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**THE INFLUENCE OF DISINFORMATION AND MISINFORMATION ON  
COVID-19 VACCINE HESITANCY.  
CASE STUDY: THE UNIVERSITY OF BAMENDA,  
NORTH WEST REGION CAMEROON**

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**Abstract**

Drawn from closed and open-ended questionnaires answered by students, lecturers and auxillary staffs of the University of Bamenda, North West Region of Cameroon, this study indicates that disinformation influences individuals' decision not to take the COVID-19 vaccines at The University of Bamenda. This decision is also influenced by other factors such as the lack of trust in the country's Ministry of Public Health and the feeling of fear of the unknown.

**Keywords: Disinformation, Misinformation, COVID-19 vaccines hesitancy.**

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## 1.1 Introduction

COVID-19, an acute respiratory illness caused by the SARS-CoV-2 virus, was declared a pandemic on March 11, 2020 (1). The pandemic has caused a significant burden with over 770,437,327 confirmed cases and an estimated 6,956,900 deaths worldwide as of September 2023. So far, Africa has recorded 9,547,278 confirmed COVID-19 cases and 175,425 deaths cumulatively (1). Cameroon has registered 125,090 confirmed cases and 1,974 deaths as of September 2023 (2). Many countries including Cameroon have designed measures to curb the spread of the disease including physical distancing, washing hands, and wearing face masks but the most important is getting vaccinated (3).

Evidence shows that while no vaccine is 100% effective, vaccines work at high rates when accepted and used broadly in communities (4). Therefore, to effectively eradicate COVID-19 in Cameroon, COVID-19 vaccines must be relatively accepted in communities (5).

Cameroon currently has four COVID-19 vaccines: Astra Zeneca, Johnson, and Johnson, Pfizer, and Sinopharm. These vaccines are free of charge and available for those 18 years and above. Pregnant women and lactating mothers are eligible for the Pfizer vaccine. Notwithstanding, only 3,701,750 people in Cameroon have received at least one dose of vaccine, which makes it 18.7% of the target population, as of September 2023, (2).

WHO recognizes vaccine hesitancy as the delay in acceptance or refusal of vaccines despite the availability of vaccine services (1). Various schools of thoughts have linked vaccine hesitancy in Cameroon to the influence of misinformation, and disinformation which dates to the origin of the virus (6).

The creation of COVID-19 vaccines raised tension among races with different ideologies, from misinformation and conspiracies theories about the virus and vaccines; such as the idea that

the vaccines have a built-in microchip for massive control of people to make them carry out actions against their wishes (7). Other beliefs have it that the vaccination would be a tactical and targeted spread of the real virus. Some conspiracies included testing of vaccines to be done on blacks to kill them (8).

These challenges created a major setback in the implementation of the vaccines in Africa and Cameroon in particular, as some individuals are hesitant in taking the vaccines.

This leave open the question as to how the decision making process of Cameroonians have been impacted by disinformation and misinformation on the traditional media, social media and interpersonal communication. For example, how and what kind of information about COVID-19 vaccines circulate among families and groups? Another important question concerns differences in the willingness of Cameroonians to get vaccinated.

To fill the gap and lay a foundation for a larger research agenda about the relationship between disinformation/misinformation and COVID-19 vaccine hesitancy in Cameroon, this study seeks to investigate the influence of disinformation and misinformation on COVID-19 vaccine hesitancy in The University of Bamenda.

## **1.2 Statement of the Problem**

The COVID-19 vaccine is definitely the best solution in eradicating the pandemic in Cameroon but this is proving difficult due to vaccine hesitancy. Cameroonians are exposed daily to different information types from the media, with students and workers at The University of Bamenda not being an exception. In a new technology era where almost everyone plays the role of a journalist, the spread of false information about the vaccines is a random phenomenon, thereby affecting individual's ability to make informed decisions. However, this is not to say that disinformation and misinformation are the only factors that influences the decisions of students and workers at the University of Bamenda to either get vaccinated against COVID-19 or not as there is the

willingness of individuals to either get vaccinated or not if given the chance to. Away from the level of readiness, there is the tendency for students and workers to hesitate getting the vaccine due to political reasons (lack of trust in the government of Cameroon). These consequently affects the vaccination rate of the institution. In the light of this problem and in locating the root cause of the problems posed by the relationship between disinformation/misinformation and COVID-19 vaccine hesitancy, it is important and imperative to look at how students and workers at the University of Bamenda exposure to disinformation/misinformation influences their decision to either get vaccinated or not.

