



AN EVALUATION OF HEALTH COMMUNICATION STRATEGIES FOR MALARIA IN YAOUNDÉ

BY IRINE NDZEBIR EBOB

Department of Sociology, Specialty: Population and Development, Faculty of Arts, Letters and Social Sciences,
University of Yaoundé I, Yaoundé (Cameroon).

ABSTRACT

Malaria is a major health problem in Cameroon with children under 5 years old and pregnant women being the most vulnerable and affected groups. The government came up with a national strategic plan to permanently eradicate the disease. In order to bridge the gap between strategies put in place, the expected results and reinforce the strategies, some field actors (non-governmental organizations, and media houses) in Yaoundé's communication strategies were assessed to know where the problem comes from, ameliorate and strengthen the strategies for better impact and efficiency. The main question was "how do field actors raise awareness on malaria in Yaoundé, and what are the limitations of their strategies?". The general hypothesis was "field actors used interpersonal and group discussions to spread the word about malaria, but they were constrained by a lack of funding and tools needed to carry out sensitization campaigns". Important information on field actors' communication techniques were gathered through interviews with seven participants from non-governmental organizations and media houses in Yaoundé, and field data was assessed using qualitative content analysis. The general hypothesis was supported by field data because the field actors employed several tactics such as interpersonal and group discussions but were limited due to inconsistent sensitization activities carried out with majority not having sufficient funds, and adequate monitoring and evaluation systems put in place, which played a huge role in the malfunctioning of the communication strategies. Thus, making it difficult to completely eradicate malaria in Cameroon.

Keywords: Malaria, Health communication, field actors' strategies, Evaluation, advantages, disadvantages, Yaoundé

GENERAL INTRODUCTION

I.1. Background study

Malaria is a major problem in Cameroon (Chiana et al 2022, pages 1-2), with the entire country at risk of infection (Nkondjio et al, 2019; Niba et al 2021, page 2; Obase et al 2023, page 2). Outdoor biting and resting behavior of vectors, restricted or limited contact of mosquitoes with treated items, early departing from residences or early evening biting behavior are thought to drive persistent malaria transmission (Bamou et al, 2021; Ngadjeu et al 2022, page 2). Malaria is caused by the parasite plasmodium (Kolawole et al 2023, page 242) which is spread via female anopheles mosquito bites (Ministère de Santé Publique, 2019; Fosah et al 2022, page 47; Mariano et al 2023, page 1; Suh et al 2023, page 1), and is responsible for 24% of all medical consultations and almost 45% of all hospitalizations in health facilities (United States Agency for International Development, 2019).

According to the Ministry of Public Health, malaria is responsible for 30 to 35% of overall death and 67% of yearly childhood mortality (Nyasa et al 2021, page 2). This is due to the parasite that causes malaria adapting to all medications and thus, becoming resistant to drugs (Tuedom et al 2021, page 2) at all stages of its life cycle (Delves et al, 2012), healthcare been pricey, unequal distribution of health services, high poverty rates, low population purchasing power, lack of information and follow up on activities (Nlinwe and Ateh 2020, page 4). The government developed the 2019-2023 national strategic plan to eradicate malaria with the goal of making Cameroon malaria-free. The strategic axes include: prevention, case management, communication, monitoring and evaluation, research/training and program management (United States Agency for International Development, 2020). Among the interventions included in the national strategic plan, eight communication methods were defined based on the type of intervention aimed for social and behavioral change to be employed which includes interpersonal communication, mass communication, capacity building, advocacy and partnership, social mobilization, social marketing, institutional communication and crisis communication (Programme National de Lutte Contre le Paludisme, 2019).

Health communication is the study and application of communication methods to shape, influence individual and community decisions that improve health (Community Guide, 2022; Rural Health Information Hub, 2022). Because health communication strives to influence people's knowledge, attitude and behavior, in order to induce a change and improve health, the components and stages (sender, receiver, message, channels, feedbacks) of health communication must be respected and effective (Open University, 2022).

These strategies failed and produced little or no permanent changes thus, making malaria still a huge threat to the general population, responsible for 5.4% of deaths in Yaoundé and about 17.2% of all deaths in Cameroon in 2020 (National Malaria Control Program's department of Monitoring and Evaluation, 2022). It is vital to evaluate the communication strategies employed, taking into account their applicability and limitations, in order to resolve this issue.

