



(RESEARCH ARTICLE)



Effects of rumours and negative campaign messages regarding vaccination campaigns in Bamenda Health District, Cameroon

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Publication history: Received on 20 August 2020; revised on 17 September 2020; accepted on 22 September 2020

Article DOI: <https://doi.org/10.30574/wjarr.2020.7.3.0317>

Abstract

The Bamenda Health District has frequently been hit by upsurges of vaccine-preventable diseases, which are sometimes neither well reported nor given the well-deserved attention. This was the motivation behind the research topic “Effects of Rumours and Negative Campaign Messages regarding Vaccination Campaigns in Bamenda Health District (BHD)”. The main objective of the study was to carry out a survey of the Effects of Rumours and Negative Campaign Messages with regards to Vaccination Campaigns in Bamenda Health District on the population and public health actors and stakeholders. We carried out a descriptive, cross-sectional and explorative survey in which multistage random sampling was done to obtain a sample size of 414 participants. Key findings revealed Negative attitude with regards to vaccination campaigns and mistrust of government information sources; adherence to rumours and negative campaign messages about vaccination programmes; inefficient cold chain system characterized by poor VVM monitoring; and precarious socio-political climate with the accompanying insecurity. The study revealed that rumours and negative campaign messages have significantly marred the vaccination campaigns in the BHD and rendered them inefficient and ineffective. Every public health actor, stakeholder, and the government are called upon to redouble their efforts in righting the flaws and lapses, both in vaccinations and health promotion strategies. The government should create an enabling and safe environment for efficient and effective vaccination campaigns in the health district while appropriately and promptly managing rumours and negative campaign messages.

Keywords: Vaccination; Efficiency; Rumours; Behaviour; Challenges

1. Introduction

Vaccination and immunization is widely known to be one of the most successful and cost-effective health interventions, and currently the world is on the verge of achieving global Polio eradication. With nearly three decades of experience as one of the largest ever, global health initiatives, the lessons learned and knowledge generated must be shared to contribute to real, sustained changes in all global health programmes. [1] Rumours and negative campaign messages can be terribly devastating to vaccination and immunization programmes. They constitute a crucial facet to be addressed by every public health actor, stakeholder and the government as well.

Disease prevention and control has nevertheless been a major problem to the public health sector in Cameroon in general and in the North West Region in particular for a pretty long time. This has led to the emerging and re-emerging of many diseases and epidemics in the North West Region and elsewhere in Cameroon. Currently the North West Region

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is experiencing an upsurge of epidemics of vaccine-preventable diseases such as Poliomyelitis, Measles, and Tuberculosis. Meanwhile the current vaccination coverage for the North West region is 68%, far from herd immunity. This is probably due to an inefficient and ineffective vaccination programme over the years. The situation has become very challenging, aggravated by the socio-political crisis and the raging war in the Region. Many families have been displaced into the bushes and refugee camps, the adverse consequences notwithstanding. These displaced populations are at very high risk of contamination, infection and epidemics, especially as they are seeking refuge in forests, slumps and overcrowded refugee camps.

With such mass displacements, disease exposure, incidence and prevalence tend to rise significantly. Consequently vaccination and immunization as well as follow up by way of surveillance, and monitoring become even less efficient. Access to vaccination for newborns and the under-fives in such circumstances is either absent or inadequate.

We therefore require a more robust, flexible and mobile or transferrable vaccination and immunization system that caters for the affected and vulnerable populations and on a large scale. This requires sufficient resources, as well as adequate capacity building of personnel, health education of the populations and appropriate health promotion strategies. This will go a long way to curb the upsurge of infectious diseases and improve access to health care for the most vulnerable people.

1.1. Problem statement

The eradication of some diseases such as Poliomyelitis from the world is on the cusp of success, yet with some regions still maintaining transmission. Improving our understanding of why some regions have been successful while others have not will help with both global eradication of the disease and development of more efficient and effective vaccination strategies for other pathogens. [2] Given these dynamic properties, attention should be given to intervention strategies that complement childhood vaccination. [2][3]

Currently there has been a decline of vaccination coverage in the Bamenda Health District from 77% in 2017 to 75% in 2018 and a decline from 78% to 62% coverage for the whole North West Region.[4] Definitely one can rightly say there is no herd immunity acquired. The lapses and challenges leading to inadequate vaccination and immunization in the Bamenda Health District therefore need to be addressed and improved upon, in order to ensure efficient and effective vaccination campaigns.