### **1.3 Research Objectives**

The global objective is to understand the influence of disinformation and misinformation on COVID-19 vaccine hesitancy in The University of Bamenda and more specifically, seeks

1. To investigate the effect of disinformation on COVID-19 vaccines in The University of Bamenda.
2. To investigate the effect of misinformation on COVID-19 vaccines in The University of Bamenda.

### **1.4 Research Questions**

1. How does disinformation affect COVID-19 vaccine hesitancy of persons in The University of Bamenda?
2. How does misinformation affect COVID-19 vaccine hesitancy of persons in The University of Bamenda toward COVID-19 vaccination?

### **1.5 Research Hypotheses**

#### **H1**

- Disinformation influences COVID-19 vaccine hesitancy at The University of Bamenda.

### **Ho**

- Disinformation does not influence COVID-19 vaccine hesitancy at The University of Bamenda.

### **H2**

- Misinformation influences COVID-19 vaccine hesitancy at The University of Bamenda.

### **Ho**

- Misinformation does not influence COVID-19 vaccine hesitancy at The University of Bamenda.

## **1.6 Scope of the study**

The University of Bamenda (UBa) is an Anglo-Saxon University in Bamenda, North West Region of Cameroon. Created by Presidential Decree No.2010/372 of 14 December 2010, the institution has over 19000 students studying across six Schools and six Faculties. The choice of the community is informed by its wide demographic and psychographics (attitudes, habits and beliefs), as the community is made up of different groups of persons, such as students, lecturers, drivers, cleaners and business persons. This will also help the researcher to determine what type of mass media members of this community consume.

## **1.7 Delimitation**

Some students and lecturers approached to participate in the survey were not receptive to the researcher. Some students were not interested in talking about COVID-19.

In addition, some respondents had poor literacy skills, let alone filling the questionnaire on their own. So, the researcher patiently explained the items to them and put them through to fill the questionnaire. Also, not all 250 questionnaires administered were returned. This might have

prevented the researcher from determining the actual awareness rate on disinformation and misinformation in The University of Bamenda.

Lastly, the researcher does not claim that this study can be generalized to other areas as it only focused on the influence of disinformation and misinformation on COVID-19 vaccines hesitancy in the University of Bamenda. Research done in other areas might have different findings.

### **1.8 Significance of the study**

The study will contribute valuable learnings about the field of disinformation and misinformation to the broader academic knowledge base. This research may be useful to researchers (communication, public health, pedagogics, etc). The study may help health communicators and health providers adopt effective communication strategies that can enable individuals to make informed choices relating to COVID-19 vaccines.

### **2.1 Literature Review**

Abiodun et al. (2021) carried out a study, COVID-19 vaccination in Nigeria: A rapid review of vaccine acceptance rate and the associated factors between January 2020 and November 2021. The study sought to assess the COVID-19 vaccine acceptance rate and to identify the predicting factors for the non-acceptance of the vaccine in Nigeria. Using qualitative data and quantitative data collected across Nigeria with 11,500 participants, the study revealed that the vaccine acceptance rate in Nigeria ranged from 20.0% to 58.2%, with significant variations in the COVID-19 vaccine acceptance rates across different population subgroups. Among health workers, the vaccine acceptance rate was between 32.5 and 55.5%. Out of the three surveys conducted on health workers, two showed COVID-19 vaccine acceptance rates below 50% with the highest of 55.5% in Ondo, Edo, and Delta. The lowest COVID-19 vaccine acceptance rate (32.5%) was seen among health workers surveyed in all six geopolitical zones of the country.

