



Vaccination Hesitancy: The Case of Cervical Cancer Vaccination in Fako Division, Cameroon

**C. Neh Fru^{1*}, Tassang Andrew^{2,3,4*}, David Greenspan⁵, F. Nchang Cho^{6,7},
Mokake Martin^{2,3}, Joseph Livingstone⁸, Tassang Thierry⁹, P. Ngum Fru¹
and Nembulefac Derick¹⁰**

¹*Faculty of Social and Management Sciences, Department of Sociology and Anthropology, University of Buea, Cameroon.*

²*Faculty of Health Sciences, Department of Obstetrics and Gynecology, University of Buea, Cameroon.*

³*Buea Regional Hospital Annex, Cameroon.*

⁴*Atlantic Medical Foundation Hospital – Mutengene, Cameroon*

⁵*David Greenspan, University of Arizona College of Medicine –Phoenix, US.*

⁶*Faculty of Sciences, Department of Biochemistry and Molecular Biology, University of Buea, Cameroon.*

⁷*Global Health Systems Solutions, Cameroon.*

⁸*Amaki Medical Services , Genville, Grenada.*

⁹*Kumbo Sub Divisional Hospital, Kumbo, Cameroon.*

¹⁰*Centre Medicalise d' Arrondissement, Ndoh-Djuttissa, Cameroon.*

Authors' contributions

This work was carried out in collaboration among all authors. Authors CNF, TA and TT designed the study. Authors FNC and PNF performed the statistical analysis. Authors DG, JL, CNF, TT, TA and FNC wrote the protocol and wrote the first draft of the manuscript. Authors CNF and TA managed the analyses of the study. Authors CNF, TA, FNC and PNF managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: The fight against cervical cancer stumbles against resistance to accepting vaccines. Vaccination hesitancy is a worldwide phenomenon. It seems this phenomenon is more amplified in Africa. With the advent of COVID 19, many conspiracy theories against all the vaccines have emanated from various quarters. Vaccination against Human Papilloma Virus is no exception to the current dynamics. A study on this topic was carried out in the Fako Division-Cameroon. Structural and individual reasons could explain vaccination hesitancy.

Objective: The objective of this study is to attempt an explanation of why vaccination hesitancy has to do with poor uptake of cervical cancer vaccines.

Methodology: a community-based cross-sectional study was carried out in some towns of the Fako Division – Cameroon from 5 to January 20, 2021. Paper-based questionnaires were administered only to those who consented to participate in this study. And chi-square test was estimated to establish the association between participant socioeconomic characteristics and cervical cancer vaccine hesitancy

Results: A total of 250 consecutively enrolled participants were included in the study. Women with a high level of education will readily accept vaccination against cervical cancer. About 71% of our sample does not trust government decisions regarding judgments against cervical cancer. If given a choice between medical treatment and prayers, 62% of our studied population will prefer prayers. There is some degree of bias against female children in our community.

Conclusion: Many components constitute vaccination hesitancy. The corruption of political elites, brainwashing of masses by the new type of churches, self-convictions, ignorance, lack of knowledge on CC, and gender bias are some. They all increase on structural causes: the colonial background and the low socioeconomic status of these countries.

Keywords: Vaccination hesitancy; cervical cancer; vaccine; fako division-Cameroon; sub-sahara Africa; developing countries.

1. INTRODUCTION

Vaccine reluctance and refusal despite the availability are seen as vaccine hesitancy which is a global phenomenon. Therefore, the World Health Organization (WHO) classified it as one of the ten global health threats of [1,2]. There have been questions as to why Cervical Cancer (CC) has consistently been a problematic health burden on the skeletal health system of under-resourced countries. Especially in Africa, the problem of CC has escalated as a result of low capacity in material and human resources, and the specialized unit for prevention and treatment of CC is scanty [3,4].

