

The Impact Of Covid-19 On Accessibility And Quality Of Healthcare Delivery In Asutifi South District (Hwidiem) In The Ahafo Region: Ghana

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Abstract: The advent of Coronavirus 2019 on earth came as a shock to the general global population. Ghana recorded its first two Covid-19 cases on 12th March, 2020 according to the Minister of Health, Hon. Kwaku Agyeman-Manu following a test done at the Noguchi Memorial Institute for Medical Research. Ghana had a case count of 6,938 with 482 deaths as at 10th February, 2021. In the Asutifi South District, the town Hwidiem with a total population of 67,196 people had a case count of 80 with 4 deaths as at 10th February, 2021. The study identified the influence covid-19 had on accessibility to health care and quality of healthcare delivery in the Asutifi South district in Ghana. The conduct of the research in the collection of data was both a retrospective and perspective cross sectional study and the sample size used was 105 study participants. It revealed that all respondents demonstrated adequate level of awareness of the incidence of Covid-19, (100%). According to the study, an average of the respondents (52.4%) indicated readily accessibility to Asutifi district hospital. Majority of the respondents (75.2%) rated accessibility to the district hospital in Hwidiem in this pandemic era as satisfactory. The study also revealed 46.7% of respondents who were satisfied with the quality of healthcare services rendered at the district hospital since the onset of COVID-19. Despite the influence of Covid-19 which had changed the trend in daily activities and social dynamics, there was satisfaction with quality of healthcare services rendered at the district hospital during the pandemic. There was the need to recruit more health professionals to reduce workload on the already stressed health care personnel and facilities and adequate remuneration for healthcare workers especially those posted to remote areas.

Keywords: Impact, Covid-19, Accessibility, Healthcare, Accessibility, Quality, Healthcare, Delivery, Hwidiem, Asutifi South District, Ahafo Region, Ghana

I. INTRODUCTION

Coronavirus 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus-2 which is commonly known as SARS-COV-2 (Lai, et al, 2020). It was first reported from Wuhan, China in December 2019 (Du-Toit, 2020). World Health Organisation (WHO, 2020) declared it a global pandemic on March 11, 2020. More than

2.1 million cases of COVID-19 including 142,229 deaths were reported by WHO in 213 countries and news of the virus had spread quickly throughout the globe claiming several lives. The number of confirmed cases stood at 107,481,542 and the number of deaths 2,353,063 as at 10th February, 2021(WHO, 2020). The countries which were most affected included the United States of America (USA), Spain, Italy, Germany, France, the United Kingdom, China, Iran, Turkey, Belgium,

Russia, Canada and Brazil. The global reaction to the threat had generally increased the perception of the severity of the illness and the threat it poses to the peoples. However, in the initially stages of reportage, there was a widespread lack of clarity on specifics related to the illness (WHO, 2020; NCDC, 2020).

Patients with COVID-19 normally present with fever, tiredness and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhoea. These symptoms are usually mild and begin gradually. Some people become infected but do not develop any symptoms and don't feel unwell. Most people recover from the disease without needing special treatment. Around 1 out of every 6 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness. People can catch COVID-19 from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch COVID-19 by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also catch COVID-19 if they breathe in droplets from a person with COVID-19 who coughs out or exhales droplets (Sarpong and Obeng, 2020).

The first confirmed case in Africa was recorded in Egypt on 14th February, 2020 and the first case in Sub-Saharan Africa was reported in Nigeria on 27th February, 2020 (WHO, 2020 and NCDC, 2020). Africa was projected to be the most vulnerable continent to be adversely affected by COVID-19 pandemic (Moore, et al, 2020). 19,895 cases confirmed by Africa Center for Disease Control (ACDC) including 1,017 deaths and 4,642 recoveries from 52 African countries as of 18th April, 2020 (CDC, 2020). Ghana recorded its first two COVID-19 cases on 12th March, 2020 as announced by the Minister of Health, Hon. Kwaku Agyeman-Manu following a test done at the Noguchi Memorial Institute for Medical Research (Abdul-Mumin, et al, 2021). Ghana had a case count of 6,938 with 482 deaths as at February 10, 2021. In the Asutifi South District, the district town, Hwidiem, with a total population of 67,196 people had a case count of 80 with 4 deaths as at February 10, 2021 (Sarpong and Obeng, 2020). Without no doubt, COVID-19 has had numerous compelling effects on socio-economic development and healthcare systems worldwide. Morbidity and mortality of non-COVID related health conditions may have affected owing to social fear of COVID-19 and reduced access to public health services (Seidner, et al, 2020).

