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Examining the Beliefs and Perceptions Associated to the COVID-19 Virus in the Wouri Division, Littoral Region of Cameroon

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Abstract

COVID-19 virus has become a global threat to the human population and society. The virus which originated from China in December, 2019 has swept across continents in the world. Cameroon has been one of the countries with a high infectious rate in the recent period having a majority of the infectious cases in the Littoral region. Lack of awareness play a major role in the rise of COVID-19 cases. This paper examined the perceptions of the existence and spread of the COVID-19 virus in Wouri Division, Littoral Region of Cameroon. The study involved a qualitative survey designed by online questionnaires which were forwarded to the inhabitants of Wouri Division through e-mails and 'WhatsApp'. The survey included the perception of the origin and existence of the COVID-19 virus, its mode of disease transmission, preventive and control measures. A total of 573 respondents were obtained (317 females and 256 males). From the results, although a greater proportion of the respondents showed knowledge towards the COVID- 19 virus existence, transmission and prevention that could lead to a reduction in the spread of the disease, our findings suggested that there's more need for public sensitisation of the virus especially its method of transmission, control and prevention.

Keywords: Perceptions, COVID-19, Control, Wouri Division

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1.0 Introduction

COVID-19 virus is a zoonotic virus with bats as a major reservoir (WHO, 2020). The virus was first identified in China based on sequencing of viral genome from samples collected from clinical patients (WHO, 2020). Preliminary cases were believed to have been transmitted through Bats. The outbreak of the COVID-19 was classified as pandemic by the World Health Organisation in March 11 2020 (CDC, 2020). In the past weeks, the fast spread of COVID-19 throughout continents brought about a global concern. Closely monitored statistics by the WHO (2020) showed that as of the 6th of April 2020, the global cases of infection stood at 1,215,667 while the number of deaths recorded was 65,655 with the USA leading with 311,637 of infectious cases. Also, concerning this pandemic disease, Italy is currently leading in the number of death cases, with about 15,362 deaths closely followed by Spain having a total of 12,418 deaths recorded (Worldometers, 2020). The infectious and death rates have seen an increase over the recent period. CDC report show that the virus is transmitted from person to person through close contact with each other, via infectious droplets or in contact with surfaces containing the virus. Currently, no vaccine has yet been developed to prevent the spread of this disease. Also, non-pharmaceutical methods have been the major preventive measure implemented by WHO to be strictly adhered in countries as well as local communities. Some of these strategies include; isolation or quarantine of infected or suspected cases, lockdown of countries borders, travel bans, closure of academic structures, restriction of gatherings and drinking spots, improvement of personal hygiene and keeping a distance of at least 1m away from the next person.

Unfortunately, the acceptance and strict adherence to these measures highly depends on the perception of the disease by the population concerned. Some studies have shown that there exist a strong correlation between the understanding or perception of a disease and a ready compliance to health recommendations (Gochman *et al.*, 1997).

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Records show that Cameroon ranks 2nd in the numbers of COVID-19 virus infectious cases recorded in Africa with a total number of 650 infections, 9 deaths and 7 recoveries as of 6th of April 2020 (Worldometers, 2020). Large scale sampling and massive testing of the population has been the major method in identifying infected cases in Cameroon (Minsante, 2020). Reports from the Cameroon's Ministry of Public Health shows a daily rise in the number of new cases recorded (Minsante, 2020). This increase can be attributed to non-respect of preventive measures implemented by WHO and other health organisations in controlling the spread. Various beliefs and perceptions have been regarded by the population of Cameroon as to the existence and spread of the virus. Such beliefs contribute negatively to the control of the spread of the virus in Cameroon as there are faulty and superstitious. These misconceptions have led to a portion of the population disregarding the precautions stipulated by the health sector as regards to this pandemic. As of date, no exploratory study has been carried out in Cameroon as regards to this threat. The aim of this study was therefore to examine the various beliefs and perception of the population in the Littoral region of Cameroon regarding the existence and spread of the COVID-19 virus. The assessment of these beliefs will help sensitise the population on corrective and preventive measures which will go a long way to reduce the incidence of the disease.