While there is a shortage of support for CC patients, the risk factors are becoming increasingly evident. Among the risk factor is the Human Papilloma Virus (HPV), a sexually transmitted disease[5]. During active sexual life, women have a probability of 75% of getting infected with the HPV [1]. In addition, some of the risk factors of CC low socioeconomic status, poor hygienic conditions, early onset of sexual intercourse, multiple sexual partners for both members of the couple, polygamy, Human

Immune Deficiency Virus (HIV), sexually transmissible diseases, various pregnancies, chlamydial infection and smoking [1].

With global milestones in decreasing infection of preventable diseases, there is a need to intensify protection against the risk of CC. About 99.7 % of cervical cancer (CC) cases are caused by the Human Papilloma Virus (HPV) [1]. However, there is potential vaccine availability for HPV that is readily available to the population at risk. For example, the bivalent vaccine, Cervarix®, potent on HPV 16 and 18, covers 2/3 of all CC cases [1]. The tetravalent vaccine, Gardasil®, is potent on types 6, 11,16, and 18 [2]. In addition, the 9-valent vaccine Gardasil 9® protects against types 6, 11, 16, 18, 31, 33, 45, 52, and 58, meaning that the 528,000 worldwide morbid cases and 275,000 deaths per annum [3], with 85% of the burden on the developing countries, could be avoided [4].

In scope, the current research attempted to investigate the socioeconomic factors associated with hesitancy to take up the CC vaccine in the Fako Division of Cameroon to provide area-specific information and spur immediate health

intervention to reduce the risk factors of CC in the population.

2. LITERATURE REVIEW

The unique circumstance of the developing countries requires extensive investigation further to accentuate reasons for persistent disease in the region. For example, in the structures of low-income countries, especially Africa, are some factors that could account for disease protection, such as vaccine hesitancy. Among these reasons is the scarcity of resources in developing countries, low priority placed on social services that may support health and quality of life [1,5-7]. This evidence is further cemented by vaccination and screening campaigns that remain pilot programs without continuity [8,9]. Additionally, sociocultural factors hamper the uptake of vaccines. Because of ignorance, lack of awareness, and knowledge, even the scarce preventive services are underused. Lots of religious beliefs, myths, folktale stories are associated with cervical cancer [9,10]. Powerful anti-vaccination lobbies convince people and ask the rationale, the effectiveness, and safety of vaccines [10,11]. The consequence is the rejection of vaccines [12].

The historical perspective of the African region draws up some debatable evidence in the literature. Some researchers have argued that colonization has a lot to do with many African countries' present state [13]. The history of most of these countries plunges into colonization. Most low-income countries are found in Africa, south of the Sahara, where cervical cancer rates are the highest [13,14]. At the helm of most of these states, puppet regimes, answerable to their colonial masters, were installed (International Agency for Research on Cancer, World Health Organization, 2020; Lane et al., 2018). The primary ambition of these new poorly elected leaders is to mimic their formal masters, the colonizer. The wellbeing of the population seems secondary to them. Their primary purpose is to keep power as long as possible and pillaging riches above any common understanding. The bridge of trust between them and the population is not trustworthy. Any social manifestation is looked at with suspicion by the powers [15,16]. The resultant consequences are civil strife, socioeconomic instability, corruption, mal governance, an ever-increasing gap of wealth between those governing and the rest of the population, pauperization of the masses, missed priorities, negligence of social services as health and education [17-18].

The historical peripheral position occupied by African countries south of the Sahara should be understood in terms of a metropolis- satellite structures described by Gunther Frank [19]. The center, known as the metropolis, is represented by the developed countries, which are the core of the global health system. The satellite, the developing countries as Cameroon, is found at the periphery of the world health system, with the metropolis-satellite relationship being unequal [19]. This relationship is exploitative and also creates a dependency and subordinate relation. Increasingly, there is the rejection of the western model of health provision. From this perspective, these are seen as different strategies to exploit and destroy Africa. The destruction, according to this theory, will foster the physical occupation of the African territory. This occupation will be a result of the sterilization of all females through vaccination. This perspective is reinforced by the absence or rejection of local health knowledge in the global health system [20]. Some people see a geopolitical strategy in vaccination and asked if Osama Bin Laden was not trapped through vaccination [21]. Therefore, both vaccines and the western health system are questioned. This issue has arisen in the critical mind of Cameroonians. As a result, there is an appearance of a vital mindset of Africans vis-a-vis the global health system [20,22]. According to this point of view, vaccination is another strategy by the former colonial master to subordinate Cameroonians. Therefore, not only the vaccines are questioned but also the western model of health. This western model of health brings out the level of consciousness of Cameroonians in terms of colonial history, which has raised the critical mind of Africans in terms of health [19,20,23].