Among the adult population, the acceptance rate was between 20.0% and 58.2%. Among university staff and students, a prevalence rate of 34.7% was recorded. The result of this study further discovered that the most reported factors that led to the non-acceptance of the COVID-19 vaccine were conspiracy theories that developed from misinformation, fake news, and political sagas radiating the internet in the process of the development of vaccines. The study suggested that the capacity for effective communication should also be improved to bridge the gap between health workers and the general populace. (9)

Lee et al. (2022) carried out two studies on misinformation about COVID-19 vaccines and vaccine hesitancy in the US. The studies examined various types of misinformation related to COVID-19 vaccines, circulated among the U.S. public, and how accuracy in the knowledge of COVID-19 vaccines related to vaccine hesitancy and behavioral intention. The first study asked a sample of 505 full-time working professionals in the US about possible misinformation they were exposed to, that was related to the COVID-19 vaccines. The second study used an online survey to examine 441 U.S. college students' knowledge about COVID-19 vaccines, and their associations with vaccine hesitancy and behavioral intention to get a COVID-19 vaccine. Using statistical analysis for the open-ended questions in study 1, the researchers discovered that 57.6% are reportedly being exposed to conspiratorial misinformation such as COVID-19 vaccines being harmful and dangerous. The results of a structural equation modeling analysis for study 2 revealed that there is a negative association between the knowledge level and vaccine hesitancy, and between vaccine hesitancy and behavioral intention. Results further suggest that exposure to misinformation and believing it as true, could increase vaccine hesitancy and reduce behavioral intention to get vaccinated. The researchers concluded that many people believed misinformation related to COVID-19 vaccines as true and inaccurate knowledge seemed to increase their vaccine hesitancy and decrease behavioral intention to get vaccinated. (10)

Agbor et al. (2021), carried out a study, social media and management of COVID-19 in a developing country: case of Cameroon. They examined how to optimize public engagement, combat misinformation and develop a culture of preparedness amidst the COVID-19 pandemic in Cameroon. Using qualitative data, researchers discovered that delays in updating Cameroon's COVID-19 situation on various official websites and online platforms led the public to rely on unverified information from non-government websites and social media accounts within their networks. In addition, the misinterpretation of evidence or misinformation from scientific publications was not clarified. Consequently, mistrust was created between the public and the government. The study posits that the Cameroon government could create a mobile application to verify the information and demystify myths about the pandemic thus avoiding misinformation. More to that, strategies could be put in place to identify, understand, and disrupt sources of misinformation. This study and the current study are related in that, both look at the influence of misinformation on COVID-19 vaccine hesitancy from a Cameroon viewpoint. Notwithstanding, there are differences in the sense that the study looked only at online misinformation while the current study looked at online and offline misinformation in relation to COVID-19 vaccine hesitancy. (11)

Dinga et al. (2021) carried out a study assessment of vaccine hesitancy to a COVID-19 vaccine in Cameroonian adults and its global implication. They investigated COVID-19 Vaccine hesitancy in Cameroonian adults and its global implication. A cross-sectional survey which included descriptive, quantitative and qualitative analysis was carried out with Cameroonians living in the country or abroad from May to August 2020 to ascertain the prevalence of vaccine hesitancy. The results showed that of over 2512 Cameroonians who participated in the survey, 2124 were hesitant to the vaccine giving a prevalence of 84.6%. This according to participants is because of confusing COVID-19 vaccine information, anti-COVID-19 campaigns and disinformation and misinformation on social media. The most prominent determinants observed



in this study were: Communication and Media Environment, Perception of the pharmaceutical industry, Reliability and/or source of vaccine and cost. Most Cameroonians agreed that even though there are benefits of a clinical trial, they will prefer it should be done out of the continent and involve African scientists for eventual acceptance and uptake. The study posits that community/public engagement will be the ultimate approach to significantly increase vaccine acceptance of COVID-19 vaccines in Africans in general and Cameroonians specifically. Also, the concerns of safety, efficacy, and confidence must be addressed using a Public Engagement approach if a COVID-19 vaccine has to be administered successfully in Africa or Cameroon specifically. This study and the current study are different in terms of the sample size. The study was done abroad and in Cameroon, whereas the current study focuses only on Cameroon (North West Region). (5)