COVID-19 intensified the burden on health systems across the globe more particularly on limited resource countries with already struggling health systems (WHO, 2020). Low and middle income countries with poor health systems are particularly vulnerable to COVID-19. (Miller, 2020 and WHO, 2020). In Sub-saharan Africa including Ghana, care for COVID-19 patients has been has not been smooth and tainted with inadequacies due to lack of equipment like Intensive Care Unit (ICU beds), bedside oxygen supply, pulse oximeters, ventilators and Personal

Protective Equipment (PPE) (WHO, 2020). This was further worsened by a surge in hospitalisations of COVID-19 patients due to increase number in active cases every day. Low and middle income countries in Sub-saharan Africa are likely to experience a surge in worse health outcomes among patients with non-COVID related health conditions due to a compelled increase in poor health seeking behaviours among such populations in this era of the pandemic which (Peak, et al, 2009) may be attributed to reduced access to primary health care.

COVID-19 has been a constant source of worry to the nation and the entire world. The pandemic has forced various health facilities to make significant changes to outpatient care and preventive care services with most primary care facilities being compelled to withdraw elective and preventive care visits to some extent. This has gravely limited access to primary health care. This has been made worse by either fear of the disease on the part of most people and are therefore compelled to stay at home to reduce their exposure to the virus even in the face of conditions necessitating care at a health facility (Saah, et al, 2021). The ensuing increase in poor health seeking behaviours resulting from these drastic measures to contain the virus could defeat the aim of Sustainable Development Goal 3 which seeks to ensure health for all at all ages through promotion of health and provision of quality healthcare services (Osborn, et al, 2015). As a quick response to the spreading menace of COVID-19, many governments across the world were compelled to impose restrictions on movements and lockdowns in an attempt to contain the virus. This significantly reduced contact patients with diabetes and obesity had with their healthcare providers and consequent depreciation of the quality of management of their conditions (Giorgino et al, 2020). These drastic measures adversely affected compliance to treatment, routine monitoring of blood glucose level, healthy eating habits, less physical activity which are very crucial in the non-pharmacological management of these conditions (Giorgino, et al, 2020).

The pandemic has also negatively affected antenatal care services. Mothers and newborn babies have had to endure the cold and uncompromising demands of COVID-19 which have compelled the need to activate global containment measures. These measures have also been stifled by limited supply of equipment, limited number of health workers to attend to other patients due to priority given to suspected or confirmed COVID-19 cases (Ogunkola, et al, 2021).

The pandemic has also resulted in the diversion of attention from other important non-COVID-19 health issues as funds and attention of governments, donors, stakeholders and other philanthropists to conscious efforts and measures to contain the menace created by this pandemic. These COVID-19 cases tend to be complicated and bring about deleterious effects to both the nation and the people of Hwidiem. For the past few months since March 2020, the Asutifi District has recorded a case count of 80 with 4 deaths and still counting. This placed the district among the top districts in the country with high case counts. Efforts in the form of public education given to the community to adhere to the safety protocols have not done so much to help the issue. Series of health education and promotion campaigns to visit the nearest health facility upon developing symptoms of COVID-19 have fallen to deaf

ears. Continued misconceptions about health facilities as to where one usually gets the virus and a lack of health personnel at sub-district outposts have contributed to the surge in the case count in the district. This study therefore seeks to assess the impact of COVID-19 on accessibility to quality health care delivery in the Asutifi South District. The study seeks to identify the impact covid-19 has on accessibility to health care and quality health care delivery in the Asutifi South district in Ghana. It was therefore imperative to identify awareness level of covid-19 in the district, ascertain how health centres were available to patient and find out the quality of health care given to patients since the onset of covid-19 in the district.

