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Impact of Public Health Awareness on Preventing the Widespread of Covid-19 Pandemic in Yobe State, Nigeria

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ABSTRACT: Background: Providing public health awareness during disease outbreaks is a fundamental component of outbreak control strategies and imparting knowledge and awareness to the general public on COVID-19 pandemic about its causes, its risks factor, its mode of transmission and its preventive measures will greatly help general public to understand the risk behaviours and assist them in responding quickly to the outbreak. The role of the general public's adoption of COVID-19 preventive measure protocols-such as physical or social distancing, covering mouth while coughs/sneezes, use of sanitizer, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

Objectives: In view of this research gap-This study aimed to identify the general public's level of knowledge and awareness on COVID-19 pandemic about its causes, its risks factor, its mode of transmission and its preventive measures, knowing this will greatly help general public to understand the risk behaviours and assist them in responding quickly to the outbreak. The role of the general public's adoption of COVID-19 preventive measure protocols-such as physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

Materials & Methods: This research study was conducted in Yobe state, Nigeria. A survey research design was adopted for the purpose of this study using self-structured questionnaire to obtain data for the purpose of this research study. A total number of 300 respondents both male and female were randomly selected. It is an open items questionnaire and is made up of two sections A & B. Section 'A' was demographic information about the respondents related to their gender, age and educational background, while Section 'B' was the questions and responses tabulated in clusters based on the eleven (11) research questions of the study and the responses were options with values assigned to them 'YES'' or ''NO.'' The data collected were analysed and presented in the table using simple frequency and percentage (%).

Findings: Based on findings of this research study, the study established that there is poor level of knowledge and awareness apropos of COVID-19 etiquettes in the study area as a result of inadequate general public awareness campaign, lack of access to print and electronic medias, and this coupled with low level of literacy, negative myths of socio-cultural practice and bad religious belief.



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Conclusions: The interest in community's health aspect is considered one of the basic goals of public health awareness which is accomplished through helping community acquire health knowledge, developing proper attitudes in seeking health care, and taking proper decisions that promote health, protect life and prevent individual from catching diseases. Therefore, findings of this research study helps the policymakers to identify the importance of providing public health awareness that increases general public level of knowledge and awareness related to COVID-19 preventive measure protocols such as-physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

KEYWORDS: Impact, Public Health, Awareness, Preventing, Widespread, Covid-19 Pandemic, Yobe State Nigeria.

I. INTRODUCTION

World is suffering from global crisis of public health emergency of international concern because of an emerged outbreak of coronavirus disease (COVID-19) which originated from the city of Wuhan, China, has become a major global public health challenges for not only China, but the countries all over the world. To prevent and protect human lives from COVID-19, many countries have announced total lockdown for almost all activities, in particular, school closures for which students have been advised to stay at home and concentrate their academic activities online (1,2,3). In Nigeria, the nationwide lockdown has created a serious matter of concern in all sectors, more especially that of businesses and religious matters and most worrisome is that of school closures, because using online studies as an alternative is a major challenge in Nigeria due to poor technology to offer online studies, because Nigeria is yet to adopt an emerging advanced learning technologies that support online studies (4).

According recent report of World Health Organization (WHO) on Corona virus (COVID-19), that the corona viruses are belong to a family of viruses that cause illnesses ranging from the common cold to more severe diseases such as Severe Acute Respiratory Syndrome (SARS) and the Middle East Respiratory Syndrome (MERS). These viruses were originally transmitted from animals to humans. Severe Acute Respiratory Syndrome (SARS), for instance, was transmitted from civet cats to humans, while Middle East Respiratory Syndrome (MERS) moved to humans from a type of camel. Several known corona viruses are circulating in animals that have not yet infected humans. The name corona virus comes from the Latin word corona, meaning crown or halo. Under an electron microscope, the looks like it is surrounded by a solar corona. The novel corona virus, identified by Chinese authorities on January 7 and since named SARS-COV-2, is a new strain that had not been previously identified in humans. Little is known about it, although human-to-human transmission has been confirmed (3).