2.0 Materials and Methods

2.1The Study Area

Cameroon is a country located in the central part of Africa (Figure 1A). The country is comprised of ten regions. The Littoral region of Cameroon (Figure 1B) is the largest in size and the most populated of the ten regions that make up Cameroon with a population of about 2, 768 436 inhabitants (INS, 2017). The littoral region is regarded as the economic heart of Cameroon as it is Cameroon's economic capital (Engwali *et al.*, 2017). The region is situated

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between latitude 4.25° north and longitude 9.31° east and occupies a land surface area of 20,248 km^2 (Arthur, 2018). The climate of this region is warm and humid (Tachang *et al.*, 2012). The littoral region is composed of four Divisions including the Wouri Division (Figure 1 C). The Wouri Division had an estimated population of about 300,000 inhabitants in the year 2010 (Arthur, 2018).

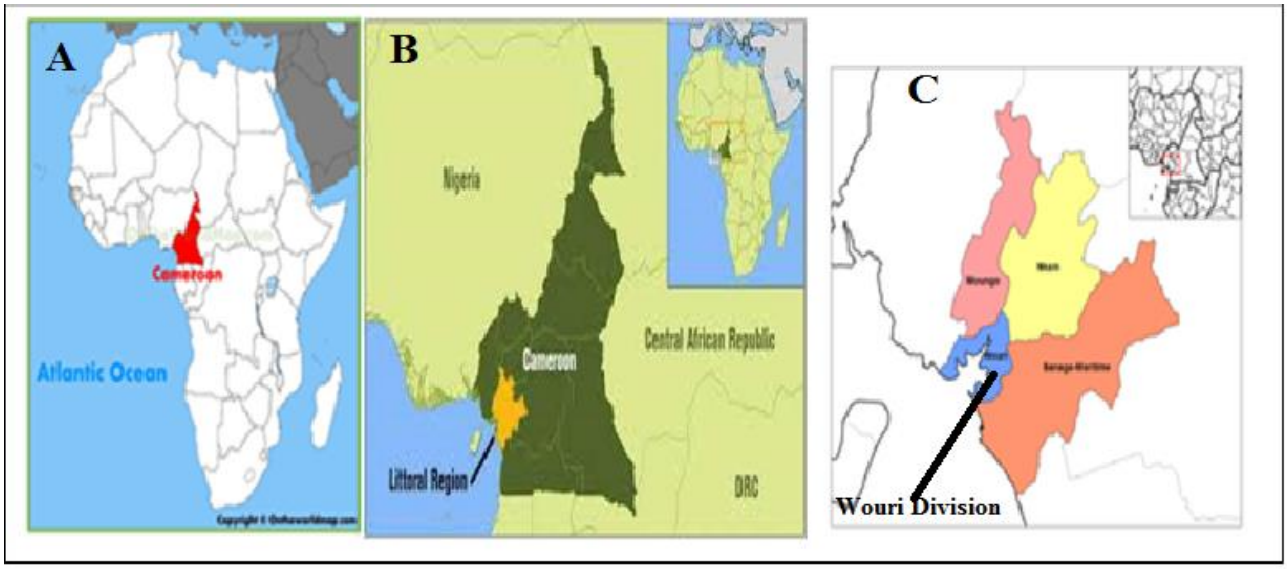

Figure 1: Location of Study Area

(A) Location of Cameroon in Africa (B) Location of the Littoral Region in Cameroon

(C) Location of Wouri Division

(Source: commons.wikimedia.org/wiki/Atlas of Cameroon , en.wikipedia.org/wiki/Littoral Region (Cameroon))

2.2 Study design and Population

The research design used involved a qualitative survey with the use of electronic structured questionnaires carried out between April 1 and 5, 2020. The study included participants of both genders and age groups, who resided in that region and who could easily assess the online questionnaires and was willing to take part in the study. All persons who accepted to take part in the study completed the questionnaire. The participants were giving assurance on the

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confidentiality of their personal identification or IP addresses. The total number of respondents in the survey was 573 which included 317 females and 256 males.

