

Knowledge and Practices of Students Face With Covid-19 in the University Of Buea, South West Region A Contribution To Anthropology Of Health In Education

Monju Calasanctius Matsiale (Ph.D)

*Assistant Lecturer, Department of Anthropology,
Faculty of Social and Management Sciences, University of Buea, Cameroon*

ABSTRACT

Cameroon like many other countries over the world are grappling with different options to fight back the Covid-19 pandemic but it is still proving tough. The negative impact on all sectors of the society is alarming. This study aims at examining how knowledge and practices of students concerning Covid-19 affected their on-campus studying strategies. To test the hypothesis that knowledge and practices of students concerning covid-19 affect students' on-campus studying strategies, interviews and surveys were carried out to collect data from some students at the campus of the University of Buea. The findings showed a little effect in the opposite direction than previously hypothesized. Thus suggesting that students' knowledge and practices did not have a significant incidence on their on-campus studying strategies hence academic performance at the period of sequential teaching and learning during Covid-19 pandemic in 2020.

KEY WORDS: Covid-19, knowledge, practices, students, on-campus

Date of Submission: 14-06-2021

Date of Acceptance: 28-06-2021

I. INTRODUCTION

From time immemorial, man has lived and survived diseases that had threaten human extermination. Thanks to history, we can quickly cite some of the diseases that had ragged human lives; the black Plague in 1720, Cholera in 1820 and Spanish Flu in 1920, and in the recent past we have not forgotten about the Severe Acute Respiratory Syndrome (SARS) and Ebola, similar studies have been carried out by Damir H (2019). All the diseases mentioned above claimed millions of lives in Europe, Asia and Africa Benedictow OJ (2005) has also made mention in his studies. A novel coronavirus pneumonia, announced by World Health Organization as COVID- 19 on 11th of February 2020, suddenly hit central China (Chen T et al, 2020). The current Covid-19 spread all over the world making it different from the diseases cited above, which were more localized in particular regions of the world. In fact, the entire world is standstill because of the covid-19 pandemic (Peter B., et al 2020). Starting in Wuhan, China in the last month of 2019, and gradually taking away lives in their numbers in the early month of 2020, scientists, researchers, medical practitioners and even government officials in Beijing, were yet to understand the character of the virus and how and why it became a mass killer (WHO, 2020)

By mid-February, provoked by humanitarian calls, international governments like the United States of America, Italy, Spain, England and Germany began airlifting their citizens from the epi-centre of the diseases at Wuhan, China. (Bitler et al., 2020) This airlifting proved to be one of the greatest instigators through which Covid-19 spread in the entire world, since the operation of airlifting was done at a period when there was little or no deep knowledge about the transmission methods and period of incubation of the disease (Corey et al., 2020). Considering that incubation period of the disease is considered to be 14 days, infected people were bundled out of Wuhan to Europe and the United States of America thereby worsening the spread (Moghadas et al., 2020).

Over a year of its existence, many countries all over the world are grappling with different means to fight back the Covid-19 pandemic but it is still proving tough. China for example implemented a shrewd lockdown strategy after the numbers of deaths were already alarming (Qian et al., 2020). However it was realized that after three months of complete lockdown in China, the number of confirmed cases and deaths started reducing, this was termed 'operation dragon (Calisher et al., 2020). Other countries such as Spain, France, Germany, Italy, India, South Africa, Britain and many others followed the lockdown example of the Chinese in an attempt to stop the spread of the diseases.

African countries also witnessed a surge in the pandemic though the number of deaths is not as alarming as the cases of Europe and the United States of America. Many people believed that Africa could face a high number of confirm cases and deaths from Covid-19 in the days ahead if stricter measures were not taken (Gilbert *et al.*, 2020).

Cameroon like many other countries entered the queue in March 2020 after registering two cases of Covid-19 of patients who travelled from France into the country. Aware of the fatality of Covid-19, the Government set out 13 main measures and other sectoral measures to stop the spread of the diseases (Sullivan *et al.*, 2020). Whatever efforts put in place by the government since then, the number of cases has kept on increasing with more than 35,000 cases already recorded since the outbreak of the pandemic in the country (Coronavirus Statistics, 2021). Despite all these efforts, early assessments of the rate of contaminated persons by the Ministry of Public Health, found that the rate of infection of Covid-19 is growing at a geometric progression, especially with the emergence of the new strand.