Another major contributor to vaccination hesitancy in Cameroon is linked to governance. According to Cocker [24], "the nature of governance is central because it determines whether the exercise of authority is legitimate." In Cameroon, the issue of poor governance has been addressed [25]. In terms of health, this flawed governance system has affected and shaped the perception of health issues, including vaccination [25,26]. The bridge of trust between the state and the people on whom authority is exercised has affected reactions towards decisions relating to health issues. Population perceives the state as working against the people, so working for the colonial master. The conspiracy theory is thereby reinforced by the absence of trust in those governing. Their

legitimacy is expressed by vaccination hesitancy [27,28]. The government does not care about the people, no water and electricity; why care now regarding the vaccine? Individuals ask themselves [25,27,28].

This concern depicts the perception grassroots people have of the state in Africa. Their resistance to a vaccine is a subtle way of resisting and fighting authoritarian states that do not increase water and electricity plague challenges in African cities in the 21st century [25]. This resistance to vaccines could also be read under the prism of Africa's resistance to globalization and homogenization of health issues. In other words, resistance to vaccination could be seen as another rejection of colonization manifested through health, a fundamental human right. Sustainable health will, therefore, within this context mean the re-humanization of health in Africa, which means the creation of schools of medicine with traditional African medicine as part of the curriculum and respecting the African diversity inclined towards nature. Thus, redressing the power imbalance between African traditional medicine and western inputs will improve and considerably scale down vaccination hesitancy.

Women have always been unjustly treated in society from time immemorial. They have not been given equal chances as men. In developed countries, this situation is being addressed. In low-income countries, this phenomenon seems to be on the increase, aided by the pauperization of the masses. Girls are not given the same opportunities as boys in education and are often pushed into early marriages. Girls are denied the right to succession, land, and inheritance [19,28]. Women have unequal opportunities for employment and salaries [5]. They are underrepresented in the political and decision spheres [29]. Their pauperization makes them vulnerable economically, and they become easy sexual prey for men, and they hardly have access to cancer unit services when they exist [30,31].

Based on the individualist premise, some groups of people are ignorant about the existence and the role of vaccines in preventing diseases [31,32]. As such, economic hardship and the growing pauperization of the masses have led to an untold proliferation of churches [25,26]. Many of these congregations function as sects, with some gurus at their helm [33,34]. Members are brainwashed to the point of dehumanization

[6–8]. They are made to believe the pastors are custodians of some supernatural powers and can make any miracle, including prevention and treatment of any disease. This zombification process puts them at the mercy of these gurus, who now dictate the conduct of their followers [34–36]. These gurus derive their fame and riches from their followers. These poor people are caged in mental captivity and look as evil some preventive measures and treatment [35–40]. These fanatics are the most difficult persons to convince [33,34].

Some persons do not believe in vaccines and do question their usefulness. To them, nature is powerful enough to stamp out any disease. They asked how Man survived before the advent of vaccination.

Furthermore, medicine has made enough progress in putting their children at the bay of some ailments. Vaccines are, therefore, not necessary [31,32]. At the same time, some people view vaccination under the evil prism. Vaccination carries some other diseases to be inflicted on their children, rendering them physically impotent. To some others, this will sterilize their daughters and, in the long run, depopulate their land, with the end objective being the ceasing of their ancestral land by White men [31,32,41,42]

Amid general mistrust, some "swinging" parents who are ready to vaccinate their children will like to be convinced about the efficiency of vaccines. In addition, they will want to have further details about the vaccines, how they are administered, the side effects, and inquire about any long-term complications [43–45].