As at April, 2020, the number of global COVID-19 cases has surpassed over one million cases and more than 220 thousand deaths were recorded and still the mortality and morbidity rate are increasing in daily basis. It was also frightening that the USA recorded more than 2000 COVID-19 deaths in a single day despite the country's strong commitment to fight against the contagion. The number of Coronavirus deaths was soaring with no immediate solutions in sight. The disease showed no sign of slowing down across the globe. The COVID-19 outbreak triggered the then President of the United States, President Trump to invoke the "Defense Production Act". The government also issued a national emergency as a result of the growing number of new cases of Coronavirus in the country. The outbreak of COVID-19 affected all aspects of human activities globally ranging from education, research, sports, entertainment, tourism, transportation, worship, social gathering/interactions, economy, businesses, and politics. Indeed, the entire world was in distress as a result of COVID-19 threats, the reality of the situation was challenging to bear, and the education sector remains one of the worst-hit by Coronavirus outbreak (1).

AIMS

Providing public health awareness during disease outbreaks is a fundamental component of outbreak control strategies and imparting knowledge and awareness to the general public on COVID-19 pandemic about its causes, its risks factor, its mode of transmission and its preventive measures will greatly help general public to understand the risk behaviours and assist them in responding quickly to the outbreak. Therefore, this study aimed to provide general public and adoption of COVID-19 preventive measure protocols-such as physical or social distancing, covering mouth while coughs/sneezes, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying



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at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

OBJECTIVES OF THE RESEARCH STUDY

In view of this research gap-This study aimed to identify the general public's level of knowledge and awareness on COVID-19 pandemic about its causes, its risks factor, its mode of transmission and its preventive measures will greatly help general public to understand the risk behaviours and assist them in responding quickly to the outbreak. The role of the general public's adoption of COVID-19 preventive measure protocols-such as physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

II. MATERIALS AND METHOD

This research study was conducted in Yobe state, Nigeria. A survey research design was adopted for the purpose of this study using self-structured questionnaire to obtain data for the purpose of this research study. A total number of 300 respondents both male and female were randomly selected. It is an open items questionnaire and is made up of two sections A & B. Section 'A' was demographic information about the respondents related to their gender, age and educational background & Section while section 'B' was the questions and responses tabulated in clusters based on the eleven (11) research questions of the study and the responses were options with values assigned to them 'YES'' or ''NO.'' The data collected were analysed and presented in the table using simple frequency and percentage (%).

III. LITERATURE REVIEW

On 27 February, Nigeria confirmed its first case in Lagos state, an Italian citizen who works in Nigeria had returned on 25 February from Milan, Italy through the Murtala Muhammad International Airport, fell ill on 26 February and was transferred to Lagos state biosecurity facilities for isolation and testing after thorough investigations he was confirmed positive from coronavirus. Initially Nigeria then having only 5000 covid-19 cases, two deaths and twenty recovered. In order to contain the spread of the virus in Nigeria, the federal ministry of education has directed all educational institutions in Nigeria to shut down and allow students to go home as cases of reported COVID-19 increases more widespread.

From February 27 till May 10, the virus has infected over 434 people, spread to 34 out of 36 states of federation. Over 600 have recovered from the covid-19 and the fatalities rate is 95. Submits that eighty-three thousand to 190 000 people in Africa could die of covid-19 and 29 million to 44 million could get infected in the first year of the pandemic if containment measures fail, a new study by the world health organization (who) regional office for Africa finds (**4**, **6**).