The National program to fight against Covid-19 prided itself with the 13 points and other sectoral measures by different ministries and organizations to curb the spread of the diseases. Public places like markets are being disinfected, people were urged to put on face masks in public places, shaking of hands, embracing, public gathering or meetings were banned and educational institutions were temporary closed indefinitely (CameroonWeb, 2020), washing of hands after every 15 minutes, keeping of social distance at least a meter and above, among many others were recommended. Given these conditions, the number of daily contamination could have dropped progressively, but this is not the case.

A Little over four months in shutdown, the state of Cameroon decided to reopen schools and universities in a bid to catch up with the academic year (2020/2021) despite the prevalence of Covid-19 (Béché, 2020). Educational institutions were urged to take necessary measures to implement the government measures and other measures proposed by the various ministries in charge of education.

Educational authorities at the University of Buea for example, expected the students to modify and readjust their behavioral trends in order to enforce the measures put in place to curb the spread of Covid-19 (Azzi-Huck *et al.*). Within the first weeks of schools the measures seemed to be applied to the letter especially as some structures such as running water taps, hand sanitizers, detergents and soaps were placed at the disposal of students at the way-in into various lecture halls. Despite all these measures, students continued to behave and live their student lives as if there was no devastating danger from the Covid-19. Some for example, were observed wearing face masks only at the main entrance where checking was serious. Once on the campus, the face masks were off. Social distance was not or very impossible to respect while the washing of hands was observed to be least in their daily actions once on the campus. At this juncture, one started wondering how students' knowledge and practices vis-à-vis covid-19 affected their on-campus studying activities.

The knowledge and practices of students about Covid-19 is not surprising (Wong LP *et al.*, 2011); it is a common characteristic of humans within and without Cameroon. Generally, people are very resistant to actions that could cause a sudden behavior change (Dent, 2013). Owing to the fact that Covid-19 gave no time to work on modifying people's behavior, resistance to respect the repost measures could be perceptible among students in the University of Buea, as well as among non-student population. Such a behavior reveals that in the face of a similar danger or pandemic, behavior modification is primordial.

In this paper, we hypothesized that students' knowledge and practices about Covid-19 affected their academic performance during the sequential teaching and learning period in 2020. Thus this paper is aimed at examining whether students' knowledge and practices concerning Covid-19 pandemic at aforementioned period affected their on-campus study activities hence academic performance. In order to achieve the aim mentioned above, the following headings were examined: students' knowledge about Covid-19, students' practices towards Covid-19 and the effect of the knowledge and practices of Covid-19 on students' academic performance.

II. METHODOLOGY

An analytical model is used for this paper. Qualitative as well as quantitative methods are used in this study. Thus techniques such as rapid survey and unstructured interviews were used to collect data on the students' knowledge and practices vis-à-vis their studies during the sequential period of studies imposed by the government during the Covid-19 pandemic. Observation was also employed as a technique to collect data on certain aspects such as the availability of wash- hand basins and hand sanitizers, to name but a few. These techniques were used to rapidly collect data for this paper in order to respect the measures put in place to stop the spread of the novel Covid-19. Qualitative data were subjected to content analysis while data collected through survey were analyzed by using Statistical Package for the Social Sciences (SPSS). The data were further subjected to descriptive statistics, such as frequency counts, tables and percentages.

III. RESULTS

The results of this work is presented with respect to the following; the identification of the students, students' knowledge about .covid-19, students' practices in relation to covid-19 and the effect of students' knowledge and practices concerning covid-19 on their academic performance.

Identification of the students

The respondents we worked with to gather data for this work were male and female, who ranged between 20 to 30 years as shown on the table below.

Table 1: Students by age and by sex

		Age range	Total
		20-30	
Sex of Respondents	Male	24	24
	Female	26	26
Total		50	50

Source: Fieldwork December 2020

Data on the table show that male students were 24 in number while female respondents were 26. The ages range between 20 to 30 years. A combination of both sexes on equal basis was to cover a comprehensive insight on the target population under study and the age range shows that a majority of undergraduate students fall within the age range of 20 and 30. Even though earlier studies, related to covid-19 pandemic attributed a minimal risk rate to those who fall within this age group, it was still important to take precautions and respect the measures that were put in place to fight against Covid-19.