The UN estimates that about 3.3 million people could die of COVID-19 in Africa if containment measures are not given the needed attention. With the poor nature of our healthcare systems in low and middle income countries including Ghana, it is a necessity that drastic measures are put in place to limit the harm already being done by the pandemic (Afulani, et al, 2020). In Afulani et al, (2020) perceived preparedness of healthcare workers geared towards handling the COVID-19 menace linked with lack of training of healthcare workers, inadequate PPE, COVID-19 protocols and isolation wards as well as poor communication from management was found to be below. Africa has been deemed particularly vulnerable to the COVID-19 pandemic owing to the high level of infectious disease burden, fragile healthcare system and poverty (Shabir and Aigaz, 2020). Twenty-two (22) out of twenty-five (25) countries deemed most vulnerable to infectious diseases are in Africa according to Infectious Disease Vulnerability Index (IDVI) 2016 (Shabir and Aigaz, 2020). The African continent is even at higher risk of COVID-19 due to great burden of immunocompromised conditions among majority of its population (Shabir and Aigaz, 2020). Considering how developed countries with their advanced healthcare systems have struggled to cope with the current pandemic, it can be hypothesized that it can have a huge impact, both direct and indirect, on our weaker healthcare sector burdened with limited testing capacity, limited ICU facilities and ventilators, inadequate PPE for healthcare workers among others. Epidemics and pandemics of such nature as COVID-19 are notorious for their damaging effects on health systems (Madhev, et al, 2017).

In view of the alarmingly surge in covid-19 case count in the district and in the nation at large, this study seeks to assess the awareness level of the people of the Asutifi South District on COVID-19 which can also help assess their level of adherence to the protocols and measures put in place to help contain the virus. This study offers the opportunity to assess the level to which primary healthcare services have been made readily available to the people in this district in this COVID-19 era compared to the pre-covid era. The study may also help estimate or have an overview of the health seeking behaviours of people in the district in response to changes in the healthcare delivery system effected due to the surge in COVID-19 cases in the district. This can also be used to assess the impact both direct and indirect, on the overall health of the general population of the district in the immediate period following the pandemic and determine the direct or indirect causal relationship between these impacts and the pandemic.

Conceptually, Covid-19 poses both direct and indirect influence on the number of health workers available at a given time to attend to the needs of patients, availability of supplies and equipment and accessibility to health services, all of which can adversely affect the quality of healthcare delivery (Figure 1). Due to the pandemic, hospitals may be forced to run a shift system to reduce numbers at the health facility at any point in time and also to reduce risk of exposure and infection. This significantly reduces the number of health workers available at a given time to attend to the increasing demands or needs of patients present. Attention of health workers may also be more focussed on suspected or confirmed covid-19 cases at the expense of patients who present with non-covid-19 related conditions.

Decreased availability and limited supply of equipment and logistics in the form of Personal Protective Equipment can directly influence the level and quality rendered due to increased exposure of health workers to the virus while working under such unfortunate conditions. Access to health services maybe influenced, restrictions or lockdowns implemented by the government to contain virus. Also, by virtue of fear of being exposed to virus outside one's home especially at the setting of the hospital, people will rather stay home and not seek health services at health centres which can lead to an increase in health seeking behaviours. Access to health services may also be adversely affected by withdrawal of outpatient services and other vital preventive care services in order to limit case to COVID related cases or emergency cases only, which also has a direct negative impact on routine health care rendered at health centres.

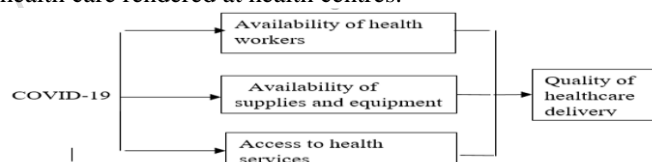


Figure 1: Solution framework required in the covid-19 period to ensure quality of healthcare delivery