We therefore perceived the need to investigate the effects of rumours and negative campaign messages on vaccination programmes so as to build an efficient and effective Polio vaccination and immunization programme for the Bamenda Health District.

1.2. Objective of the study

The main objective of the study was to investigate the Effects of Rumours and Negative Campaigns Messages with regards to Vaccination Campaigns in the Bamenda Health District.

1.3 Methodology

1.3.1 Research Design

The research design was a descriptive, cross-sectional, and explorative one.

1.3.2 Random Sampling

Multistage Random Sampling was done to obtain a Sample size of (n) = 414 Respondents. This was determined by the Fisher et al (1998) formula [5] as follows:

$$n = \frac{Z^2 P (1 - P)}{d^2}$$

Where:

- n = the desired sample size where the study population is equal to or greater than 10,000.
- Z = Standard normal deviate corresponding to 95% level of confidence (CI = 1.96).

- p = Estimated prevalence of characteristic of interest (unsound practices) = 0.5 (Since that of the Bamenda Health District is not known).
- d = Level of precision (set at $\pm 5\%$).

1.3.3 Research Tools

- A Semi-Structured Questionnaire
- Focus Group Discussion
- Key Informants Questionnaire

The study therefore employed the triangulation of both qualitative and quantitative methods.

2. Results

2.1. Bio-demographic Characteristics of Study Participants (n = 414)

Overall, 414 subjects participated in the study. They were aged between 15 years to slightly over 55 years. 62% of the respondents were aged 34 years or below. Only 8 (1.9%) subjects were aged over 49 years. (Fig 1)

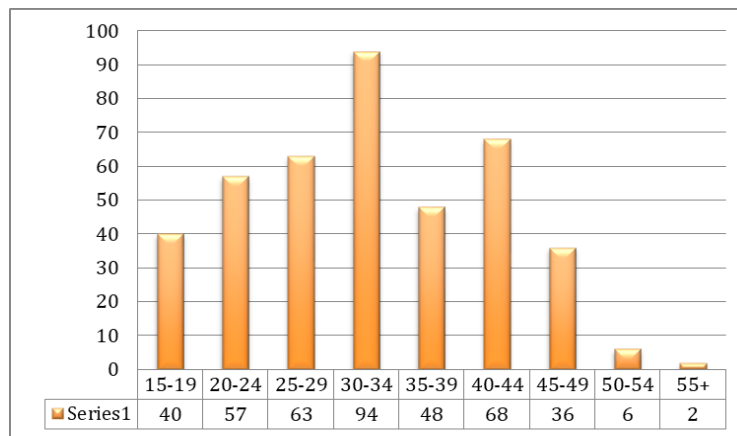


Figure 1 Bio-demographic Characteristic of Respondents (n=414)

Community members were the most common designation (45.4%) among the study participants, followed by nurses (20.8%), Assistant nurse (14.5%), midwife, student health personnel and Laboratory Technician and doctors, (11.8%) respectively. (Fig 2).

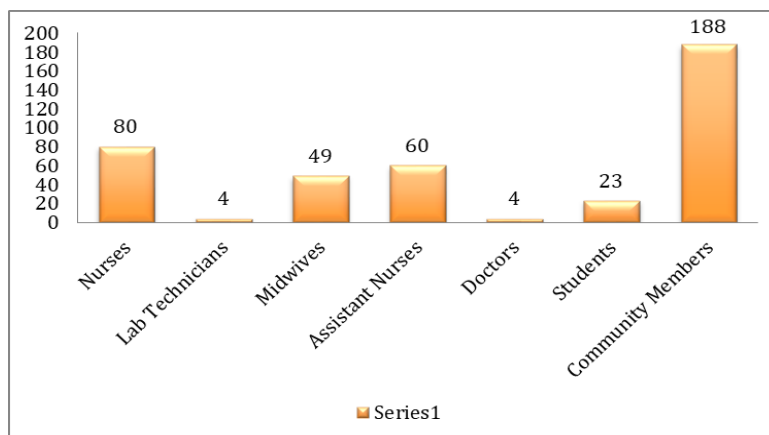


Figure 2 Designation of Participants (n = 414)

The respondents were asked the most common source of information they would turn to concerning vaccines and the responses were as presented in Fig 3. The largest percentage (30%) of participants relied on private radio announcement as a source they would turn to for information about vaccines, followed by Community Town Crier (22%), Vaccination Mobilizer (20%), Church announcement (11%), National Radio Announcement (9%), Private Press (6%) and National Press (2%), respectively.