STUDENTS' KNOWLEDGE ABOUT COVID-19

In order to assess students' knowledge concerning Covid-19, the following headings were used to obtain data that was later analyzed. The headings are aligned above the tables.

Table 2: Students' Knowledge of the existence of Covid-19

Are you aware that Covid-19 exists?	Frequency	Percent
Yes	47	94.0
No	03	6.0
TOTAL	50	100.0

Source: Fieldwork December 2020

According to the table above, 47 students making a percentage of 94.0 percent accepted that they have a full knowledge about the existence of Covid-19. While 03 making a percentage of 6.0 percent said they did not have a full knowledge about the existence of Covid-19. The statistics show that a majority of students had a significant knowledge about Covid-19 (Zhong B-L et al.). It therefore means that since most students knew about the pandemic, the barriers to fight against the diseases could be respected, thereby minimizing the rate of spreading the disease on campus. In this case, a free Covid-19 campus will enable students to concentrate and improve on their academic outcome.

Table 3: Knowledge of the symptoms of Covid-19

Symptoms	Frequency	Percent
Fever	7	14.0
Dry cough	3	6.0
Tiredness	5	10.0
Aches and pains	8	16.0
Sore throat	5	10.0
Headache	6	12.0
Loss of taste or smell	2	4.0
Difficulty breathing	7	14.0
Chest pain or pressure on chest	7	14.0
Total	50	100.0

Source: Fieldwork December 2020

Concerning knowledge about the symptoms of covid-19, a list of symptoms was presented to the students to freely tick those they knew best. According to the statistics on the table, aches and pains were ticked by 08 students, showing the highest percentage of 16%. Fever, difficulty in breathing and chest pain or pressures on chest was ticked by 07 students, showing the second highest percentage of 14% respectively. Headache was ticked by 06 students, with 12.0%, thus occupying the third place. While tiredness and sore throat symptoms were ticked by 05 students, each with 10.0% respectively. Dry cough was ticked by 03 students with a 03%. The last but the not least is loss of taste or smell which was ticked by only 02 students thus 4.0%. (Li et al., 2020) Thus it can be said here that students are aware of how covid-19 pandemic manifests once in the body

Table 4: Knowledge about Covid-19 transmission

How is Covid-19 transmitted?	Frequency	Percent
Close contact with infected person;	4	8.0
Taking infected hands to nostrils and mouth;	1	2.0
Sneezing without protecting;	4	8.0
All of the above	41	82.0
Total	50	100.0

Source: Fieldwork December 2020

On the above table four options were presented to students to assess their knowledge about Covid-19. Concerning the first option which stated that Covid-19 is transmitted through close contact with infected persons, 04 students making up 8.0% indicated that it was one of the ways through which the pandemic spread. The option which stated that Covid-19 was transmitted through taking infected hands to nostrils and mouth, only 01 student indicated that it is one of the possible ways through which the disease is transmitted, thus making 2.0%. Regarding the third option which stated that sneezing without protecting is another way of transmitting Covid-19, 04 students indicated that it was one of the ways thus making up 8.0%. While a majority of the students (40) making up 82.0% indicated that all of the above mentioned options were possible means through which Covid-19 is transmitted.

Table 5: Knowledge about how Covid-19 is prevented

How is Covid-19 prevented	Frequency	Percent
Wearing face mask;	2	4.0
Keeping Social distance;	00	0.0
Washing hands more often;	00	0.0
All of the above	48	96.0
Total	50	100.0

Source: Fieldwork December 2020

With regard to knowledge about how Covid-19 is prevented, we presented the following items to the students to assess their knowledge on some of the methods on how to prevent Covid-19. The items presented were: Wearing face mask, keeping social distance, washing hands more often and all of the above. Concerning the wearing of face mask, only 02 students said face mask can be used to prevent the pandemic. While the second and the third items on the list were not ticked. Instead, a majority of the students, 48 (96%) said all the first three items on the list could be employed to prevent Covid-19.