The construction or design of the questionnaire was based on the literature that existed for the COVID-19 disease. The questions were structured in a multiple choice format with responses each of scale 0 - 1 (No or Yes). The questionnaire involving 20 questions was stratified into four sections. The first set (1 to 4) involved personal details of the respondent such as age, gender, level of education, religion. This was closely followed by questions (5 to 8) involving perception or beliefs of the origin and existence of the disease. The third set of questions (9 to 13) involved identifying the disease transmission routes, transmission methods, and risk perception of disease acquisition. The last set of questions (14 to 20) were geared towards disease control and prevention.

Similar responses giving by participants across each corresponding question were grouped and added up which was later used to produce a general scale linked to the various perceptions.

Results were represented using tables and bar charts.

3.0 Results and Discussion

A greater proportion of individuals who took part in the study were made up of the active age group ≤ 40. Table 1 presents the age and gender of the subjects including the number of participants involved in each of the groups.

Table 1: Number of participants according to age and gender

Gender	Age					
	<20	21-30	31-40	41-50	51-60	>60
Female	86	115	54	36	17	9

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Male	62	87	48	31	15	13

3.1 Perception of origin and existence of the COVID-19 virus

Based on the results obtained, it was observed that a higher portion of the respondents had awareness on the existence of the virus. Majority of the respondents understood that the origin of the virus was from animals > 70 % (444). Others believed the virus was as a result of God's punishment to humans' >10% (106) or man-made >20% (178) (figure 3.1). Contrary to this, some respondents still had doubts about the existence of the virus > 10% (74). This level of ignorance could create a problem as this set of individuals could go about spreading the disease unknowingly.

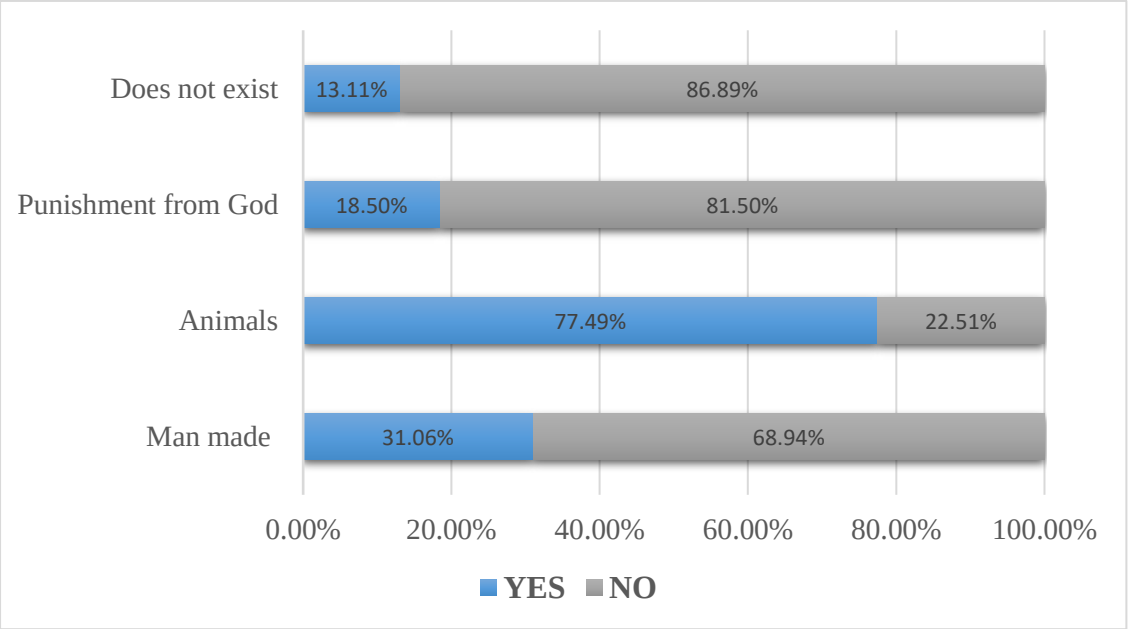

Figure 3.1: Perception of origin and existence of the COVID-19 virus in the Wouri Division of Cameroon (Percentage of respondents)

3.2 Perception of the mode and mechanism of COVID-19 virus transmission

The highest proportion of the respondents (> 80 %) understood the mode of transmission of the virus as being through person to person contact either by handshake or through contact with infectious droplets such as saliva or sputum (Figure 3.2). From this it shows that the majority

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of the population considered the virus to exist only on human surfaces. This however showed a limited perception as regards to the mode of transmission of this virus. This belief is not appropriate but rather misleading considering that research on viruses show that they can survive outside the human body for a length of time on various types of surfaces or objects found within domestic or public places (Abad *et al.*, 1994). Less than (< 20 %) of the respondents believed that the diseases was sexually transmissible and could also be spread from the consumption of contaminated food and water.