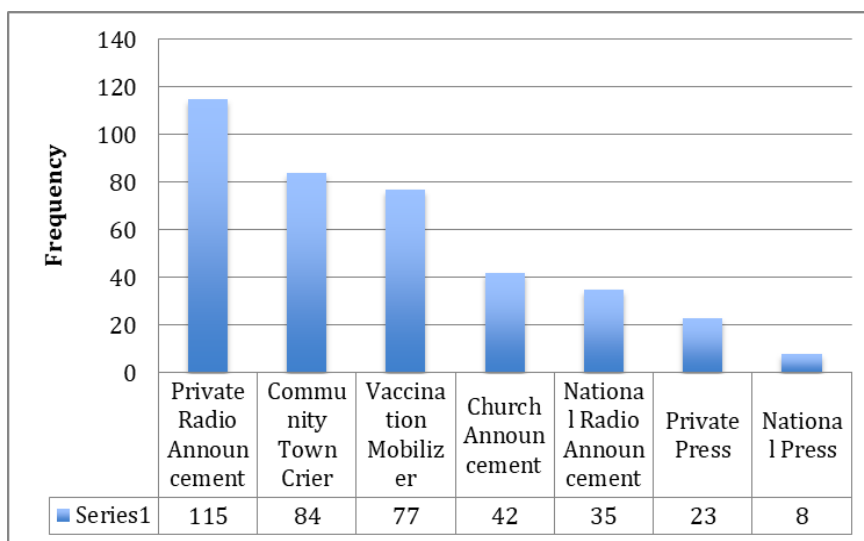


Figure 3 Most common Sources of Information on Vaccines (n = 384)

The study participants were asked what they would do when they hear a negative rumour related to a vaccine. About three-fifths of the study participants 238 (62%) would ask a friend what they think and 77 (20%) would refuse to take the vaccine. Others would ask a health worker (8%), consult the Church Pastor/Priest (7%) or go to the Internet (3%).

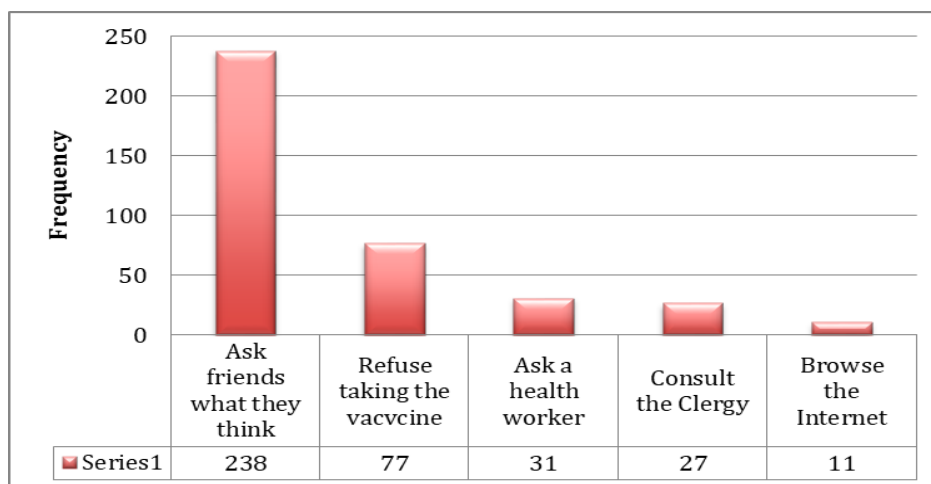


Figure 4 Action Respondents would take on hearing a negative rumour related to vaccine(s) (n = 384)

The study participants were asked what they would do when they hear a negative rumour related to a vaccine. About three-fifths of the study participants 238 (62%) would ask a friend what they think and 77 (20%) would refuse to take the vaccine. Others would ask a health worker (8%), consult the Church Pastor/Priest (7%) or go to the Internet (3%). The study participants when asked to mention the source of information about vaccination they trusted the most, village health committee was mentioned by 73 (39%), followed by vaccination mobilizer 32 (17%). Social meeting groups, private press, the Church Pastor / Priest, Private Radio Television, Cameroon Radio Television and Government Press were mentioned by a few respondents as trusted sources of information about vaccination (Table 1)

Table 1 Most Trusted Information Sources about Vaccination by Non-Medical Personnel (n = 188)