The COVID-19 pandemic in Nigeria is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The milestone of 100,000 confirmed cases was reached on 10 January. There were 43,732 new cases in January, raising the total number of confirmed cases to 131,242. The death toll rose to 1,586. The number of recovered patients increased to 104,989, leaving 26,667 active cases at the end of the month. There were 24,415 new cases in February, taking the total number of confirmed cases to 155,657. The death toll rose to 1,907. The number of recovered patients increased to 133,768, leaving 19,982 active cases at the end of the month. There were 7,234 new cases in March, raising the total number of confirmed cases to 162,891. The death toll rose to 2,057. The number of recovered patients increased to 151,648, leaving 9,186 active cases at the end of the month. There were 2,219 new cases in April, raising the total number of confirmed cases to 165,110. The death toll rose to 2,063. The number of recovered patients increased to 155,101, leaving 7,946 active cases at the end of the month (**4**).



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On May 22, there were 166019 cases have been confirmed, 156476 cases have been discharged and 2067 deaths have been recorded in 36 states and the Federal Capital Territory. On the 23rd of May 2012, the 40 new cases were al reported from 7 states- Lagos 29 cases, Abia 3 cases, Ogun 3 cases, Kano 2 cases, Kaduna 1 case, Plateau 1 case, and Rivers 1 case. A multi-sectoral national emergency operations Centre (EOC), activated at Level 2, and continues to coordinate the national response activities. The Nigeria Centre for Disease Control (NCD) was established in the year of 2011 in response to the challenges of public health emergencies and to enhance Nigeria's preparedness and response to epidemics through prevention, detection and control of communicable diseases. Several measures have been instituted by the Federal Government of Nigeria through the PTF-COVID-19 together with the Federal Ministry of Health to curtail the spread of the disease and protect the health of Nigerians. This includes an initial lockdown of non-essential activities; closure of schools; a ban on international flights etc. Nigeria is one of many countries that have commenced the gradual easing of lockdown measures initially instituted at the beginning of the COVID-19 pandemic. This is to ensure a balance between preserving lives and livelihoods while addressing the socio-economic disruptions caused by the outbreak (4).

Globally, in the past week, the number of new cases and deaths continued to decrease, although overall counts for both remained high with just over 4.8 million new cases and nearly 86 000 new deaths reported in the past week. All regions reported a decline in new cases this week with the exception of the Western Pacific where the numbers of new cases were similar to the previous week. Till may, there global record of Corona-virus are 167,671,546 total cases plus new cases of 153,921 and 3,481,226 plus new deaths of 2,971 mostly from Asia and India in particular, as well as 148,818,072 world total recovered (**3,5,6**).

The research, which is based on prediction modelling, looks at 47 countries in the WHO African region with a total population of one billion. The new estimates are based on modifying the risk of transmission and disease severity by variables specific to each country in order to adjust for the unique nature of the region. The model predicts the observed slower rate of transmission, lower age of people with severe disease and lower mortality rates compared to what is seen in the most affected countries in the rest of the world. This is largely driven by social and environmental factors slowing the transmission, and a younger population that has benefitted from the control of communicable diseases such as HIV and tuberculosis (TB) to reduce possible vulnerabilities. The lower rate of transmission, however, suggests a more prolonged outbreak over a few years, according to the study which also revealed that smaller African countries alongside Algeria, South Africa and Cameroon were at a high risk if containment measures are not prioritized. Observes that the outbreak of pandemic COVID-19 all over the world has disturbed the political, social, economic, religious and financial structures of the whole world. World's topmost economies such as the US, China, UK, Germany, France, Italy, Japan and many others are at the verge of collapse (7).

Besides, stock markets around the world have been pounded and oil prices have fallen off a cliff. In just a week 3.3 million Americans applied for unemployment and a week later another 6.6 million people started searching for jobs. Also, many experts on economic and financial matters have warned about the worsening condition of global economic and financial structure. Such as Kristalina Georgieva, managing director of International Monitory Fund (IMF), explained that "a recession at least as bad as during the global financial crisis or worse". Moreover, COVID-19 is harming the global economy because the world has been experiencing the most difficult economic situation since world war-II. When it comes to the human cost of the corona virus pandemic it is immeasurable therefore all countries need to work together with cooperation and coordination to protect the human beings as well as limit the economic damages. For instance, the lockdown has restricted various businesses such as travelling to contain the virus consequently this business is coming to an abrupt halt globally. Submits that the corona virus (COVID-19) pandemic that has swept across the globe in the last few weeks and months has not only had a significant impact on Public Health, society, and the economy as a whole, it has also wreaked havoc to the sporting calendar (**8**).

