



EDUCATIONAL IMPACT OF COVID-19 ON SELECTED STUDENTS IN OGUN STATE COLLEGE OF HEALTH TECHNOLOGY ILESE-IJEBU

**Banjoko Oluwole Adebayo¹, Olojede Oluwaseun Kayode²,
Adebanjo Abdulazez Adedapo³, Adegbite Ayoade Azeez⁴
and Oludaniels Adebukonla Mama⁵**

¹Department of Medical Imaging Processing Technician Ogun State College of Health Technology, Ilese-Ijebu. Email: oluwoleabanjoko@gmail.com

²Department of Dental Therapy, Ogun State College of Health Technology, Ilese-Ijebu.

³Department of Pharmacy Technician, Ogun State College of Health Technology, Ilese-Ijebu.

⁴Department of Water and Sanitation Technology, Ogun State College of Health Technology, Ilese-Ijebu.

⁵Department of General Studies, Ogun State College of Health Technology, Ilese-Ijebu.

ABSTRACT: *COVID-19 a global pandemic affecting all socio-economic aspects of most countries with the imposed lockdown by governments of these countries. The lockdown has halted all educational activities at all levels within Nigeria. The study intends to evaluate the impact of COVID-19 pandemic on the education of selected students in Ogun State College of Health Technology, Ilese Ijebu. The study adopted a quantitative research method where a self-structured questionnaire was administered through google form to the students of the departments of dental therapy, medical imaging, pharmacy technician and, dental surgery technician. From the 350 responses gathered, it was observed that COVID-19 has harmed the learning of the students and the use of online classes to argument this is currently not working considering the many challenges involved. The Government should, therefore, improve the technology available to keep students learning while at home.*

KEYWORDS: COVID-19, Impact, Educational, Students, Learning, Lockdown, Nigeria

INTRODUCTION

Covid-19 is a communicable disease That originated from Wuhan, Hubei in China at the end of 2019 (Moon, 2020). It is a zoonotic disease whose outbreak was believed to be associated with the wildlife animal and seafood market where patients worked or visited (Karasneh et al., 2020). This outbreak of coronavirus is seen as the third following the outbreak of Severe Acute Respiratory Syndrome Corona Virus (SARS-CoV) in China in the year 2003 and the Middles East Respiratory Syndrome Corona Virus (MERS-CoV) in 2012 (Zhang et al., 2020) and it has spread around the world within a short period.



In January 2020, the World Health Organization (WHO) publicly declared coronavirus as a public health emergency that requires global attention (Eirini et al., 2020) and pronouncing it as a global pandemic (Van Bavel et al., n.d.). As at the time of writing the total case of COVID-19 in the world is approximately nineteen million (19,000,000) with about twelve million, one hundred and sixty-five thousand, six hundred and ten (12,165,610) recovered cases and Seven hundred and eleven thousand, two hundred and twenty (711,220) death (Worldometer, 2020). The first case of COVID-19 in Africa was discovered in Egypt on the 14th of February 2020 (Egypttoday, 2020) and at exactly 27th of February 2020, the first case was discovered in Lagos, Nigeria brought into the country by an Italian man returning from Milan in Italy (NCDC, 2020). Since the first case of the virus was identified, the action of the government has been to mitigate transmission of the disease thereby reducing the number of people who contact it.

COVID-19 spread has created lots of challenges stemming primarily from the mitigation against the spread of the virus. To reduce the spread, the government had to shut down socio-economic activities for an extended time. The global response to the novel coronavirus has led to the lockdown of the various sectors by the government (Bayham & Fenichel, 2020). School closure is an important aspect of this lockdown (Bayham & Fenichel, 2020). The shutting down of the schools is necessary to reduce the spread of the virus considering students can transmit or contract the virus in the learning environment (Medical Association, 2020). The educational sector is the most affected in Nigeria considering the government's total closure of all schools (Michael Onyema et al., 2020). In the civilized country, to bridge the gap of learning due to the lockdown, education of students at all levels had been moved online (Rajgor et al., 2020) Nigeria with a population of more than 13,200,000 children out of school (ICIR, 2018) is faced with more children denied education due to the social distancing policy in place for the prevention of COVID-19 making physical class not possible (Jæger & Blaabæk, 2020).

