaning Frequently Touched Surfaces and Objects Will Help to Prevent COVID-19	409 (51.1%)	350 (43.8%)	32 (4%)	9 (1.1%)	
Covering Mouth And Nose With Flexed Elbow or Tissue When Coughing or Sneezing Will Help to Prevent COVID-19 Virus	438 (54.8%)	340 (42.4%)	22 (2.8%)	0 (0%)	
Preventive Practices (LOPP)					
I Do Disinfect My Room Often	199 (24.9%)	458 (57.3%)	121 (15.1%)	22 (2.8%)	High preventive practices = 404 (50.5%) Low preventive practices = 396 (49.5%)
I Do Encourage My Family Members to Always Practice Personal Hygiene.	380 (47.5%)	378 (47.3%)	40 (5%)	2 (.3%)	
I Make Use of Hand Sanitizer often to Prevent COVID-19	342 (42.8%)	334 (41.8%)	112 (14%)	12 (1.5%)	
I Ensure Two (2) Meters Distance (Social Distancing) When Talking to Someone to Prevent Against COVID-19	298 (37.3%)	370 (46.3%)	102 (12.8%)	30 (3.8%)	
I Do not Go Out of My House Again Since the Stay at Home	220 (27.5%)	312 (39%)	218 (27.3%)	50 (6.3%)	
I Do Covering Mouth and Nose With Flexed Elbow or Tissue When Coughing or Sneezing Will Help to Prevent COVID-19 Virus.	340 (42.5%)	376 (47%)	74 (9.3%)	10 (1.3%)	
I Do Clean And Disinfect Frequently Touched Surface Daily. This Includes Tables, Doorknobs, Light Switches, Handles, Desks and Phone.	299 37.4(%)	378 (47.3%)	111 (13.9%)	12 (1.5%)	
I Wash My Hands Always With Soap And Clean Water Often.	380 (47.5%)	378 (47.3%)	40 (5%)	2 (.3%)	
I Do Avoid Touching My Eye, Nose And Mouth With My Unwashed Hands	342 (42.8%)	334 (41.8%)	112 (14%)	12 (1.5%)	
I Do Make Use of Face Mask And Hand Gloves When Out of The House.	239 (29.9%)	316 (39.5%)	207 (25.9%)	38 (4.8%)	

Table 4. PPMC Summary Showing the Relationship between Awareness Level and Preventive Practices of COVID-19 Preventive Measures.

Variables	N	Mean	Std.Dev	Df	r	r^2	Sig
Awareness	800	30.3475	3.53976	798	.378	.143	.000
Preventive practices	800	31.9825	5.08793				

misinformation about the cure of COVID-19 and were aware of measures for preventing COVID-19 transmission personally. A total of 508 (63.5%) strongly agreed that maintaining social distance help to prevent the spread of COVID-19 virus, 484 (60.5%) are aware that hand washing with soap and water help in preventing COVID-19 virus. This is in line with the findings of [14] that majority of dentists were aware of COVID-19 symptoms and ways of identifying patients at risk of having COVID-19, were able to correctly report known modes of transmission, and were aware of measures for preventing COVID-19 transmission in dental clinics. Most of the dentists reported that cleaning hands frequently by using alcohol-based hand rub or soap and water, routinely cleaning and disinfecting surfaces in contact with known or suspected patients, and wearing personal protective equipment can help prevent transmission from patients with known or suspected COVID-19. In addition, their response to preventive measures were better for personal protective equipment and disinfection and sanitation procedures than for measures applied to dental staff or patients, such as special clothing or ventilation. More so, some recommendations and reports have provided handy information about the signs and symptoms of the disease, ways of transmission, and referral mechanisms to increase dentist's knowledge and preventive practices, so they could contribute, at a population level, in disease control and prevention [15, 5].

Nigeria students have depended on NCDC, WHO and electronic media as their main sources of information concerning the prevention of coronavirus disease. Spreading on the internet of information provided by public health specialists on preventive practices which has been exposed to careful scientific examination may have affected individuals attitudes toward preventative behaviour for coronavirus disease control among undergraduate students in Nigeria. Conversely, some of the respondents believed that consuming boiled ginger into an empty stomach and Gargling salt water, drinking hot tea can kill the virus. This could be as a result of misinformation from social media or from family friends which requires urgent actions of health educators to rectify and produce facts through continuous public health awareness campaign until the myths are completely over.

We also found out that there is a relationship between awareness level and preventive practices of COVID-19 preventive measures; r (798) = 0.378, p <0.01. This is to say, as the level of awareness of COVID-19 preventive measures increases, it brings about increase in the level of preventive practices. [16] found that overall higher knowledge score is associated with higher preventive practices toward COVID-19, akin to this is the association between the knowledge about the disease and preventive practices which was reported in KSA on MERS-CoV [17]. Pakistan on Dengue (a viral disease), and in China on COVID-19 [18]. Countries like Nicaragua [19] and the Philippines have even now taken the wits to increase the spread of knowledge to prevent infectious disease and its transmission [20].

This study will conclude that a large chunk of Adekunle Ajasin University students has high awareness and high level of preventive practices about COVID-19 preventive measures from which they get information majorly from the Nigeria Center for Disease control (NCDC) website and through electronic media. Also, there is a relationship between awareness level and preventive practices of COVID-19 preventive measures. as the level of awareness of COVID-19 preventive measures increases so will the level of preventive practices rise.

Limitations of The Study

Regardless of the outcomes presented here, it is imperative to stress that this survey had limitations, including that some respondents were unable to provide satisfactory responses to the recommendations rather than their real opinions and also the low rate of responses, which resulted in a smaller than expected sample size. This could be as a result of the short period of data collection. Conversely, this is considered a reasonable sample size. More so, this pandemic has caused many to be busy with watching the news and taking care of personal affairs. This means that those who were active on social media during the short period of data collection were the only ones that had the chance to participate in the study. This could result in selection bias and sampling error, which prevents the ability to generalize our results. Despite these limitations, the results obtained offered essential information to guide health communication efforts that can help control an imminent outbreak of the COVID-19 pandemic.

Recommendations

Based on the findings, the following recommendations were made:

1. The NCDC should be further strengthened by the Federal Government to continually disseminate health information concerning COVID-19 preventive measures since it is the major source.
2. Free subscription or Wi-Fi should be made available for students to further source for valid facts on COVID-19 preventive measures.
3. Students should be encouraged to practice hand washing and respiratory hygiene to further curtail the spread of coronavirus disease.

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Conflict of Interest

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