Ngasa et al. (2021), carried out a study, spirituality and Other Factors Associated with COVID-19 Vaccine Acceptance amongst Healthcare Workers in Cameroon. They evaluated the cause of low COVID-19 vaccine acceptance among healthcare workers (HCWs) in Cameroon. The study made use of a single theory: the two-step flow, portraying health workers as opinion leaders who can help change the attitude of Cameroonians towards the vaccine. The researchers conducted a cross-sectional online survey from April to June 2021 in which 369 HCWs in Cameroon participated. The data collected using Survey sparrow and analyzed using Stata 14 revealed that COVID-19 vaccine uptake is low among HCWs in Cameroon due to worries about the efficacy of the vaccine because of conflicting information in the media. The study, therefore, recommends that tailoring communication strategies towards certain sub-groups might enhance vaccine uptake among HCWs in the specific and general population. The study is different from the current study in that, the study's participants are drawn only from the health sector while the current study's participants are from diverse backgrounds. (12)

Neely et al. (2021), carried out a study, vaccine Hesitancy and Exposure to Misinformation. the researchers investigated objections to COVID-19 vaccination and the potential effects of misinformation on vaccine decisions in the state of Florida between June 3 and June 14, 2021. This study is drawn from the cultivation theory which described how exposure to misinformation affected the behavior of the participants selected for this study. Quantitative data collected through a web-based survey, indicate that out of 600 adults approached, 73% were exposed to misinformation about COVID-19, which was directly correlated with vaccine hesitancy. The study suggests that this accounts for the poor recovery rate of Florida as compared to other states in the US. Also, the study commends that to improve trust in public health messages and improve vaccine acceptance, vaccine misinformation must be effectively addressed, especially regarding timing and platform or methods. This study is related to the present study in the sense that both examine the influence of misinformation on COVID-19 vaccine hesitancy. More so, both studies make use of the cultivation theory. (13)

Melki et al. (2021) carried out a study, mitigating infodemics: The relationship between news exposure, trust and belief in COVID-19 fake news and social media spreading. The researchers sought to examine the relationship between exposure and trust in COVID-19 news (from Television, social media, and interpersonal communication) and information sources (healthcare experts, government, clerics) and belief in COVID-19 myths and false information as well as critical verification practices before posting on social media. Based on three key theories: Selective exposure, Social learning and media literacy, the study used a cross-sectional researcher-administered phone survey of adults living in Lebanon between March 27 and April 23, 2020. The findings showed that people with higher education and those who trust COVID-19 information from the government contributed to reducing belief in myths and false information. Rather, trust in news from social media, interpersonal communication and clerics increased belief in COVID-19 myths and false information, which in turn promoted the posting of

unchecked information on social media. The study suggests that media literacy courses should be integrated into schools and university curricula with strong health literacy modules to help counter infodemics. (14)

Lyu et al. (2022) carried out a study, misinformation versus Facts: Understanding the Influence of News regarding COVID-19 Vaccines on Vaccine Uptake. The study aimed to interrogate the scale and scope of the influence of misinformation and fact-based news about COVID-19 vaccines on social media platforms on vaccine uptake. The study was based on two theories: Media dependency and magic bullet. Using the URL-based tweet classification method, the study detected 26,998 fake news-related (fake news, conspiracy theories, unreliable content, or extremely biased news) by US citizens on Twitter. Also, the study discovered that some of the states with relatively lower vaccination rates tend to have both higher rates of fake news-related. The study posits that the circulation of more related fact-checked news on COVID-19 on Twitter could trigger critical thinking thus questions about fake news could be raised. This could induce a decline in hesitancy. Both studies are similar in the level of theories and aim which explores the influence of misinformation on COVID-19 hesitancy. Nevertheless, there are differences in their methods of data collection. (15)

Singh et al. (2021) carried out a study, misinformation, believability, and vaccine acceptance over 40 countries: Takeaways from the initial phase of the COVID-19 infodemic. These researchers examined the extent of worldwide exposure to COVID-19 misinformation, assesses different populations' susceptibility to false claims, and analyzes its association with vaccine acceptance. Through an online survey carried out across 40 countries, the findings indicated that poorer regions were more vulnerable to encountering and believing COVID-19 misinformation; countries with a lower gross domestic product (GDP) per capita showed a substantially higher prevalence of misinformation. This is due to the high practice of unconventional treatment in these countries due to poverty and thus limited access to health care

services. More to that, the study revealed that at an individual level, exposure to misinformation accounts for high belief in rumours and conspiracies about COVID-19. The study commends that, the foundations of increasing inequities through policy/system change must be tackled effectively and inclusively to address the issue of misinformation. (16)