METHODOLOGY

The study adopted a quantitative research method approach where a self-structured questionnaire was developed to survey the knowledge and impact of Covid-19 lockdown on the education of the respondents. Students from the departments of Medical Imaging, Dental Therapy, Dental Surgery Technician, and Pharmacy Technician of Ogun State College of Health Technology, Ilese- Ijebu were selected as the study group. Due to the Covid-19 lockdown, a google form questionnaire was administered online through the Whatapps group of the selected departments by sharing the form link for the students to fill and submit online for a duration of one week. Google form application and descriptive statistics were used in the analysis of the responses from the respondents.



RESULTS

A total of 350 questionnaires were filled and submitted.

Demographic Information of Respondents

This section deals with the respondent's demographic data.

Table 1: Demographic Data of Respondents

Gender	Frequency	Departments	Frequency
Male	71 (20.3%)	Dental Therapy	153 (43.70%)
Female	279 (79.7%)	Medical Imaging	115 (32.90%)
		Pharmacy Technician	69 (19.70%)
		Dental Surgery Technician	13 (3.70%)
Level	Frequency	Program	Frequency
100	78 (22%)	Technician	153 (43.70%)
200	161 (46%)	National Diploma (ND)	110 (31.40%)
300	73 (21%)	Higher National Diploma (HND)	87 (24.90%)
400	38 (11%)		

Table 1 shows that there are more female respondents (79.7%) compared to the male respondents (20.3%) with the majority of them from the dental therapy department (43.7%) and 32.9%, 19.7% and 3.70% representing the departments of medical imaging, pharmacy technician and dental surgery technician respectively. The program of study with the highest respondents fell under Technician (43.7%) followed by a National Diploma (ND) with 31.4% and 24.9% from the Higher National Diploma (HND) program. 46% of the total respondents were at 200 level while 100 level and 300 level had 22% and 21% of respondents respectively and 400 level had 11% respondents.

Knowledge on COVID-19

Respondents were accessed for their knowledge on the pandemic as follows;

Table 2: Knowledge of COVID-19

Opinion on Diseases	Frequency	Diseases Classification	Frequency	Mitigation Measures	Frequency
Government Scam	23 (6.57%)	Communicable Disease	318 (90.86%)	Social Distancing	316 (90.3%)
Severe Acute Respiratory Syndrome (SARS)	252 (72%)	Non-Communicable Disease	20 (5.71%)	Use of Sanitizer	251 (71.7%)
Acute Malaria Symptoms	35 (10%)	No idea	12 (3.43%)	Regular Hand Washing	247 (70.6%)
5G network Issues	38 (10.86%)			Sharing of Toilet	2 (0.6%)
Tuberculosis	2 (0.57%)			Party of Large Population	15 (4.3%)



72% of the respondents are aware that COVID-19 is a Severe Acute Respiratory Syndrome (SARS) as shown in Table 2. 10.86% of the respondent believes that it is 5G network issue. 10% believe that COVID-19 can be classified as an acute malaria symptom while 6.57% classified it as a government scam and 0.57% said it is the same as for tuberculosis. Also, the table inferred that majority of the respondents are aware that COVID-19 is a communicable disease (90.9) with 5.71% of the students classifying it as a non-communicable disease whereas, 3.43% of the respondents do not have an idea of the classification of the disease. Mitigating against the spread of the virus, 90.3%, 71.7%, and 70.6% of the respondents which represents social distancing, use of sanitizers, and regular hand washing respectively is the percentage of the respondents who agree that according to World Health Organization (WHO) and Nigeria Center for Disease Control (NCDC) COVID-19 spread can be controlled through such methods though 4.3% of the study group feel that having a large party can help mitigate the spread and 0.6% think that using the same toilet can lead to the spread of the disease.

Impact of COVID-19 Pandemic on Educating Health Students

Table 3: Training during COVID-19

Disrupted Training	Frequency	Challenges	Frequency	Online Platform	Frequency
Yes	349 (99.1%)	Poor Internet Connection	255 (72.9%)	Whatapps	219 (62.6%)
No	1 (0.9%)	Poor Electricity	239 (68.3%)	Facebook	8 (2.3%)
Online/ Physical	Frequency	Access to an internet phone	135 (38.6%)	Twitter	1 (0.3%)
Yes	158 (45.1%)	Lack of money for data	259 (74%)	Zoom	19 (5.4%)
No	123 (35.1%)	Connection issues due to location	169 (48.3%)	Google Talk	2 (0.6%)
Maybe	69 (19.7%)	Concentration issues due to distraction	191 (54.6%)	Skype	0 (0%)
Classification of Online Class taken	Frequency	Spending extended/ limited time for classes compared to a physical class	145 (41.4%)	Instagram	0 (0%)
Audio	190 (54.3%)	Expression of themselves	1 (0.3%)	Website (Coursera, Udemy, etc.)	1 (0.3%)
Video	14 (4%)	Not Applicable	36 (10.3%)	None Attended	125 (35.7%)
Not Attended	146 (41.7%)				