Response	Frequency	%
Village Health Committee	73	39
Vaccination mobilizer	32	17
Social Meeting Groups	24	13
Private Press	19	10
The Church Pastor / Priest	15	8
Private Radio Television	13	7
Cameroon Radio Television	6	3
Government Press	6	3

One hundred and seventeen (62%) of the non-medical study personnel in general agree with anti-vaccination lobby groups. The remaining 38% of the respondents said that they don't agree with anti-vaccination lobbies (Fig. 5)

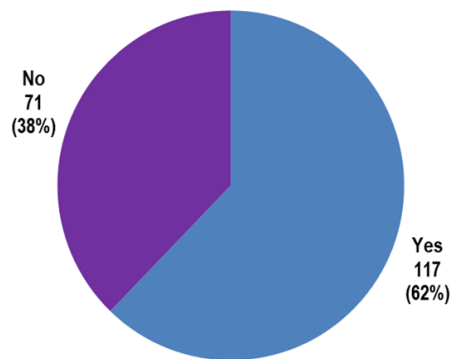


Figure 5 Agree with Anti-vaccination lobbies (n = 188)

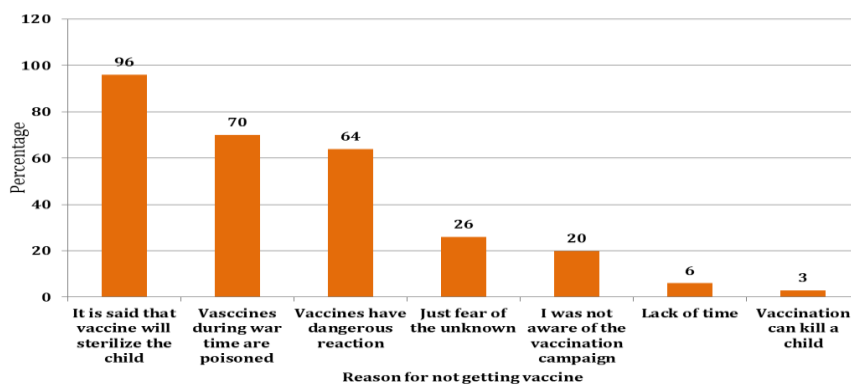


Figure 6 Reasons for not getting their children vaccinated (n =414)

3. Historical influences

The respondents were asked if they could remember any events in the past that discouraged them from getting vaccine(s) for themselves or their children.

According to the respondents, The 2018 political activists discouraged the populations of the Anglophone regions from receiving vaccines from the Cameroon government describing them as having been poisoned, and the 2016 rumour that the Ebola Trial Vaccine in Bamenda was intended for the gradual reduction of the North West Population discouraged 376 (98%) and 305 (79%) of them from getting a vaccine(s) respectively. (Table 2)

Table 2 Past Events that discouraged Respondents from getting Vaccinations: ($n = 384$)

Brief Description	Yes	No	Total
In the early 1990s Tetanus Toxoid was allegedly used to render women of childbearing age sterile for political reasons.	305 (79%)	79 (21%)	384 (100%)
In 2016 it was rumoured the Ebola Trial Vaccine in Bamenda was intended for the gradual reduction of the North West population.	371 (97%)	13 (3%)	384 (100%)
Last year political activists discouraged the populations of the Anglophone regions from receiving vaccines from the Cameroon government, describing them as having been poisoned.	376 (98%)	8 (2%)	384 (100%)

3.1. Statistical Analysis

Table 3 Reasons for Vaccine Resistance and Denial.

* CI = 1.96 - 95% and Significance Level = 5% (0.05); Software: Stata.

VARIABLES	YES	NO	T-stat	P-value	DF
In the early 1990s Tetanus Toxoid was allegedly used to render women of childbearing age sterile for political reasons.	305	79	14.06	0.00	383
In 2016 it was rumoured the Ebola Trial Vaccine in Bamenda was intended for the gradual reduction of the North West population.	371	13	46.56	0.00	383
Last year political activists discouraged the populations of the Anglophone regions from receiving vaccines from the Cameroon government, describing them as having been poisoned.	376	8	61.65	0.00	383

*All variables have a P-value of less than 0.05. They are therefore significant to the prevalence under study.