In a bid to stem the spread of the virus, many professional and amateur leagues across all continents and sports took the unprecedented step to postpone or suspend their seasons on the advice of the Centre of Disease Control and Prevention



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(CDC) to avoid gatherings of large amounts of people. Observes that the COVID-19 pandemic and the measures put in place to contain its diffusion are taking a heavy toll on the tourism sector (9).

Global Responses to Corona virus Pandemic

The U.S government also negotiated with the parliament to approve more than 2 trillion US Dollars' stimulus package to combat the Corona virus pandemic, and to provide some reliefs to citizens and businesses affected by the Corona virus outbreak. Similar actions were also replicated in many other countries including Germany, where 810 billion US dollars were also set aside to contain the effects of the pandemic, yet the virus rapidly spread to the many parts of the world, more especially Africa. On 23 March 2020, Cambridge International Examinations (CIE) released a statement announcing the cancellation of Cambridge IGCSE, Cambridge O Level, Cambridge International AS & A Level, Cambridge AICE Diploma, and Cambridge Pre-U examinations for the May/June 2020 series across all countries. International Baccalaureate exams were also cancelled. Efforts to curtail the spread of COVID-19 through non-medical interventions and preventive measures such as social-distancing and self-isolation have prompted the widespread closure of primary, secondary, and tertiary schooling in over 100 countries(**10,11**).

In Ghana, schools were shutdown to contain the spread of coronavirus disease. The government also released 100 million US dollars to enhance the fight against the pandemic. The country reacted proactively to contain the spread of the Virus. In Madagascar, the country has recorded zero COVID-19 death so far, and the country has claimed a breakthrough in Herbal medicine for COVID-19 treatment. However, the WHO issued warned that such claim has not been scientifically approved and cannot be recommended by the organization as cure for COVID-19. In fact, many unified examinations have to be suspended. Most of Africa's 54 countries are now with confirmed cases and death tolls due to COVID-19, some have closed their borders and banned international flights, local and international trade are declining at a drastic rate. The Democratic Republic of the Congo, Rwanda, South Africa, Tunisia, Nigeria and most of the African countries have declared complete lockdowns (**12-15**).

Nigeria Responses to Corona virus Pandemic

The federal government of Nigeria has ordered a total close down of all schools. The decision was largely applauded, and the National University Commission (NUC), a regulatory body for all universities in Nigeria also gave a follow-up directive to all universities in the country to shut down the academic activities and all students stay at home. The government also suspended social gatherings, and workers below the Grade level 12 were asked to work at home. An Italian who was reported to be the first case of corona virus in Nigeria was successfully treated and discharged according to the government, but new cases emerged thereafter. Thus, the country needs to do more in terms of disaster preparedness and response. Nigeria as a country have a well ensured all schools and personnel experience a compulsory stay at home order so as to prevent further spread of this deadly virus from spreading among students and school personnel since it can easily be contacted through direct contact with the carrier of the virus (**3**,**4**).

IV. RESULT

The findings of this research study, the study established that there is poor level of knowledge and awareness apropos of COVID-19 etiquettes in the study area as a result of inadequate general public awareness campaign, lack of access to print and electronic mediaand this coupled with low level of literacy, negative myths of socio-cultural practice and bad religious belief.



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Figure 1: Distribution of Respondents by Gender



Description: above result is the distribution of respondents by gender, of which 63% of the respondents were males whereas 37% were females. This indicates that the majority of the respondents were males.