II. MATERIALS AND METHODS

A. GEOGRAPHICAL AND SOCIAL CHARACTERISTICS

Asutifi South District, Figure 1, is one of the administrative districts in the Brong Ahafo Region. The District was carved out from the then Asutifi District in July, 2012 with Hwidiem as the District capital. The District is located in the western part of Brong Ahafo Region. It shares boundaries with Asutifi North District to the North, Ahafo Ano North District to the East, Asunafo Municipal to the West, Atwima Mponua District to the South-East, and Asunafo South District to the South-West. The total land area of the district is about 597, 244 squares kilometers. The District is located between latitudes 6°40' and 7°15' North and Longitudes 2°15' and 2°45' West. The population of Asutifi South District, according to the 2010 Population and Housing Census, is 67,196 representing 2.3 percent of the region's total population. Males constitute 53 percent and females represent 47 percent. Sixty-three percent of the population is rural. The District has a total number of 10,845 households. The average

household size in the District is 5 persons per household. Children constitute the largest proportion of the household members accounting for 44.2 percent. Spouses form about 11.2 %. Nuclear households (head, spouse(s) and children) constitute 31.8 percent of the total number of households in the District.



Figure 3.1 Source: 2020 Annual Performance Review of the Asutifi South District Health Directorate. Map of Asutifi South District in the Ahafo Region of Ghana with Hwidiem as the study area

B. RESEARCH DESIGN

The mode of data collection of the cross sectional study was a mix of both retrospective and perspective approaches. 105 participants who attended the hospital were assessed to answer questionnaire. Collectively, the data was collected from the district health directorate, biostatistics department of the hospital and respondents. Data was entered into Statistical Package for Social Sciences (SPSS), version 21.0 and analysed alongside with Microsoft Excel version 16.

III. RESULTS

A. SOCIO-DEMOGRAPHIC CHARACTERISTICS

The results obtained (Table 4.1) showed that an average of the respondents (45.7%) were within the age group between 18 and 35 years while 4.8% of respondents were within the age group of 70 years and above. Males were captured by the study as majority respondents representing 70.5%. On religious grounds, it was found that 70.5% of the respondents were Christians. In addition, an average of 54.3% respondents confirmed they were staying with the parents. Finally on occupation, teachers and students constituted the majority (28.6 and 26.7) respectively.

Variable	Frequency	Percentage (%)
Age		
0-17	17	16.2
18-35	48	45.7
36-58	22	21.0
59-70	13	12.4
70+	5	4.8
Total	105	100
Gender		
Male	74	70.5
Female	31	29.5

Total	105	100
Religion		
Christianity	74	70.5
Islam	29	27.6
Traditional	2	1.9
Total	105	100
Marital status		
Married	45	42.9
Single	60	57.1
Total	105	100
Who do you stay with?		
Parents	57	54.3
Friends	2	1.9
Other family relatives	25	23.8
Alone	11	10.5
Others	10	9.5
Total	105	100
Occupation		
Teacher	30	28.6
Doctor	4	3.8
Nurse	5	4.8
Farmer	21	20
Students	28	26.7
Unemployed	15	14.2
Pensioner	2	1.9
Total	105	100

Table 4.1: Socio-demographic characteristics of participants

B. AWARENESS LEVEL COVID-19

In respect of the awareness level on Covid-19, the study according to Table 4.2 showed that all respondents (100%) had a knowledge about COVID-19 with social media and television/ newspaper being 42.9% each. The study showed that 61.9% of respondents were aware of Covid-19 since its inception and announcement made by the President of the Republic of Ghana.

Variable	Frequency	Percentage (%)
Have you heard of the COVID-19 outbreak?		
Yes	105	100
No	-	-
Total	105	100
When did you first hear about COVID-19?		
March 2020	65	61.9
April 2020	21	20
May 2020	4	3.8
June 2020	15	14.3
Total	105	100
Main source of information regarding COVID-19		
Newspaper and television	45	42.9
Social media	45	42.9
Government official	2	1.9

websites		
Public health banners	3	2.9
Friends and family	6	5.7
Health personnel	4	3.8
Total	105	100

Table 4.2: Awareness level of COVID-19 in the district (Part I)

Table 4.3 showed that all respondents knew the clinical symptoms of the Covid-19 as fever, cough and shortness of breath. Again they all knew the first place to go, that's hospital, when the showed symptoms of the disease.