## **2.2 Theoretical Framework**

The agenda-setting theory is one of the most widely used theory used in the study of the impact of disinformation and misinformation on COVID-19 vaccines. The theory hypothesizes how public attention on societal issues depends on what the media presents as news. Following the original research, additional study was carried out to improve the validity of tenets proposed by Walter Lippmann (1922). The agenda-setting theory is structurally designed to explain the effect of the media on public decisions. To McCombs and Shaw, the media cannot tell the audience what to think but they can tell them what to think about and the media have the power to set agendas. The media achieve this through 'gate-keeping'. 'Gate-keeping' is the process through which media groups or an individual determine not only which information is selected, but also what the content and nature of messages, such as news will be (17). The theory was originally created to establish the principal connection between world events and the images in the public mind but other studies have shown that agenda-setting can be used in decision making processes. For example, Zeng and Zhou (18), used the COVID-19 pandemic to demonstrate how events stand at the center of media, public and government agendas though public agenda is more persuasive than the media and government agendas. The new media (social media) with its wider network have provided a space for the audience to engage in public discourse thereby changing narratives (19). With many news agencies and citizen journalists, communication is now individualized and

social. The public now has a choice in the type of content they want, who they want to communicate with and can give direct feedback to the news source through the comment section of social media. This way, the public can push their ideas and agenda not only to media sources but to policy makers as well. This shows the relationship between public behavior and the media. This theory is therefore relevant to the study as it will help establish the extent to which agendas on COVID-19 vaccines designed in the form of disinformation and misinformation messages directly influence media consumers at The University of Bamenda to resist the vaccines.

### **3.0 Methodology**

This study is quantitative and its nature is exploratory. Methods of data collection included open-ended and closed questionnaires. The participants for the study included students and workers randomly targeted at the University of Bamenda. The simple random sampling technique was used to select the sample for this study. This technique was used because it suits the diverse nature of the study population and gives every member of the community an equal opportunity to be part of the study and therefore produces an accurate sample. Hence, a representative sample of 250 respondents was drawn from the population, with an estimation 30000 people. This is because it is difficult and almost impossible to study the whole population. Questions asked on the questionnaires investigated issues around on COVID-19 and the relationship between the media and disinformation/misinformation on the COVID-19 vaccine. The questions also sought to determine the influence of disinformation and misinformation on COVID-19 vaccine hesitancy.

Descriptive data analysis was used to provide answers to the research questions mentioned in chapter one was performed. The retrieved data were analyzed using SPSS and Microsoft excel. Logistic regression was used to test the hypothesis and analyzed with the use of STATA. The model was used to see the effect of the independent variables on hesitancy and to see the effect of the control variables (safety and trust) on hesitancy.

## 4.0 Findings and Discussions

### Response Rate

Response rate presents the number of participants in the study. It determines the statistical power of the research. In this study, the researcher issued 250 questionnaires which were filled but was not returned as issued. The number of questionnaires that were received was 215, giving a 86% response rate.

### Knowledge on COVID-19 Vaccine

The study sought to know how familiar the respondents are with the COVID-19 vaccines and the table below shows that most of the respondents are not familiar with the vaccine and those in this category makes up (57.7%) of the total respondents while the remaining (42.3%) are familiar with the COVID-19 vaccines.

	Frequency	Percent
No	124	57.7
Valid Yes	91	42.3
Total	215	100.0

**Table 2: Knowledge on COVID-19 Vaccine**

### Vaccinated against COVID-19

52.1% of the participants answered yes meaning they have been vaccinated, while the remaining 47.9% have not been vaccinated. Due to reasons like most of them haven't been opportune to get the vaccine and others because they are not certain if the vaccine is safe for their health or not, since the vaccine have not been tested and approved and because most of the

respondent don't even trust the minister of health. In addition, some respondents say they are not vaccinated because of the negative information posted on social media platforms and some people still die even after receiving the vaccine. More so, some fear the side effects of the vaccine.