The table expressly states that 99.1% of the respondent states that the pandemic has affected their academic training while 0.1% believe otherwise. 45.1% believe online classes can be used to replace physical classes (35.1%) though 19.8% of the respondents do not agree nor disagree with the opinion. Challenges faced by the students to access online classes majorly are lack of



money (74%), poor internet connection (72.9%), poor electricity (68.3%), and concentration issues due to distraction (54.6%). Minor challenges such as lecture time being extended or limited (41.4%), access to an internet-enabled phone (38.6%). A respondent stated that the ability to express oneself online is an issue at 0.3% while 10.3% of the respondent feels the question does not apply to them. 62.6% of the study group have attended a lecture taught on Whatapps, 35.7% had not attended an online lecture before while 2.3% attended on Facebook, 5.4% attended on Zoom, 0.6% had their lecture on Google Talk with Twitter and Websites (Udemy, Coursera, etc.) having a 0.3% percentage of respondents who had attended on a website. Though no respondent had attended a lecture on Skype and Instagram. In line with the lectures attended online, 54.3% of the respondents' state that the lecture they attended online can be classified as being an audio alone lecture while 4% said they had attended a video lecture but 41.7% admitted to have not attended an online class before.

Table 4: Learning during COVID-19

Does learning have three pillars?	Frequency	Does online class adequately cover the three pillars?	Frequency
Yes	337 (96.30%)	Yes	49 (14%)
No	13 (3.705)	No	301 (86%)
Which pillar is missing?	Frequency	Opinion on Industrial Attachment (SIWES)	Frequency
Listening	55 (15.70%)	Too Risky & to be discontinued	62 (17.70%)
Seeing (Visuals)	199 (56.90%)	Risky but done after the pandemic	219 (62.60%)
Practicing	292 (83.40)	To be done simultaneously with online class	69 (19.70%)
Demonstrative Online Class for practical Session	Frequency		
Yes	115 (32.90%)		
No	235 (67.10%)		

96.30% of the respondents agree that learning has three pillars (listening, seeing, and practicing) while 3.70% of the respondent does not agree as shown in Table 4. Most of the respondents (86%) do agree that online classes cannot cover the pillars of learning though 14% of them agree that online learning will cover the pillars. In tabulating their opinion on the pillar of learning missing from online learning, 83.4% of the respondents are stated that online classes cannot cover the practical aspect of their learning while 56.9% feel that visuals (seeing) are missing in the online classes attended. 14% states that listening is also missing. To handle the practical sessions, 67.1% of respondents do not agree that demonstrative classes can replace the practical classes while 32.9% agree that demonstrative classes can be used as an alternative for the practical classes. 62.6% of the students believe that going for industrial attachment



(SIWES) is too risky and should be postponed until after the pandemic. 17.7% feel it is too risky and therefore should be discontinued while 19.7% of the respondents want the practical session to be taking place simultaneously with the online class.

DISCUSSION

From Table 1 which analyzes the demographic data of the respondents, it can be observed that more female students responded to the questionnaire compared to their male counterparts. This is expected because the college has more female student enrollment. Similarly, the dental therapy department has more students that responded compared to other departments within the college, this as a result of the dental therapy department having more student enrollment in the college and more levels. 400 level students had the least numbers of enrollment because on comparing the levels in each department, it can be noted that the Dental Therapy department is the only department that has 400 level (HND II) as the graduation class. In the other departments, the graduating level is 300L. There were more respondents from the 200-level and technician program because the 200-level session currently has more enrollment within the college and technician program are more than the national diploma (ND) and Higher National Diploma (HND) in the study group.