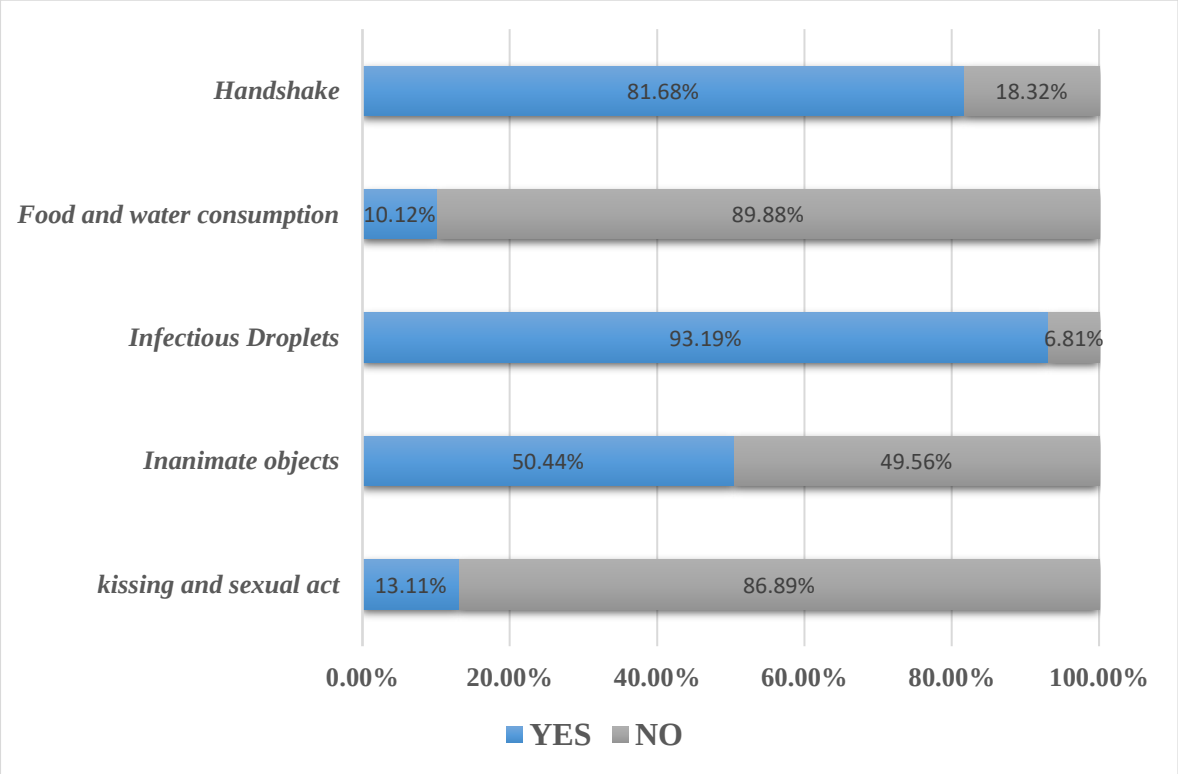

Figure 3.2: Perception of the mode and mechanism of COVID-19 virus transmission in the Wouri Division of Cameroon (Percentage of respondents)

3.3 Perception of effective control and preventive measures of the COVID -19 virus

Non-pharmaceutical measures including strategies implemented by the WHO were highly understood by the population in the disease prevention. The results (Figure 3.3) showed that hygienic practices which included usage of hand sanitizers, avoidance of handshake and wearing or usage of mask were more understood and practiced in this area (> 80%) than the

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practice of social exclusion measures such as staying at home and complete exclusion from gatherings (< 80%) which are also considered as effective preventive measures as stipulated by the WHO and CDC guidelines (WHO, 2020).