Figure 2: Distribution of Respondents by Age



Description: above result is the distribution of respondents by age, of which 53% were respondents between the ages of 18-35, whereas 28% between the ages of 36-45 respondents, as well as 17% of the respondents were between the age of 46-60, and the remaining 2% were respondents between the age of 61 and above respectively.







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Description: above results has shown the distribution of respondents by their educational background, of which 10% were respondents holders of postgraduate degrees, while 38% were respondents with undergraduate degrees, as well as 36% of the respondents were holders of primary/SSCE, whereas the remaining 16% were respondents with non-formal religious education.

Research (RQ)	Questions	Responses	Frequency	Percentage%
RQ1		YES	66	22%
-		NO	234	78%
		Total	300	100%
RQ2		YES	222	74%
		NO	78	26%
		Total	300	100%
RQ3		YES	219	73%
		NO	81	27%
		Total	300	100%
RQ4		YES	153	51%
		NO	147	49%
		Total	300	100%
RQ5		YES	132	44%
		NO	168	56%
		Total	300	100%
RQ6		YES	189	63%
		NO	111	37%
		Total	300	100%
RQ7		YES	228	76%
		NO	72	24%
		Total	300	100%
RQ8		YES	153	51%
		NO	147	49%
		Total	300	100%
RO9		YES	201	67%
-		NO	99	33%
		Total	300	100%
RQ10		YES	114	38%
-		NO	176	62%
		Total	300	100%
RO11		YES	168	56%
- L		NO	132	44%
		Total	300	100%

Table4: Result of Research Questions Responses and Description



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V. DISCUSSION

The main justification of this research study was to assessed the levels of knowledge and awareness of the general public in the study area through the use of research titled "*Impact of Public Health Awareness on Preventing the Widespread of COVID-19 Pandemic*" and the findings of this research study has established that there is poor level of knowledge and awareness of COVID-19 in the study area. The role of the general public's adoption of COVID-19 preventive measure protocols-such as physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemics and their preparedness, especially when there are disparities in the dissemination of information as well as access to the media. Research on knowledge, attitudes and behaviours in the context of a pandemic can not only guide communication and mitigation strategies during the outbreaks, but can also inform future pandemic preparedness planning.

Therefore, public health awareness campaign is critically tailored to alter the negative attitudes of general public, as when poliomyelitis emerged in Nigeria our communities condemning and rejecting polio vaccine on baseless and unreasonable blames, but when series of public health awareness campaigns were raised on importance and value of polio vaccine through involvement of religious and community leaders, now polio became a very rare case in Nigeria.

VI. CONCLUSION

The interest in community's health aspect is considered one of the basic goals of public health awareness which is accomplished through helping community acquire health knowledge, developing proper attitudes in seeking health care, and taking proper decisions that promote health, protect life and prevent individual from catching diseases. Therefore, findings of this research study helps the policymakers to identify the importance of providing public health awareness that increases general public level of knowledge and awareness related to COVID-19 preventive measure protocols such as-physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces and quarantining is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

RECOMMENDATIONS

1. Public health awareness campaign is critically needed in the study area in order to alter the negative attitudes of socio-cultural practice and religious belief of general public-such as rejecting COVID-19 vaccine, use of traditional medicines in treating of COVID-19 which scientifically unproven, disobedient to COVID-19 protocols, etc. This will help the general public to understand the value and importance of preventive measure through adopting physical or social distancing, covering mouth while coughs/sneezes, use of sanitizers, frequent hand washing, use of face masks, keeping unwashed hands away from touching face, staying at home, ventilation of indoor spaces, quarantining and conducting COVID test when any symptoms manifested and the use of COVID-19 vaccine is pivotal in containing the risk of transmissions and spread of COVID-19 pandemic.

2. Government should engage professional health educators and promoters in raising public health awareness campaign and because of recognition, a medical professional uniform (Lab coat) should be use while creating awareness, instead of using non-professional personnel such as Nollywood and Kannywood actors, actresses and comedians while creating awareness. Because people have negative perceptions towards them and any message of awareness brought by them could not be adhered by people as they always act on fictions instead of facts and local languages should be used in raising public health awareness campaign through Television, Newspapers and social media, as well as Billboard and Radio in case of rural remote areas.