		Frequency	Percent
	No	103	47.9
Valid	Yes	112	52.1
	Total	215	100.0

### Willing to accept COVID-19 vaccines

Out of 215 respondents, 112 agreed to take the vaccines if they had the chance to, making (52.1%) of the total respondents while 103 (47.9) refused that they cannot take the medicine even if they had the chance. Reason being that they do not believe in the effectiveness of the vaccine to keep them safe. Also, because they do not trust health officials due to conflicting information on social media platforms. This implies that the minority have been influence by misinformation and disinformation on COVID-19 Vaccines.

		Frequency	Percent
	No	103	47.9
Valid	yes	112	52.1
	Total	215	100.0

**Table 4: Willing to accept COVID-19 vaccines**

**Profession of the respondents**

Going by profession, the table below revealed that, out of 215 respondents, 117 were of the secondary sector, making (54.4%) of the total respondents, 65 were making of the tertiary sector, (30.2%) of the total respondents and 33 respondents were from the primary sector making (15.3%) of the total respondents. This implies that majority of respondents were from the secondary sector (54.4%), and (30.2%) of the tertiary sector since due to their job type, they were more exposed to information.

	Frequency	Percent
Primary	33	15.3
secondary	117	54.4
tertiary	65	30.2
Total	215	100.0

**Table 1: Profession of the respondents**

**Trust in Public Health Ministry.**

Note that out of 215 respondents, 128 making (59.5%) revealed they do not trust the Ministry of Public Health while the remaining 87(40.5%) gave a positive respond. According to respondents, the lack of trust is due to the fact that ‘No agency is perfect or should be trusted’ and because they are out for money purposes other than the health of the population. Others stated that COVID-19 is more of a political agenda. See table 5 below



	Frequency	Percent
No	128	59.5
yes	87	40.5
Total	215	100.0

**Table 5:Trust Public Health Ministry**

**Table 3: vaccinated against COVID-19**

**Come across COVID-19 Misinformation and Disinformation**

Of the 215 respondents, 118 (54.9%) are exposed to disinformation and misinformation on COVID-19 Vaccines. while 97, making (45.1%) are not.

	Frequency	Percent
No	97	45.1
yes	118	54.9
Total	215	100.0

**Response Rate**

Response rate presents the number of participants in the study. It determines the statistical power of the research. In this study, the researcher issued 250 questionnaires which were filled but was not returned as issued. The number of questionnaires that were received was 215, giving a 86% response rate.

	Frequency	Percent
No	103	47.9
Valid Yes	112	52.1
Total	215	100.0

**Table 6: Come across COVID-19 misinformation and disinformation**

**Sources of Misinformation and Disinformation on COVID-19 vaccines**

Out of 118 respondents, 50 (23.3%) came across disinformation and misinformation, through the social media, while 25 (11.6%), 23 (10.7%), 16 (7.4%), 2 (0.9%) and 2 (0.9%) came across misinformation and disinformation through radio, Newspapers, Tv, friends and family and others respectively. The total couldn't sum up to 100% is because, the sources are a continuation of whether the respondents have come across misinformation and disinformation of COVID-19 vaccines (table 9) above, where out of 215 respondents, 97 refused they haven't come across misinformation and disinformation of COVID-19 vaccine making 45.1% of total respondents, while the remaining 118 agreed, making 54.9% of total respondents.

	Frequency	Percent
Social media	50	23.3
Radio	25	11.6
News papers	2	.9
TV	16	7.4
Friends and family	23	10.7
Others	2	.9
Total	118	54.9

**Table 7: Sources of misinformation and disinformation**

## Hypothesis testing

Here, the researcher does the hypothesis testing to see the effect of the independent variables on hesitancy and also to see the effect of control variables (safety and trust) on hesitancy.