Table 6: Knowledge about the treatment of Covid-19

How is Covid-19 treated?	Frequency	Percent
By using traditional medicines;	7	14.0
By taking chloroquine;	8	16.0
No available treatment	35	70.0
Total	50	100.0

Source: Fieldwork December 2020

In order to assess the students' knowledge about treatment of Covid-19, three items were presented to the students to choose among. The items as indicated on the table above were: Using traditional concoctions, taking chloroquine and no available treatment. Concerning the first item, 07(14.0%) students thought that using traditional medicines could treat Covid-19, While 08(16.0%) thought that taking chloroquine could treat the pandemic. A majority of the students, 35(70.0%) said there was no available treatment.

STUDENTS' PRACTICES TO FIGHT COVID-19

In order to assess students' practices to fight Covid-19, the following headings were used to obtain data that was later analyzed. The headings are aligned above each table.

Table 7: Wearing face mask on campus to prevent Covid-19

Do you always wear face mask on Campus	Frequency	Percent
Yes	26	52.0
No	24	48.0
Total	50	100.0

Source: Fieldwork December 2020

The table above reveals the responses to the question as to whether students always wore face masks on campus in order to prevent Covid-19. Out of 50 students that were administered questionnaires, 26 of them making up 52.0% accepted that they always wore face masks on campus. While 24 students making up a 48.0% deny that they were always wearing face masks on campus.

Table 8: Washing hands to prevent Covid-19

Do you always wash hands as recommended	Frequency	Percent
Yes	30	60.0
No	20	40.0
Total	50	100.0

Source: Fieldwork December 2020

Again, we also asked the question to find out whether students always wash their hands as recommended by the government. The results on the table above revealed that out of 50 students, 30 students making up 60.0% accepted that they always wash their hands as recommended. While 20 of the students, making up 40.0% said they do not wash their hands as recommended.

Table 9: The use of hand sanitizers

Do you use always use hand sanitizers in case there is no water for hand washing?	Frequency	Percent
Yes	24	48.0
No	26	52.0
Total	50	100.0

Source: Fieldwork December 2020

The table above shows the statistics related to whether students always use hand sanitizers in case there is no water to wash hands. The data revealed that 24 of the students out of 50, making up 48.0% said they always use hand sanitizer. While 26 of them out of 50, making up 52.0% said they do not always use hand sanitizers.

Table 10: Maintenance of social distance on campus

Do you keep social distance when on Campus?	Frequency	Percent
Yes	18	36.0
No	32	64.0
Total	50	100.0

Source: Fieldwork December 2020

The information on the table above is related to whether students keep social distance on campus. According to the data, 18 students, making up 36.0% accepted that they keep social distance on campus. While 32 students, with a representation of 64.0% said they do not keep social distance on campus.

EFFECT OF STUDENTS' KNOWLEDGE AND PRACTICES CONCERNING COVID-19 ON STUDENTS' ACADEMIC PERFORMANCE

In order to assess students' knowledge and practices of Covid-19, on students' academic performances, the following headings were used to obtain data that was later analyzed. The headings are aligned above the tables.

Table 11: Assessing the impact of Covid-19 on students' academic performance

Do you think covid-19 has any effect on your education	Frequency	Percent
Yes	36	72.0
No	14	28.0
Total	50	100.0

Source: Fieldwork December 2020

The table above shows data concerning the impact of Covid-19 on students' performance. The data collected showed that 36 students out of 50 who responded to our questionnaire acknowledged the fact that Covid-19 had affected their academic performance, thus making up a percentage of 72.0%. While 14 students, out of 50 were of the opinion that their academic performance was not affected by Covid-19, thus making up 28.0%.

Table 12: Prolong daily studies on Campus

During the Covid-19 Pandemic did you stay and study everyday on Campus	Frequency	Percent
Yes	14	28.0
No	36	72.0
Total	50	100.0

Source: Fieldwork December 2020

The data on the table above show whether during the crashed study period of Covid-19, students prolonged their stay in the campus to study. The data obtained, revealed that out of the 50 students who took part in filling the questionnaires, 14 of them accepted that they stayed and studied everyday in the campus, making up 28.0%. While 36 of the students said they did not stay back on the campus to read, making up 72.0% of the students who filled out the questionnaire.