Variable	Frequency (%)	Frequency (%)
What are the main symptoms of the virus?	Yes	No
Fever	105 (100)	-
Cough	105 (100)	-
Shortness of breath	105 (100)	-
Sore throat	-	-
Nausea	-	-
Toothache	-	-
Abdominal pain	-	-
Do you know where to go if you start developing symptoms		
Hospital	105 (100%)	-
Stay home	-	105 (100%)
Total	105 (100%)	105 (100%)

Table 4.3: Awareness level of COVID-19 in the district (Part II)

Table 4.4 shows that majority of the respondents (69.5%) posited that wearing a facemask can help prevent the spread of the virus. On hygiene, a greater part of them (77.1%) knew that the use of alcohol-based sanitizer can also help prevent the spread of the virus. In fact, 44.8% of the respondents thought that the use of gloves was necessary to help curb the pandemic and on whether or not drugs can be used to cure COVID-19, nearly the average of them (41.9%) said it was incurable with drugs.

Variable	Frequency	Percentage (%)
Does wearing a facemask help prevent the spread of the virus?		
Yes	73	69.5
No	6	5.7
Maybe	26	24.8
Total	105	100
Do you think alcohol-based hand sanitizer is effective for preventing the spread of the virus?		
Yes	81	77.1
No	4	3.8
Maybe	20	19
Total	105	100
Would wearing gloves help prevent the spread of the virus?		
Yes	47	44.8
No	21	20

Maybe	37	35.2
Can COVID-19 be cured with drugs?		
Yes	23	21.9
No	44	41.9
Maybe	38	36.2
Total		

Table 4.4: Awareness level of COVID-19 in the district (Part III)

C. ACCESSIBILITY TO HEALTHCARE

According to Table 4.5, despite the fact that an average of 52.4% of respondents indicated readily accessibility to the healthcare facility, 75.2% of them rated accessibility of the district hospital as good. Again nearly an average of respondents (47.6) trusted that they can have access to screening and testing at the district hospital in the special period. In terms of the availability of healthcare centres in the district an above average of respondents (61.9%) said it was good.

Variable	Frequency	Percentage (%)
Has the district hospital been readily accessible since the onset of COVID-19?		
Yes	55	52.4
No	26	24.8
Maybe	24	22.9
Total	105	100
Rate the accessibility level of the district hospital to patients since COVID-19 started		
Amazing	15	14.3
Good	79	75.2
Terrible	11	10.5
Total	105	100
Can one have access to screening and testing at the district hospital?		
Yes	50	47.6
No	14	13.3
Maybe	41	39.0
Total	105	100
How would you rate the district's availability of healthcare centres?		
Amazing	19	18.1
Good	65	61.9
Terrible	21	20
Total	105	100

Table 4.5: Accessibility level to healthcare delivery in the district

D. QUALITY OF HEALTHCARE SERVICES RENDERED

As shown in Table 4.6, the study showed 65.7% of respondents were satisfied with the district's availability of

health professionals. 46.7% of respondents expressed satisfaction with the quality of services offered at the district hospital since the onset of COVID-19. 64.8% of respondents revealed that health and hygiene protocols were upheld at the hospital.

Variable	Frequency	Percentage (%)
How would you rate the district's availability of health professionals?		
Very good	24	22.9
Not bad	69	65.7
Terrible	12	11.4
Total	105	100
How is the quality of treatment at the district hospital since COVID-19 started?		
Very good	32	30.5
Not bad	49	46.7
Terrible	24	22.9
Total	105	100
Does the district hospital abide by health and hygiene protocols during patient's treatment?		
Yes	68	64.8
No	4	3.8
Maybe	33	31.4
Total	105	100
Amazing	19	18.1
Not bad	65	61.9
Terrible	21	20

Table 4.6: Quality of healthcare services rendered

IV. DISCUSSION

The emerging COVID-19 pandemic is a distinct period that is infested with a variety of social, economic and health challenges. The affected populations need to have an adequate level of COVID-19 related awareness, in order to meet the aforementioned challenges and form realistic expectations regarding the disease's future course. The health-related and socioeconomic burden of the pandemic might prove to be disastrous, especially it is to be mishandled by the public and disregarded by concerned authorities (WHO 2020). Since the entirety of any population that is contact with COVID is vulnerable to its consequences, this study was conducted to evaluate the awareness, accessibility and quality healthcare in Hwidiem District towards the early spread of COVID-19.