Table 2 infers that almost all the respondents are aware that COVID-19 is a Severe Acute Respiratory Syndrome (SARS) though few of them have varying opinions about the disease with about 10.86% of the respondent believing COVID-19 is an offset of the new 5G communication network. This can be attributed to the early news on Covid-19 outbreak where varying news attributed it to the 5G network though this had been disproven by professionals, the respondents might not have access to such information or do not understand the technical terms of the professionals to discard 5G as the reason behind the pandemic. Similarly, 10% of the respondents think that COVID-19 is a severe malaria symptom. This is might be because the symptoms of COVID-19 at the mild stage are related to the symptoms of normal fever from the information they have gathered therefore assumes it can be classified as severe malaria. Some category of the respondents believes that COVID-19 is a government scam, this is attached to the misinformation from known sources such as CNN, untrustworthiness of the government, and the inability of the government to show concrete shreds of evidence of people infected with the virus except through the media when compared to what applies to the civilized world where patients are shown. Furthermore, the table shows that majority of the respondents are aware that COVID-19 is a communicable disease and therefore social distancing, constant use of sanitizers and regular hand washing are some of the methods in which the human to human transmission can be reduced.

The respondents majorly agree that the pandemic has affected their academic training considering tertiary institutions had been on lockdown in Nigeria since May while also noting that there is no specific time for resumption determined year therefore an academic calendar that should have ended by May 2020 has been extended indefinitely while also placing uncertainty on the future of the learning of some students/physical classroom. These lack of what to do and intention to get over the current academic session to reduce the time spent on the program can be attributed to the reason why 45.1% of the respondents want the classes to be moved online through the fear of the unknown or lack of basic amenities needed to be educated online would have contributed to the reason why 35.1% of the respondents prefer the



physical classroom environment to the online environment. The challenges envisaged in learning online by the students include poor internet connections, lack of electricity access to funds to procure data for their internet-enabled phones, and concentration issues due to distraction from different sources while studying at home(online) compared to in a physical class where all these challenges are not a problem. 216 respondents which represent 62.6% of the total study group stated that the class they took online was done on Whatapps which might be the reason why the majority of them said that the classes they attended were audio classes considering Whatapps is a chatting platform and audio platform with few people being able to connect at once together using their video service. This is further emphasized by the respondents when it was stated in Table 4 that visuals and majorly practicing are seriously missing pillars of learning from the current online classes being practiced or witnessed by the respondents. In Table 4, it is made known that the respondents agree that for learning to take place, listening, seeing (visuals), and practicing (doing) are important. With 86% of the respondent agreeing that online classes cannot adequately cover the three pillars of learning this contradicts the 45.1% in Table 3 where most of the respondents stated that online classes should replace the physical classes. This can be buttressed further by the fact that 67.1% of the respondents also agree that demonstration classes cannot replace the practical sessions carried out for medical students in training even if it is done with the aid of a video which is why medical students go for clinical training in health institutions or hospital so they can have the first-hand experience about what they are being taught although most of the respondents agree that it is currently risky to send the students on clinical training until after the pandemic rather than discontinue it.

Table 3 addresses the issue of whether educational training can continue even during the lockdown. Considering the students had been at home for months with little or nothing to do educationally, the idea of going online for their training appealed to the majority the student which is why the majority of them

The Implication of Research and Practice

Knowing that majority of the students in tertiary institutions in Nigeria are in public schools where nothing has been done since the shutdown started and the uncertainty on when educational institutions will resume, government/relevant authority should come up with a specific plan known to all stakeholders (students inclusive) on when normalcy is expected in the educational sector. While such a plan is being carried out, tertiary education students should be engaged relatively online with the aid of video tutorials which can handle the listening and visual aspect of their training comfortably in line with their syllabus to compensate for the time being wasted staying at home without any form of formal education. Although video lectures can be achieved a lot, feedback on lectures administered is relatively limited therefore plan should be in place for physical classes and industrial attachment (SIWES) posting of the students immediately after the pandemic. The government should make available necessary technology and educate the students so they can take advantage of technology to forestall future occurrences that may affect learning.



CONCLUSION

COVID-19 has brought a halt and affected the training of medical students in Ogun State College of Health Technology, Ilese-Ijebu negatively. To prevent valuable time being spent idle and also to prevent the spread of COVID-19 while ensuring that the school environment, as well as students, are safe, classes have to move online to pass knowledge through the use of technology although these classes were inadequate and ineffective in replacing the physical classes. To make these online classes more effective and adequate, there has to be a synergy between formal education in physical classrooms and the use of technology such that after the pandemic, the technology acquired can be further used for distance learning programs as well as allowing the students to be able to revisit lectures again and again to have a grasp of the lecture.