Table 13: Academic Performance of students during the Covid-19 period

How were your last semester (2019/2020) results during the Covid-19 period?	Frequency	Percent
Improved	22	44.0
Not improved	17	34.0
Just normal	11	22.0
Total	50	100.0

The data on the above table seek to find out the performance of students in the last semester of 2019/2020 during the sequential period of learning caused by Covid-19. On the table, the data shows that 22 out of 50 students said their academic performance during the semester improved, making up 44.0% of the students who were administered questionnaires. While 17 out of 50 students acknowledged the fact that their academic performance did not improve. Making up 34% of students who were administered questionnaires. The final group that made up 11 out of 50 students said their results were stable. Thus neither improved nor did not improve.

V. DISCUSSIONS

Like many other students in Cameroon and beyond, the students of the University of Buea have a comprehensive knowledge about Covid-19 (Zegarra-Valdivia, 2020). Significantly, knowledge about the pandemic placed them on a better position to take actions to protect themselves from being contaminated by it (Di Giuseppe, 2008). Knowledge is a powerful tool that plays a significant impact on the lives of those who poses it (Abbag et al., 2020). The students of the University of Buea were not left out because knowledge concerning the emerging pandemic helped them to participate in the sequential teaching recommended by the government without coming in contact with covid-19 pandemic.

Whatever the rate attributed to the symptoms above, what is clear is that a significant number of students knew at least one symptom of Covid-19. The knowledge about symptom could help a suspected sick student to seek for help earlier (Jindal et al., 2020). Seeking early help will not only preserve his/her life but the lives of friends and family members around him or her, since the pandemic is highly contagious.

A majority of students have a significant knowledge of the different modes of Covid-19 transmission. Significant knowledge about transmission is important to students because it helps them to protect themselves from contracting the diseases (Zhong B-L et al., 2020). If students respect the containment measures, it is likely that they will stay safe hence giving them the opportunity to continue studies without interruption.

A significant number of students are very knowledgeable on how to prevent Covid-19. Generally, it is often said that 'prevention is better than cure', thus the knowledge about prevention can be interpreted that students are more likely to use the preventive measures prescribed by the government in order to stay safe from Covid-19 (Ilesanmi O et al., 2016). As a result, staying safe and healthy, will enable them concentrate on studies hence improve on their academic performance.

The fact that covid-19 has no sustainable treatment, provokes a wave of fright among the University student population in Buea (Shereen MA, 2020). This explains why a significant number said there was no treatment for Covid-19. Therefore if there is no treatment as it is upheld, it goes a long way to foster their caution concerning the pandemic, since once contracted, one is doomed to die (Suganthan N., 2019). This knowledge went a long way to ignite the students to respect the Covid-19 barriers roles in the campus thereby keeping them safe to concentrate on their studies.

Thanks to the knowledge students have about Covid-19; a majority of them respect one of the barriers to Covid-19 which is to put on face masks on campus (Wilder-Smith et al., 2020). Putting on face masks is not only necessary but important because experts indicated that it was one of the surest ways to prevent the virus from entering the nose and mouth. In order to put a stop to the pandemic on campus and concentrate on studies, many students opted for the culture of face mask.

Another practice that is not only necessary but important is the frequent washing of hands. In fact modern wash-hand basins and liquid soap have been installed near all lecture halls at the University of Buea. This has enhanced the practice of washing hands frequently by a majority of students on Campus. Experts uphold that frequent washing of hands with soap will limit the chances of carrying the virus on the hands and that might eventually end in the mouth or nose which are the gateways of the virus into the body (Wilder-Smith et al., 2020). Thanks to the presence of the wash-hand basins, most students have checked the spread of the virus on the campus, thereby keeping them healthy to concentrate on studies in order to improve on their academic performance.