Corruption, be it active or passive, has eaten deeply into the fabric of our society. The government and all its administrative branches are viewed as corrupted [46]. While they swim in revolting luxury, the rest of the community crawls in abject poverty [40,41]. Public funds are embezzled at every level of the administration. Kickbacks are the order of the day [35,47,48]. Members of government and functionaries are ready to sign any contract, given a percentage [35,46,47]. The decisions they take regarding public interest are regarded with suspicion. Amid controversies regarding vaccination, people develop cold feet towards vaccines, and they will hardly see anything good as far as vaccination is concerned [35,47,48]. With the financial might commended by pharmaceutical firms, physicians

are coopted in the propaganda machinery of these firms. Their neutrality as health experts is questioned by the general population [48,49].

Daily, people are bombarded on various media platforms with negative messages against vaccination. Some authors of these messages have high morale, social profile as bishops, academicians, state men, and professors in medicine. These mediatic harassments negatively impact even people who could have accepted vaccination [37–39,50].

Awareness and knowledge are modulated both by individual and structural factors. At the former level, the low socioeconomic status of our community impedes the fight against CC. Education and financial empowerment of women seem the driving force in acquiring knowledge and awareness of CC; both are lacking in Africa sub of the Sahara [34]. Structural weaknesses of the system, as the scarcity of both health personnel, specialized in this pathology, lack of health structures carrying out both preventive and curative treatment of CC is a real impediment in the fight against CC [34]. Lack of vulgarization of information on cervical cancer by the public authority also significantly contributes to the lack of knowledge and awareness, resulting in a high morbidity and mortality rate.

3. MATERIALS AND METHODS

3.1 Study Design, Sample Population, and Strategy

This community-based cross-sectional study was carried out from the 5 to January 20, 2021, in three communities; Buea, Mutengene, and Tiko in the Fako Division- Cameroon. Buea and its environment have a population of 200,000 inhabitants [51], Mutengene has a population of 32,936 [52], and Tiko has a mainly farming and trading population of 117,883 [34].

3.2 Sampling Procedure

A total of 250 persons aged from 15 to 66 years were recruited for the study. Peer educators detailly explained the questionnaires and procedures to respondents and assured them of anonymity and confidentiality. The candidates were recruited by simple random sampling. Questionnaires were then administered only to those who consented.

3.3 Sample Size Determination

The sample size was calculated using the CDC-Epi InfoTM 7.2.3.1 StatCalc software as described in another study [46], with the following characteristics: an estimated population size for Buea Health area of 40,000 inhabitants, expected frequency of persons living with cervical cancer in Cameroon of 13.8% [53], and an accepted error margin of 5%, design effect of 1.0 and one clusters. Thus, the CDC-Epi InfoTM 7.2.3.1 StatCalc estimated minimum sample size was 182.

3.4 Research instrument and Data Collection

The data instrument (paper-based questionnaires) was adapted from a related study [45]. Trained peer-educators/nurses administered the questionnaires. In addition, a pilot session of the questionnaire was done before the survey to ensure that respondents were able to understand it and that questions were interpreted as intended. Hesitancy towards cervical cancer (CC) vaccine was assessed on the following Yes/No questions, "Will you trust a government's CC vaccine program?", "What will you do if your daughter develops CC?" "Do you believe God can heal CC without medical intervention?"

3.5 Study Variables

The dependent variable hesitancy was defined as the proportion of the number of participants who responded with a 'No' to the question "Will you trust a government's CC vaccine program?" where the numerator comprises all participants who answered 'No' and the denominator consists of the total number of participants in the study.

Independent variables were the demographic characteristics.

3.6 Statistical Analysis

Data was captured into Microsoft Excel Office 2018 (Microsoft Inc) and exported to CDC-Epi InfoTM 7.2.3.1 (CDC-Epi InfoTM, USA) for statistical analysis. Categorical variables are presented as frequency tables. The association between resistance to the CC vaccine and demographic characteristics was assessed using bivariate analysis. In addition, the Chi-square (χ^2) test was used to compare participants' characteristics with hesitancy to the CC vaccine.