It was observed that social exclusion in this region to an extent proved difficult especially in the market places. Majority of the population testified they couldn't stay away from markets and shops as most of them used the expression 'hunger kills more than the virus'. This possibly is one of the major challenges to the social exclusion strategy as prescribed by the health officials in the control of the spread of the virus. This could probably be due to the fact that most Africans survive directly on their market sales.

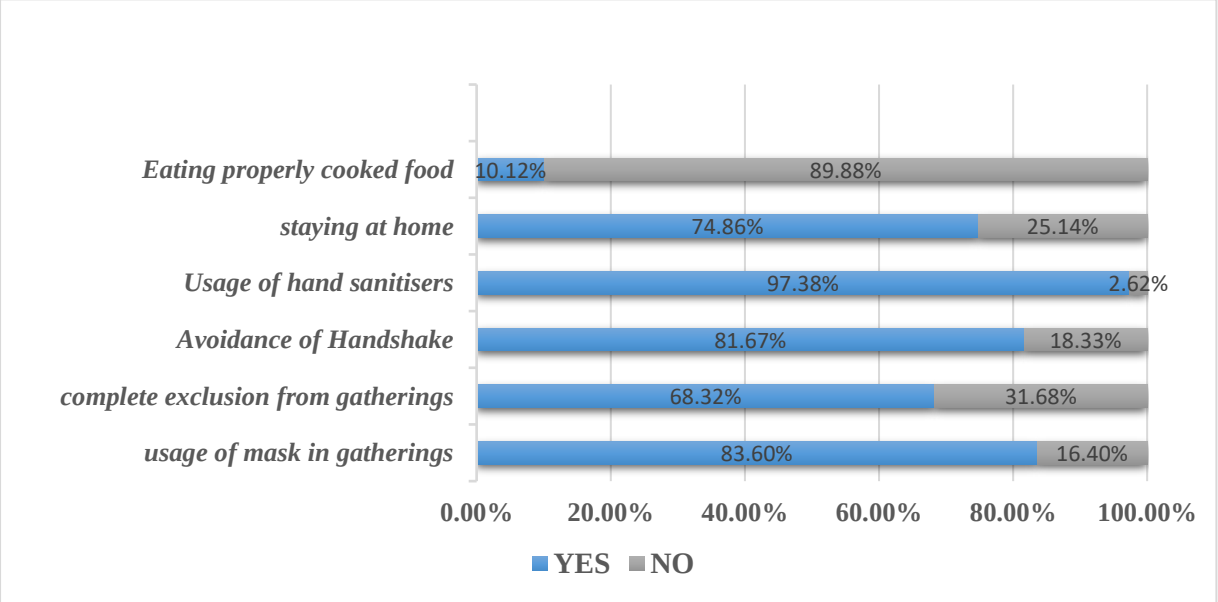

Figure 3.3: Perception of effective control and preventive measures of the COVID -19 virus in the Wouri Division of Cameroon (Percentage of respondents)

4.0 LIMITATIONS

One possible limitation of this study was that of voluntary participation which could give rise to responder bias as such it was not really possible to obtain the effective rate of response. Since questions were administered through online modes, individuals living in areas lacking network facilities could not participate in the survey. Lack of technological devices such as computers and telephones made the response rate low.

5.0 CONCLUSION

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The results have a lot of significance to health experts. Firstly, it highlights that the use of non-pharmaceutical strategies such as complete public exclusion and improvement of sanitation and hygiene is most effective to prevent the contraction of the disease as vaccines are not yet available. Nonetheless, our findings also highlight the need for more sensitisation of the public concerning the existence of the virus, mechanism of transmission and effective control or preventive methods as a portion of the population still have beliefs which are contrary and inadequate. These beliefs and perception can have an adverse effect to the population on the spread of the virus and can also contribute greatly to a challenge in controlling this outbreak.

6.0 USED ABBREVIATIONS

WHO; World Health Organisation, CDC; Center for Disease Control

7.0 CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article and there have been no significant financial support from anywhere that might have influenced its outcome.

8.0 ACKNOWLEDGEMENTS

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