Future Research

The research can be furthered by taking the opinion of the entire students and staff of Ogun State College of Health Technology on the complete impact of COVID-19 on the college community. Furthermore, the impact of COVID-19 on the country, in general, can be assessed.

REFERENCES

- Bayham, J., & Fenichel, E. P. (2020). Articles Impact of school closures for COVID-19 on the US health-care workforce and net mortality: a modeling study. *Public-Health*, 5. [https://doi.org/10.1016/S2468-2667\(20\)30082-7](https://doi.org/10.1016/S2468-2667(20)30082-7)
- Egypttoday. (2020). *Egypt announces first Coronavirus infection - Egypt Today*. <https://www.egypttoday.com/Article/1/81641/Egypt-announces-first-Coronavirus-infection>
- Eirini, I. (, Kamenidou,), Stavrianea, A., & Liava, C. (2020). Achieving a Covid-19 Free Country: Citizens Preventive Measures and Communication Pathways. *International Journal of Environmental Research and Public Health Article*, 17(4633), 1–18. <https://doi.org/10.3390/ijerph17134633>
- ICIR. (2018). *FACT CHECK: Are there 13.2 million out-of-school children in Nigeria as claimed by UBEC?* International Centre for Investigative Reporting. <https://www.icirigeria.org/fact-check-are-there-13-2-million-out-of-school-children-in-nigeria-as-claimed-by-ubec/>
- Jæger, M. M., & Blaabæk, E. H. (2020). Inequality in learning opportunities during Covid-19: Evidence from library takeout. *Research in Social Stratification and Mobility*, 68. <https://doi.org/10.1016/j.rssm.2020.100524>
- Karasneh, R., Al-Azzam, S., Muflih, S., Soudah, O., Hawamdeh, S., & Khader, Y. (2020). *Media's effect on shaping knowledge, awareness risk perceptions and communication practices of pandemic COVID-19 among pharmacists*. <https://doi.org/10.1016/j.sapharm.2020.04.027>
- Medical Association, A. (2020). *Medical Student Education in the Time of COVID-19*. <https://doi.org/10.1001/jama.2020.5227>
- Michael Onyema, E., Chika Eucheria, N., Ayobamidele Obafemi, F., Sen, S., Grace Atonye, F., Sharma, A., & Omar Alsayed, A. (2020). Journal of Education and Practice www.iiste.org ISSN. *Journal of Education and Practice*, 11(13). <https://doi.org/10.7176/JEP/11-13-12>



- Moon, M. J. (2020). Fighting COVID-19 with Agility, Transparency, and Participation: Wicked Policy Problems and New Governance Challenges. *Public Administration Review*, 80(4), 651–656. <https://doi.org/10.1111/puar.13214>
- NCDC. (2020). *First case of Corona Virus disease confirmed in Nigeria*. <https://ncdc.gov.ng/news/227/first-case-of-corona-virus-disease-confirmed-in-nigeria>
- Rajgor, D. D., Lee, H., Archuleta, S., Bagdasarian, N., & Quek, S. C. (2020). COVID-19 and medical education. *The Lancet Infectious Diseases*, 20, 777–778. <https://doi.org/10.1001/jama.2020.1585>
- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., Crockett, M. J., Crum, A. J., Douglas, K. M., Druckman, J. N., Drury, J., Dube, O., Ellemers, N., Finkel, E. J., Fowler, J. H., Gelfand, M., Han, S., Alexander Haslam, S., Jetten, J., ... Willer, R. (n.d.). *Using social and behavioural science to support COVID-19 pandemic response*. <https://doi.org/10.1038/s41562-020-0884-z>
- Worldometer. (2020). *Coronavirus Update (Live): 18,976,340 Cases and 711,220 Deaths from COVID-19 Virus Pandemic - Worldometer*. <https://www.worldometers.info/coronavirus/>
- Zhang, L., Li, H., & Chen, K. (2020). *Effective Risk Communication for Public Health Emergency: Reflection on the COVID-19 (2019-nCoV) Outbreak in Wuhan, China*. <https://doi.org/10.3390/healthcare8010064>

Copyright © 2020 The Author(s). This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.