## Logistic regression

**Table 8: Logistic regression**

Logistic regression		Number of obs	=	215	
		LR chi2(4)	=	49.46	
		Prob > chi2	=	0.0000	
Log likelihood = -123.06287		Pseudo R2	=	0.1673	
nohesitant	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
-----+-----					
misinfo	.2094277	.3422074	0.61	0.541	-.4612864 .8801418
disinfo	-.8149171	.3416605	-2.39	0.017	-1.484559 -.1452748
safe	1.197689	.323297	3.70	0.000	.5640381 1.831339
trust	1.17583	.3406285	3.45	0.001	.5082103 1.843449
_cons	-.4265915	.2935135	-1.45	0.146	-1.001867 .1486844

**Source: Computed by the researcher (2022), with the use of STATA**

From table 8 above, it is observed that the number of observations in the model is two hundred and fifteen, with four independent variables, with a pseudo coefficient of determination (R2) of 0.1673 (16.73%), which means that the four independent variables in the model accounts for 16.73% changes in the dependent variable (hesitancy), and the overall model is significant at a five percent level of significance.

Looking at the direction of the effect of the variables of interest (misinformation and disinformation) on not been hesitant, it is observed that misinformation has a positive effect on non-hesitancy and this effect is not significant, while disinformation has a negative effect on non-hesitancy and this effect is significant at a 5% level of significance.

With respect to the control variables (safety and trust), it is seen that they all have a positive and significant effect on non-hesitancy, though the significant levels vary.

Lastly, looking at the constant term, it is seen that it has a negative effect (relationship) with the dependent variable, non-hesitancy. However, this relationship is not significant.

### Marginal effect

After running the logit model as seen above, and because the logit coefficient is meaningless in capturing the exact quantitative effect of the independent variable on the dependent variable, the marginal effect is used to interpret the unit change of the dependent variable as a per a unit change in the independent variables. Table 12 illustrates this marginal effect coefficient.

**Table 9: Marginal effect**

Marginal effects after logit							
y = Pr (not hesitant) (predict)							
= .57102292							
variable	dy/dx	Std. Err.	z	P> z	[	95% C.I.]	X
-----+-----							
mis*	.0511218	.0831	0.62	0.538	-.111748	.213991	.413953
disinfo*	-.1950856	.07869	-2.48	0.013	-.349308	-.040863	.581395

safe*	.2862963	.07322	3.91	0.000	.142779	.429813	.52093
trust*	.2756098	.07378	3.74	0.000	.131006	.420214	.404651

**Source: Computed by the researcher (2022), with the use of STATA**

Firstly, looking at the variables of interest, it is observed that an increase in misinformation by a unit will increase the probability of not being hesitant by 0.051 (5.1%). However, this test is not significant. With respect to disinformation, it is observed that an increase in disinformation will reduce the probability of not being hesitant by 0.19 (19%) and this test is significant at a 5% level of significance.

Also, it is observed from the table above that being safe or feeling safe about COVID-19 vaccines will increase the probability of not being hesitant by 0.28 (28%) and this test is significant at a 1% level. Lastly, it is also seen that having trust increases the probability of not being hesitant to COVID-19 vaccine by 0.27 (27%) and this test is significant at a 1% level of significance.

## Discussion

Using quantitative data, the study investigated the influence of disinformation and misinformation on COVID-19 vaccines hesitancy. The researcher asked questions to know if participants have come across disinformation and misinformation on COVID-19 vaccines and if they are willing to get vaccinated despite the information they have on the vaccines. The results revealed that at The University of Bamenda, disinformation influences individuals' decision not to take the COVID-19 vaccines. The researcher also found out that factors such as the lack of trust in the Ministry of Public Health also influences COVID-19 hesitancy at the University. The findings showed that out of 215 respondents, 128 (59.5%) do not trust the Ministry of Public Health due to disinformation. As a result, 47.9% of the respondents have not been vaccinated against COVID-

19. The findings indicate the need for the creation of strict laws by the government to regulate the spread of disinformation and misinformation to take away the feeling of fear and promote trust between the public and the government.

## 5.0 Conclusion

Information is a very vital element of life. It shapes the daily decisions of individuals at different levels. Good information is therefore essential for decision making. This study found that disinformation affects the decisions of students and workers thereby influences COVID-19 vaccine hesitancy in The University of Bamenda. Respondent's perception about the vaccines and health institutions are guided by messages designed in the form of disinformation especially on social media platforms. Some respondents are not able to identify disinformation either on media platforms or interpersonally. Therefore, there is the need for the government and stakeholders to support the fight against disinformation and misinformation in educational facilities.

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