Asking the right question will help identify suitable solutions and enhance communication strategies. The principal question is “how do field actors raise awareness on malaria in Yaoundé, and what are the limitations of their strategies?”. Before starting the field inquiry, it was necessary to develop a hypothesis that would serve as a guide, and has not yet been confirmed or refuted. The general hypothesis is “field actors used interpersonal and group discussions to spread the word about malaria, but they were constrained by a lack of funding and tools needed to carry out sensitization campaigns”. The principal objective that must be achieved for the study to be successful in addressing the problem is laid out in the predefined hypothesis on health communication techniques; “to evaluate how field actors’ carry out malaria sensitization in Yaoundé and the limitations of their methods”. This study focuses on government field partners (non-governmental organizations, and media houses), going on to assess communication strategies put in place in order to identify the loopholes, problems with the strategies and what needs to be ameliorated to promote a permanent change in behavior and thus, completely eradicate malaria in Cameroon.

This study will permit the government and policy makers know if the reasons for the failed strategies could be the field actors’ communication strategies, expose the difficulties encountered by the field actors and where support is needed to reinforce the communication tactics. Thus, the purpose of this study is to evaluate the malaria-related communication strategies used by non-governmental organizations, and media houses in Yaoundé. In order to collect the data required to address the research question and eventually provide insightful solutions to the problem, we must employ specific techniques.

I.2. Methodology

The data for this field study was collected from a specific group at a specific location and time in order to answer the research question and accomplish the goal.

1.2.a. Study area:

This findings from a study “*Health communication process concerning malaria in Cameroon: the role of actors for change of behavior*” (Ndzebir, 2023), was carried out in Yaoundé the political capital of Cameroon (Nations Unies pour les Établissements Humains 2007, page 9) with over 3,660,082 inhabitants and 775,911 households in 2017 (Feumba and Levine 2018, page 1) in 7 districts all administered by a municipal council with a mayor. In order to assess the efficiency of the strategies, field data was collected in four non-governmental organizations and two media houses from August 2021- February 2022.

I.2.b. Study design:

We considered a lot of factors when choosing field actors for interviews. We sought to include field actors from a variety of domains in order to create a group with experiences of raising awareness for a variety of diverse groups (pregnant women, general population, youths, and adults), and who participated in field operations pertaining to malaria in particular areas in Yaoundé. The type of field actors selected for this study (non-governmental organizations and media houses) were chosen based on the national strategic plan which identified and used different field actors to reach the entire population of Cameroon; the non-governmental organizations all based in Yaoundé and intervene in specific sectors: Cycle of Support for Rural Development in Yaoundé I and II districts, Association the Volunteers for Progress and Well-Being in Yaoundé II district, Aripia in Yaoundé V and VII districts, and Positive Generation in Yaoundé III and VII districts. Some of the non-governmental organizations carried out activities based on the project, sponsors instructions and requests.

Lastly, Canal 2 International television and Royal FM radio all based in Yaoundé and accessible are the two media houses (radio and television) chosen. Canal 2 International television was chosen because it is the first private and most widely watched commercial channel in Cameroon. Additionally, one of the four primary television stations the non-governmental organization Malaria No More utilized in 2011 to disseminate its night watch platform campaign across the country. The radio station Royal FM was selected at random for this study because it is a reachable radio station in Yaoundé that serves the population of Cameroon, and has statewide coverage. Most importantly, it raises awareness on malaria through its health program (Ndzebir 2023, page 229, 233).

The literature review aimed at introducing and facilitating the understanding of the situation at hand for the reader, and to capture as many relevant data as possible. Google and websites like horizon documentation were searched in order to access published reports on malaria in Cameroon. Search terms used to guide these searches included “malaria”, “parasite”, “prevalence”, “drug resistance”, “national malaria strategic plan”, “health communication”, “Yaoundé”. Documents from 2007-2023 were selected from the databases, and the articles used in the review were chosen based on their content on malaria in Cameroon. Data on communication strategies in Cameroon were gotten from the national strategic plan for malaria 2019-2023, and all documents used in this study were either in French or English language.

The qualitative method used was interview where participants were interviewed on their activities and strategies to educate about malaria. In this study, manual procedures based on note-taking and summarization was used as the initial step in obtaining the qualitative data for analysis. Quotations were utilized to clarify, and to help readers comprehend complicated procedures, why the interviewees held certain opinions or adopted certain techniques (Corden and Sainsbury 2006a, page 2). Using the framework approach for data display as a foundation, the data were analyzed methodically and transparently (Corden and Sainsbury 2006b, page 5). Content analysis assisted in locating, classifying, and organizing texts to understand concepts (Gheyle and Jacobs 2017, page 3; Shava et al

2021, page 553). The data were organized and summarized using a thematic framework with headings and categories reflecting the original research question.

The key conclusions from the analysis are presented below. The author chose to utilize the words and phrases in italics that were occasionally used by the people questioned because they make it easier to grasp. In their area of intervention, the field actors conducted several malaria-related initiatives targeting specific target populations.