4. Discussion

On the overall, 414 subjects participated in the study with ages ranging between 15 years and slightly over 55 years, with an average age of 30 years. This age range is pretty similar to that of a sample of Angolan soldiers on whom a similar study was carried out by Bing et al (2005) [6] on HIV Preventive and Control Interventions, even though in the present study we are dealing with the prevention of Polio through efficient and effective vaccination and immunization. Participants' ages ranged from 18 to 51 years with a mean of 29 years.

Meanwhile, a remarkable shortage of health workers was observed and this could negatively influence access to disease prevention and health care. In a similar study implemented in Uganda in September 2005 on infection prevention, the majority of participants were nursing assistants and support staff with minimal professional health qualifications. [7] This was as a result of an acute shortage of health staff in Uganda.

Staff recruitment, retention and motivation are therefore crucial as a solution to shortage of personnel in health care delivery. Rumours and negative campaigns can be terribly devastating to vaccination and immunization programmes and ought to be addressed promptly. Some rumours can be founded, though. Concerning vaccine resistance and denial as a result of past events and rumours, all variables have a P-value = 0.00 (less than 0.05). They are therefore significant to the prevalence in question.

In our current context we have rumours dating as far back as in the 1990s, comprising politically motivated rumours (the case with Tetanus Toxoid vaccine and HPV vaccine), rumours from misconceptions about vaccination (the case with the Ebola Vaccine trial in Bamenda). This corroborates with the findings of Ndipowa et al (2016) [8] on Vaccination and Immunization Misconceptions in Cameroon. The findings revealed that the resistance against, and refusal of vaccines by some populations has marred the efficiency and efficacy of vaccination campaigns against diseases of epidemic potential such as Poliomyelitis, Measles, Yellow Fever, and Tetanus. This problem could also be attributable to inadequacies in policy, management, and governance. Effective vaccination and immunization coverage in Cameroon, therefore, needs to be reviewed and revamped.

It is worth noting that rumours and negative campaigns against vaccination are not unique to the Bamenda Health District. We are aware that between 2003 and 2011 Nigeria faced the same phenomenon. There are several important steps that the Nigerian government took to neutralize and dispel rumors in order to avoid dire health consequences. The Nigerian authorities had to start by building public trust. But it was also important for the government to combat ignorance with knowledge about the vaccines. Before any immunization exercise was conducted, citizens had to be given adequate information. Health workers had to be equipped to answer questions that people might have. Readily available pre-packaged frequently asked question pamphlets were helpful and the media had to also be brought on board right from the outset. [9]

This was an excellent example to emulate. Therefore to combat false rumours the government and relevant authorities must articulate and disseminate appropriate counter messages. The messages must provide answers to the fears that led to the rumours in the first place, and should be disseminated through the same channels used by those spreading the rumours. The government must also promptly and appropriately respond to the concerns of high profile individuals such as politicians, and of the populations they represent. Lastly, health interventions must be provided by the publicly recognized health agency of government, rather than agencies that could be questionable.

5. Conclusion

The Polio vaccination and immunization programme in the Bamenda Health District is inefficient and ineffective as a result of massive deficiency in knowledge and insufficient capacity building of the population and stakeholders. This is compounded by past events, rumours and negative campaign messages about vaccines and vaccination programmes. Intensive health education and health promotion are therefore a crucial responsibility of the public health authorities.

Recommendations

- We strongly encourage the health authorities of the North West Region in general and the Bamenda Health District in particular to emulate the Nigerian experience as described earlier in this discussion and endeavor to address all issues of rumours and negative campaign messages accordingly and promptly.
- The government and other concerned stakeholders should stop or suspend political crisis and create an enabling and safe environment for efficient and effective vaccination campaigns to be carried out.

Suggestions for further research

- Effective Vaccination and Immunization Coverage of Displaced Populations in Cameroon: Serum Immuno-Antigen level of Various Pathogens.
- KAP study on Disease Prevention, Control and Health Promotion in Bamenda Health District.

Compliance with ethical standards

Acknowledgments

My gratitude to Dr. Christian Wankah for his tremendous interest, moral support and encouragement, and for dedicating a lot of his time to proofread and make fruitful inputs to this work. I am profoundly grateful for the invaluable financial and moral support from my daughter Miss Bih Annita Attangeur. I render my heart-felt gratitude to Mr Che Alphonsius

Attangeur Ndipowa for his permanent and unflinching moral and financial support in all my endeavors. As a first-born he has been up to his merits.

Disclosure of conflict of interest

We declare we have no competing interests. The research article is original and has not been submitted or accepted for publication elsewhere.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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