The use of hand sanitizers (Wang FS et al, 2020) is useful especially where one cannot frequently find water to wash the hands. Sanitizing hands is also one of the recommendations of Covid-19 health experts as a means to curb the spread of the pandemic. Hand sanitizers kill the virus on the hands and keep the hands safe (Deblina Roy et al. 2020). Concerning this practice, a lesser percentage of students indicated that they always move along with it. The insignificant percentage of students using hand sanitizers on campus can be explained in two folds. Firstly, wash-hand basins and liquid soaps are within reach to many students to wash hands on campus; secondly, hand sanitizers are being sold at exorbitant prices especially within this period of Covid-19 pandemic and a significant number of students might have been unable to afford it. Despite the fact that many did not move along with hand sanitizers, did not stop them to respect the other Covid-19 curbing mechanisms, which helped kept them healthy to concentrate on their studies.

Keeping social distance (Wang FS et al, 2020) on campus was not quite evident, even within the period of sequential teaching and learning, the University campus was always characterized with the hustle and bustle that goes with it. The situation in the classrooms was not better either, it was difficult to keep social distance, and owing to the fact that certain courses were very populated. Most lecture halls on their part are small to accommodate the many students for a single course let alone an entire discipline. Thus keeping social distance which constituted one of the recommended barriers to fight against Covid-19 was not respected on campus at the University of Buea. Considering that students did not keep up the social distance rules, one could wonder how the virus did not spread among students.

The outburst of the pandemic meant little to people who lived out of China where the Covid-19 started (Riou et al., 2020). As time went by the diseases gradually extended its tentacles throughout the world. As days went by, new revelations about the nature of the virus and how it was being spread created panic and many countries started locking down. Cameroon registered its first case in March 2020 and followed suit with the lockdown. Against this backdrop of general lockdown, educational institutions were not spared (CameroonWeb, 2020). In fact educational institutions were closed for over two months in a bid to curb the spread of the Covid-19 virus. It was only on June 1st 2020 that the government decided to reopen schools and universities for a sequential teaching and learning process.

The closing of educational institutions opened a window for most students to relax and forget about studying. At the resumption of classes many had to face a new reality, which was an intensive and crash sequential teaching and learning process which was meant to catch up the lost time. In the face of this situation, it was very certain that Covid-19 could play a negative impact on students' academic performance. Keeping away from school within the year for so long due to the outbreak of Covid-19 therefore was not favorable to the students and their studies.

VI. CONCLUSION

To conclude, the novel corona virus that started in 2019 is a new disease that has caused great impacts to the people's way of life in an extraordinary way. This paper has examined the relationship that exists between the knowledge and practices of students concerning Covid-19, showing how the knowledge and practices has an impact on study way of life and academic performance. The results of this research showed a little effect in the opposite direction than previously hypothesized, thus suggesting that students' knowledge and practices concerning covid-19 did not have a significant incidence on the performance of students during the period of sequential teaching amid Covid-19 pandemic.