4. RESULTS

A total of 250 consecutively enrolled participants were included in this analysis; their general characteristics are presented in Table 1. A significant number of study respondents is between ages 15 – 40, where more than 69.2% have secondary school education. In comparison, the study had more female research participants than male. More than half of the research respondents were in a marital union at the time of data collection.

Results from Table 2 show the characteristics of the 250 participants. Only 4 (1.6%) had

previously taken the HPV vaccine, and only 70 (29.4%) could trust the vaccine. Thus, the proportion of participants who will reject the HPV vaccine was 168 (70.6%) of the 250 participants.

Evidence from Table 3 shows that age and marital status had a significant association ($p < 0.05$) with trusting the government's decision on CC. All participants' demographic characteristics except sex and residence had a significant association with "what to do if daughter develops CC," and only age was significantly associated with believing that God can heal CC without medical intervention.

Table 1. Sociodemographic characteristics of studied participants

Variable	Subclass	Frequency (%)
Age groups (Years)	15 – 20	55 (22.0)
	21 – 30	62 (24.8)
	31 – 40	60 (24.0)
	41 – 50	43 (17.2)
	> 50	30 (12.0)
Education	No Formal Education	25 (10.0)
	Primary	52 (20.8)
	Secondary	78 (31.2)
	Tertiary	95 (38.0)
Sex	Male	78 (31.2)
	Female	172 (68.8)
Marital status	Single	97 (38.8)
	Married	130 (52.0)
	Divorced	5 (2.0)
	Widowed	18 (7.2)
Residence	Buea	82 (32.8)
	Mutengene	85 (34.0)
	Tiko	83 (33.2)

Table 2. Hesitancy related characteristics

Variable	Subclass	Frequency	%
Previously taken HPV vaccine	Yes	4	1.6
	No	238	98.4
Trust Government CC vaccination program	Yes	70	29.4
	No	168	70.6
What do you do if your daughter develops CC	Hospital	101	40.4
	Church	63	25.2
	Traditional treatment	86	34.4
Daughter can be next of kin	Yes	30	12.0
	No	220	88.0
Do you believe God can heal CC?	Yes	163	65.2
	No	37	14.8
	Cannot tell	50	20.0
If given only one option, which will you choose?	Church	159	63.6
	Medical Doctor	48	19.2
	Herbalist	25	10.0
	I don't know	18	7.2

Table 3. Bivariate associations between respondents' characteristics and lack of trust

DV →		Trusting decisions of government on CC vaccination				What will you do if your daughter later develops CC?				
Variable ↓	Subclass	No (%)	Yes (%)	Total (%)	χ^2 (p-value)	Hospital (%)	Church (%)	Tradition (%)	Total (%)	χ^2 (p-value)
Age groups (Years)	15 – 20	9 (5.4)	39 (55.7)	48 (20.2)	129.594 (<0.001)*	20 (19.8)	13 (20.6)	22 (25.6)	55 (22.0)	74.806 (<0.001)*
	21 – 30	27 (16.1)	30 (42.9)	57 (23.9)		29 (28.7)	8 (12.7)	25 (29.1)	62 (24.8)	
	31 – 40	59 (35.1)	1 (1.4)	60 (25.2)		7 (6.9)	31 (49.2)	22 (25.6)	60 (24.0)	
	41 – 50	43 (25.6)	0 (0.0)	43 (18.1)		16 (15.8)	10 (15.9)	17 (19.8)	43 (17.2)	
	> 50	30 (17.9)	0 (0.0)	30 (12.6)		29 (28.7)	1 (1.6)	0 (0.0)	30 (12.0)	
Education	NFE	18 (10.7)	3 (4.3)	21 (8.8)	4.477 (0.214)	3 (3.0)	16 (25.4)	6 (7.0)	25 (10.0)	45.915 (<0.001)*
	Primary	31 (18.5)	19 (27.1)	50 (21.0)		16 (15.8)	20 (31.7)	16 (18.6)	52 (20.8)	
	Secondary	51 (30.4)	23 (32.9)	74 (31.1)		33 (32.7)	6 (9.5)	39 (45.3)	78 (31.2)	
	Tertiary	68 (40.5)	25 (35.7)	93 (39.1)		49 (48.5)	21 (33.3)	25 (29.1)	95 (38.0)	
Marital status	Single	61 (36.3)	30 (42.9)	91 (38.2)	10.124 (0.018)*	22 (21.8)	25 (39.7)	50 (58.1)	97 (38.8)	33.243 (<0.001)*
	Married	85 (50.6)	40 (57.1)	125 (52.5)		72 (71.3)	28 (44.4)	30 (34.9)	130 (52.0)	
	Divorced	5 (3.0)	0 (0.0)	5 (2.1)		1 (1.0)	2 (3.2)	2 (2.3)	5 (2.0)	
	Widowed	17 (10.1)	0 (0.0)	17 (7.1)		6 (5.9)	8 (12.7)	4 (4.7)	18 (7.2)	
	Total	168	70	238		101	63	86	250	
Believing God can heal cancer without medical attention						No (%)	Yes (%)	Can't tell (%)	Total (%)	χ^2 (p-value)
Age groups (Years)	15 – 20					2 (5.4)	50 (30.7)	3 (6.0)	55 (22.0)	61.314 (<0.001)*
	21 – 30					12 (32.4)	34 (20.9)	16 (32.0)	62 (24.8)	
	31 – 40					2 (5.4)	45 (27.6)	13 (26.0)	60 (24.0)	