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3. Government should involve religious and community leaders in sensitizing general public, as they are very closer to their subjects and they are highly respected by members of their respective communities. Polio case is a typical example in Nigeria, as when poliomyelitis emerged in Nigeria our communities condemning and rejecting polio vaccine on baseless and unreasonable blames, but when religious and community leaders were engaged polio had successfully eradicated in Nigeria.

REFERENCES

(1). World Health Organization (2020b): Corona virus Disease 2019 (COVID-19) situation report-36. Available online: <u>https://www.who.int/docs/defaultsource/coronaviruse/situationreports/</u>20200225sitrep36covid19.pdfsfvrsn2791b 4e 02 (accessed on 26 February 2020).

(2). **Jianfeng B:** On Health Communication and Public Health Behaviours Optimization in China: *Ph.D. Thesis. Wuhan: Wuhan University; School of Journalism and Communication*; 2012.

(3). Aljazeera (2020): Corona virus: All you need to know about symptoms and risks. https://www.aljazeera.com/news/2020/01/coronavirus-symptoms-vaccines-risks200122194509687.html.

(4). Nigeria Centre for Disease Control. (2019): The Nigeria Centre for Disease Control (NCDC) Covid-19 Presidential Task Force (PTF) Corona Virus 19 Cases Situation Report by Covid-19 Presidential Task Force. NCDC Retrieved Website- <u>https://covid19.ncdc.ng</u>.

(5). **Wikipedia.** (2020): Impact of the 2019–20 coronavirus pandemic on education.<u>https://en.wikipedia.org/wiki/Impact_of_the_2019%E2%80%9320_coronavirus_pandemic_on_education.</u>

(6). **New WHO estimates (2020):** *Up to 190 000 people could die of COVID-19 in Africa if not controlled remarks:* <u>https://www.afro.who.int/regional-director/speeches-messages/opening-statement-Covid-19press-conference-7-may-2020.</u>

(7). Irfan, M. (2020): Impact of Covid-19 on Global Economy Structure. https://moderndiplomacy.eu/2020/04/22/impact-of-Covid-19-on-global-economy-structure.

(8). Christina, G. (2020): Coronavirus disease pandemic effect on the sports industry - Statistics & Facts. https://www.statista.com/topics/6098/impact-of-the-coronavirus-on-sport.

(9). **Pamela, C. (2020):** Impact of COVID-19 on tourism in small island developing states.<u>https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2341.</u>

(10). ILO COVID-19 (2020): Impact could cause equivalent of 195 million job losses, says ILO chief. https://news.un.org/en/story/2020/04/1061322.

(11). **Deborah, J. (2020)**: Perception of Undergraduate Students on the Impact of COVID-19 Pandemic on Higher Institutions Development in Federal Capital Territory Abuja, Nigeria, Electronic Research Journal of Social Sciences and Humanities Vol 2: Issue II ISSN: 2706 – 8242 www.eresearchjournal.com Apr - Jun 2020.

(12). Varalakshmi, R. and Arunachalam, K., (2020). COVID-19 Role of faculty members to keep mental activeness of students. Asian Journal of Psychiatry, 51, p.102091.

(13). **New York Times 11th March (2020)**: *COVID-19 virus has become a pandemic*, WHO. <u>https://www.nytimes.com/2020/03/11/health/COVID-19 virus-pandemic-who.html</u>.

(14). Bhatnagar, V. et al., (2020): Descriptive analysis of COVID-19 patients in the context of India. Journal of Interdisciplinary Mathematics, pp.1-16.

(15). Wondwosen, T.; Damtew, T. (2020): COVID-19 Poses a Serious Threat to Higher Education; the Impact of the COVID-19 Crisis. International Network for Higher Education in Africa, 2020.





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