REFERENCES

- [1]. Benedictow OJ (2005). The Black Death: the greatest catastrophe ever. In *Hist Today*. pp42–49.
- [2]. WHO. (2020) Statement Regarding Cluster of Pneumonia Cases in Wuhan, China; World Health Organization: Geneva, Switzerland, Available online:<https://www.who.int/china/news/detail/09-01-2020-who-statementregarding-cluster-of-pneumonia-cases-in-wuhan-china> (accessed on 20 December 2020).
- [3]. Gilbert M, Pullano G, Pinotti F, Valdano E, Poletto C, Boelle PY, et al. (2020) Preparedness and vulnerability of African countries against importations of COVID-19: a modeling study. *Lancet*. pp871–7.
- [4]. Calisher C, Carroll D, Colwell R, Corley RB, Daszak P, Drosten C, et al. (2020) Statement in support of the scientists, public health professionals, and medical professionals of China combating COVID-19. *Lancet*. pp42–3.
- [5]. Sullivan AD, Strickland CJ, Howard KM. (2020) Public health emergency preparedness practices and the management of frontline communicable disease response. In *J Public Health Management Practice*; pp180–3.
- [6]. Béché, E. (2020) Cameroonian responses to COVID-19 in the education sector: Exposing an inadequate education system. *Int Rev Educ* pp755–775 <https://doi.org/10.1007/s11159-020-09870-x>
- [7]. CameroonWeb. (2020). Coronavirus: The University of Yaoundé 1 suspends its courses [Coronavirus: University of Yaoundé 1 suspends its courses]. *CameroonWeb* , 16 March [online news item]. Retrieved 7 December 2020 from <https://www.camerounweb.com/CameroonHomePage/NewsArchive/Coronavirus-1-universit-de-Yaound-1-suspend-ses-cours-498841> .
- [8]. Coronavirus Statistics. (2021). *Coronavirus (COVID-19) statistics in Cameroon: Evolution of the number of cases and contaminations day by day* (Coronavirus statistics online) [Coronavirus (COVID-19) statistics in Cameroon: Evolution of the number of cases and contaminations day by day (online Coronavirus statistics)]. Paris: Eficiens. Retrieved 03 March 2021 from <https://www.coronavirus-statistiques.com/stats-pays/coronavirus-nombre-de-cas-au-cameroun/>.
- [9]. Azzi-Huck, K., & Shmis, T. (2020). Managing the impact of COVID-19 on education systems around the world: How countries are preparing, coping, and planning for recovery. *World Bank Blogs*, March 03 [blog post]. Retrieved 3 March 2021 from <https://blogs.worldbank.org/education/managing-impact-covid-19-education-systems-around-world-how-countries-are-preparing> .
- [10]. Abbag HF, El-Mekki AA, Al Bshabshe AAAA, Mahfouz AA, Al-Dosry AA, Mirdad RT,
- [11]. et al. (2018) Knowledge and attitude towards the Middle East respiratory syndrome coronavirus among healthcare personnel in the southern region of Saudi Arabia. In *Journal of Infection and Public Health*. pp720-2.
- [12]. WHO. (2020) Coronavirus. [Internet]. Available from: https://www.who.int/health-topics/coronavirus#tab=tab_1
- [13]. Di Giuseppe G, Abbate R, Albano L, Marinelli P, Angelillo IF (2008) A survey of knowledge, attitudes and practices towards avian influenza in an adult population of Italy. *BMC Infectious Diseases*.
- [14]. Wong LP, Sam IC (2011) Knowledge and attitudes in regard to pandemic influenza A (H1N1) in a multiethnic community of Malaysia. *International Journal of Behavioral Medicine*.pp112-21.

- [15]. Zhong B-L, Luo W, Li H-M, Zhang Q-Q, Liu X-G, Li W-T, et al. (2020) Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. *International Journal of Biological Sciences*. pp1745-52.
- [16]. Chen T, Liu T, Liu L, Fang P. (2020) Enlightenment from the governance experiences of public health emergency of international concern. *The Chinese Health Service Management*. pp324-8
- [17]. Charulata Jindal, Sandeep Kumar, Sunil Sharma, Yuk Ming Choi and Jimmy T. Efirid (2020) The Prevention and Management of COVID-19: Seeking a Practical and Timely Solution. In *International Journal of Environmental Research and Public Health (IJERPH)*. doi:10.3390/ijerph17113986
- [18]. Li, H.; Liu, S.M.; Yu, X.H.; Tang, S.L.; Tang, C.K. (2019) Coronavirus disease (COVID-19): Current status and future perspectives. *Int. J. Antimicrob. Agents* **2020**, *55*, 105951.
- [19]. Ilesanmi O, Alele FO. (2016) Knowledge, Attitude and Perception of Ebola Virus Disease among Secondary School Students in Ondo State, Nigeria, October, 2014. *PLoS Currents*.
- [20]. Suganthan N. (2019) Covid-19. *Jaffna Medical Journal*. pp3–8. DOI: <http://doi.org/10.4038/jmj.v31i2.72>
- [21]. Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. (2020) COVID-19 infection: origin, transmission, and characteristics of human coronaviruses. *J Adv Res*.
- [22]. Wilder-Smith A, Freedman DO. (2020) Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *J Travel Med*. <https://doi.org/10.1093/jtm/taaa020>.
- [23]. Wang FS, Zhang C. (2020) what to do next to control the 2019-nCoV epidemic? *Lancet*. p391-3.
- [24]. Deblina Roy, Sarvodaya Tripathy, Sujita Kumar Kar, Nivedita Sharma, Sudhir Kumar Verma VKP. (2020) Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Journal of the Neurological Sciences*.
- [25]. Riou, J.; Althaus, C.L.(2020) Pattern of early human-to-human transmission of Wuhan 2019-nCoV. *bioRxiv*