	41 – 50	6 (16.2)	28 (17.2)	9 (18.0)	43 (17.2)	
	> 50	15 (40.5)	6 (3.7)	9 (18.0)	30 (12.0)	
Education	NFE	2 (5.4)	19 (11.7)	4 (8.0)	25 (10.0)	4.678 (0.586)
	Primary	8 (21.6)	36 (22.1)	8 (16.0)	52 (20.8)	
	Secondary	10 (27.0)	53 (32.5)	15 (30.0)	78 (31.2)	
	Tertiary	17 (45.9)	55 (33.7)	23 (46.0)	95 (38.0)	
Marital status	Single	13 (35.1)	73 (44.8)	11 (22.0)	97 (38.8)	12.101 (0.060)
	Married	22 (59.5)	73 (44.8)	35 (70.0)	130 (52.0)	
	Divorced	1 (2.7)	3 (1.8)	1 (2.0)	5 (2.0)	
	Widowed	1 (2.7)	14 (8.6)	3 (6.0)	18 (7.2)	
	<i>Total</i>	37	163	50	250	

**p*-values with statistical significance

5. DISCUSSION

The current research explored the socioeconomic factors associated with hesitancy to take up the CC vaccine in the Fako Division of Cameroon to provide area-specific information and spur immediate health intervention to reduce the risk factors of CC in the population. The evidence from the result analysis extended evidence on the risk factor of CC in the region under investigation.

The research findings resonate with evidence from existing literature [34,54,55]. In our study, 65 % of respondents believe God can treat CC. Furthermore, 62% will prefer prayers to the hospital if asked to choose between the two options. Amidst poverty, people seek solutions in assemblies called "churches." The opening of churches by con artists in searched of riches becomes the order of the day. They are self-aware of titles like Prophets, Bishops, Pastors, Apostles, Papa, "Man of God, " Aided by the gloomy economic atmosphere biting hard into the fabrics of the society, these gurus set out to preach the "gospel of prosperity." In the name of "miracles," people probing to solve their problems flock in their numbers into these churches [56,57]. They become the fertile ground on which the gurus build their riches. As much as Jesus Christ fed a crowd of 5000 people, nowadays 5000 people provide for a single person. Keeping these people as "mental slaves" becomes a complete task for the gurus [33,54].

The research respondents believe that their leaders have mystical powers to find solutions and treat, among others, any disease and cancer inclusive. In their illusion, they think prayers could treat cancer in the name of a "miracle," and nothing contrary to this can dissuade them [33,51,57]. These people are transformed into "mystical-religious" beings. Vaccination is regarded as evil with devastating effects. The prophets make them believe the optimum protection is prayers alone [33,58–60].