This study revealed that majority of respondents demonstrated an adequate/appreciable level of awareness on

COVID-19 before. Fever, cough and shortness of breath were identified by all participants as some of the common presentations/symptoms of COVID-19. Majority of respondent (69.5%) posited that wearing a facemask can help prevent the spread of the virus. 77% of the respondents agreed that the use of alcohol-based sanitizer can also help prevent the spread of the virus. However, on whether drugs can be used to cure COVID-19, (41.9%) of the respondents said no while (21.9%) of the respondents said yes and (36.2%) were not sure. This is consistent with findings from (Jaber, et al, 2021) where participants emonstrated a fair level of awareness of COVID-19 symptoms. These findings from this study were also in line with findings from (Qutob & Awartani, 2021) in which respondents showcased a good level of awareness of transmission of the virus and preventive measures. These were further supported by (Qalati, et al, 2021) in which results showed that the overall knowledge of COVID-19 among participants was fairly appropriate. This study revealed that newspaper/ television and social media (42.9%) were the main sources of information on COVID-19 related matters by majority of respondents. This is similar to a study by (Jaber, et al, 2021) in which social media was the second most commonly used medium to access information regarding the COVID-19 pandemic. The same study however, revealed doctors and other medical staffs constituted the most frequently used source of information about COVID-19 pandemic. In another study Salako, et al, 2020, social media was the main source of information on the pandemic, a finding consistent with this study.

An average of (52.4%) respondents in this study indicated readily accessibility to Asutifi district hospital. 75.2% of the respondents rated the accessibility of the district hospital in this pandemic era as not bad. This finding goes contrary to a finding by Ahmed, et al, 2020, where respondents reported disruption to health services due to imposition of restrictions on movement due to the COVID-19 pandemic. Particularly, some facilities had stopped being functional while others provided only emergency services. The few facilities that operated did so with limited hours while offering minimal services out-patient services were reduced compared to the pre-covid period due to limited staffs (Ahmed, et al, 2020). However, the finding of this study was supported by a similar finding by another study (Oluoch-Aridi, et al, 2020), which revealed that despite the high risk of exposure to the COVID-19 virus, there was continued access to health facilities among women. This same study, (Oluoch-Aridi, et al,2020), also reported reduced access to health facilities in less than half of women respondent partly due to hospital's policies to restrict women entry to health facility and decision to scrap certain routine services deemed not necessary or urgent in this COVID-19 era to reduce risk of contracting the virus.

This study revealed a widespread satisfaction of majority of respondents with the quality of healthcare services rendered at the district hospital since the onset of COVID-19. On accessing the quality of healthcare services offered at in the district hospital in this COVID-19 era, majority of the respondents (65.7%) were satisfied with the district's availability of health professionals. 77.1% of respondents expressed satisfaction with the quality of services offered at the district hospital since the onset of COVID-19. About

(65%) of respondents revealed that health and hygiene protocols were upheld at the hospital. This is an improvement compared to Deriba, et al, 2020 which found out about 44.6% of patients were satisfied with service rendered to them from health facilities. The indicators associated with increased satisfaction in relation to these findings were; obtaining sanitizer for hand cleaning at the facility entrance, maintaining and observing social distancing while waiting in a queue to be served, presence or absence of direction indicators among others. However, the findings from this is similar to those from a study by Traiki, et al, 2020, which found an overall patient satisfaction with staff behaviour, communication and healthcare services.

V. CONCLUSION

This study assessed the impact of COVID-19 on accessibility to healthcare and quality healthcare delivery in the Asutifi South district. This study revealed that all respondents 100% demonstrated in adequate level of awareness on COVID-19, including its symptoms and some of its preventive measures. Over 60% were aware of the disease since its inception in March 2020 in Ghana as was announced by the President of the Republic of Ghana. All participants knew that the first place to go when symptoms of the disease manifested was the hospital. An average 52.4% of the respondents indicated that the district hospital was readily accessible during the COVID-19 pandemic. There was also widespread satisfaction with quality of healthcare services rendered at the district hospital among majority of respondents (65.7%) during the pandemic. The study is therefore a model piece of how other rural settlements in Ghana would have comported themselves from the inception of the COVID-19 till date. This in effect guarantees the citizenry and government that education is going down well on the progress of COVID-19.

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