Furthermore, fueled by the current controversies around Covid-19, a stiff resistance has developed against CC vaccination [39,59,61]. With many authors, we agree that many of those at the helm of the state are regarded as corrupted [44,62–66]. Their decisions are influenced by what they can gain personally [35,47,53]. Abnegation is kilometers away from them. Public contracts are signed depending on how handsome the kickbacks are. The prisons are full of top government officials who have

embezzled vast sums of public funds [62,66,67]. The denizens are bewildered and look at those governing them as scavengers, ready to sacrifice them at the slightest opportunity. In our study, 71% of our sample population will not accept vaccination against CC. The reasons are multiple. People fear being Guinea pigs in the hands of influential firms who have bought over those governing them [31,32,41]. Some fear it is a ploy to render their loved ones barren and subsequently wipe them from the surface of the earth. Some others think the side effects will be disastrous [30–32]. People develop cold feet towards vaccination for all these reasons and look for other avenues to protect themselves.

The 8% of our sample size, which will instead go to herbalists for treatment are probably, people who do not believe in modern methods of prevention and treatment of CC or who have some concern with the safety of therapy or desire some additional information about CC treatment. This group of persons individually or aided by herbalists says vaccines are unnecessary because nature responds to every situation. They believe in natural immunity. To them, vaccination is equivalent to introducing a foreign object into one's system, which is not advisable [31,32,43,44].

The traditional society the world over is full of bias against women. Africa is no exception. Women are denied some fundamental rights rendering them vulnerable to some disease [28,68]. Our study is as per the works of many authors [28,68,69]. Just 12% of our sample will make their daughter next of kin. Many researchers agree that capacitating the woman financially, and academically will enhance their autonomy and make them independent. They can make rational decisions concerning their health and act accordingly.

There are few limitations to be considered when adapting the study findings. The data that was acquired from the questionnaire entirely depended on the self-reported accounts of respondents. However, questionnaires were pre-tested and administered by trained peer-educators or nurses.

6. CONCLUSION

Vaccination hesitancy is a complex multi-tentacular phenomenon. The public authorities appear corrupted and few individuals swindle public money. The welfare of the population is not their paramount interest. The bridge of

communication between the governed and those governing is not trustworthy. Individuals seemed to have lost faith in those administering them. The decision patterning to CC vaccination is regarded with suspicion. The poor people seek refuge in churches where a new brand of conmen known as "pastors" or "men of God" takes a grip of them. They are brainwashed and dehumanized. They are made to believe that these gurus have magical power and can perform miracles by praying for their healing. Some other small groups, based on their conviction, do not believe in vaccination. Some others are simply ignorant, and they have no awareness nor knowledge of CC. The ordinary man gets revolted and queries the system governing us. Vaccination campaigns of the masses are viewed as attempts by the west to depopulate their countries by rendering women barren. They stand tough against the west, which is trying to assimilate them in the name of globalization. They want to affirm their own identity and culture. Lastly, the negative bias against the female gender will not empower them of qualities needed to stand against vaccination hesitancy. They are not financially capacitated and are not given the same chances as male children.

Thus, for immediate policy and health redress to alleviate vaccination hesitancy, we recommend the there should be the creation of schools of medicine with traditional African medicine as part of the curriculum and representing the African diversity inclined towards nature. Redressing the power imbalance between the African traditional medicine and the western inputs will improve and considerably scale down vaccination hesitancy. Also, the Ministry of Public Health (MPH) and all its ramifications on the national territory have to engage in profound sensitization of the society about vaccination against HPV. The top to bottom

CONSENT

All participants in the survey gave verbal inform consent to participate in the research, and their information was treated with the utmost confidentiality. Furthermore, in addition to all ethical procedures, the study adhered to Helsinki Declaration and the research procedure by the global ethical standard.

ETHICAL CONSIDERATION

The Institutional Review Board – Faculty of Health Sciences (IRB-FHS) of the University of

Buea approved the study, and authorizations were obtained from the South West Regional Delegate of Public Health and the Director of the administration of Atlantic Medical Foundation Hospital – Mutengengene.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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