II. FIELD ACTORS' COMMUNICATION STRATEGIES FOR MALARIA, ITS ADVANTAGES AND LIMITATIONS

The field actors engaged in a variety of malaria-related activities and employed tactical communication techniques in order to reach their targets and attain their objectives.

II.1. Field actors' targets for malaria-related activities:

According to the Coordinator of Aripia (2021), their focus is on *“human immunodeficiency virus, tuberculosis, malaria and hepatitis, and targets people living with human immunodeficiency virus, orphans, poor and vulnerable children”*. Meanwhile, Positive Generation's Community Mobilization Officer (2022), and Association the Volunteers for Progress and Well-Being's Secretary General (2022) both stated that they target *“the general public”*. Cycle of Support for Rural Development's Chief of activities and monitoring (2022) said their campaigns are directed at *“families, expectant mothers, and kids under five”*. Lastly, both Canal 2 International television's journalist Madam Ngamo (2021) and Royal FM radio's Editor in chief (2021) stated that they target *“the entire population of Cameroon”*.

Activities pertaining to malaria were carried out in Yaoundé by non-governmental organizations and media houses in order to reach their target audience and accomplish their targeted goals.

II.2. Field actors' activities and media programs on malaria:

On the activities carried out by the non-governmental organizations, Cycle of Support for Rural Development's Chief of activities and monitoring (2022) pointed out that *“some organizations depend on the project at hand, funds and objectives”* before choosing an activity. The participants asserted their activities include *“sharing insecticide treated nets”*, *“cleaning the environment”* with help from municipal councils, *“carrying out sensitization campaigns”* where they *“educate”* and *“train”* on malaria, *“monitoring and evaluation”* of healthcare access and services. Only trained personnel, partners and volunteers carry out the field activities. Concerning programs on malaria, the participants stated that they have no specific program(s) but health magazines that sensitize on all pathologies and news reports. Canal 2 International television has *“nous chez-vous and checkup”*, and Royal FM radio *“family health magazine”*.

They implemented several initiatives related to malaria while applying strategic communication tactics in order to reach their targets and attain their objectives.

II.3. Field actors' communication strategies for malaria:

The non-governmental organizations' participants declared they utilized "*mass communication*" in public places such as markets, "*door to door*" sensitization where they use "*interpersonal*" method to educate the head of households on malaria, and "*use parents*" to teach their children (the case of Cycle of Support for Rural Development), and "*focus groups*" (for both Cycle of Support for Rural Development and association the Volunteers for Progress and Well-Being). Also, they used "*pair educators*", "*community health workers*", and "*community leaders*" such as chiefs to reach the population. Positive Generation also placed "*posters*" in hospitals, used the "*media*", "*Facebook*", "*website*" and the application "*Treatment Access Watch online*" to monitor access to healthcare. Meanwhile, Aripia solely used "*religious leaders*" to educate their congregation. Concerning media houses, the participants asserted that they raise awareness on malaria during "*world malaria days*", "*news coverage*", "*topics*" which are treated on health magazine programs where "*health professionals*" are invited to "*answer questions*".

They used specific communication techniques because the advantages increased their level of effectiveness and comprehension.

II.4. Advantages of field actors' communication strategies for malaria:

All the non-governmental organizations' participants highlighted that the messages they put out on malaria are "*accepted*", "*practiced*", and "*taken seriously*" especially when they work with "*community health workers*" and get the chief's "*accord*". Also with door to door and interpersonal communication, the people are "*attentive*", and "*ask questions*". For Positive Generation, with the Treatment Access Watch application, information is "*accessible by everyone*" and the application provides information on treatment and other data on malaria. Moreover, on the field actors' criteria for choosing communication tactics, only association the Volunteers for Progress and Well-Being, and Positive Generation base their choices on the "*socio-cultural backgrounds*", "*ways of living*", and "*values*" of the people.

Also, concerning the results obtained with the strategies, the Community Mobilization Officer of Positive Generation (2022) stated that "*the population got to know the protocol for treatment, and prevention of malaria in health facilities*". Also for Aripia, patients got "*informed*" and "*changed*" their behavior. For media houses, the participants said their messages "*reach*" people "*all over the country*", and the programs with health professionals are "*efficient*". Moreover, the results are "*quantified*" based on "*feedbacks*" which proved the tactics efficient, and as confirmed by Madam Ngamo (2021) "*more people*" sleep under insecticide treated nets.

Furthermore, they have partners who sensitize in their intervention zones. For organizations, the participants said “*associations*”, and “*municipal councils*”. Meanwhile, media houses partnered with “*medical professionals*” and “*non-governmental organizations*” to educate their audience.

Moreover, on their evaluation systems, the association the Volunteers for Progress and Well-Being evaluates the efficiency of its strategies through “*statistical data*” from district hospitals, gotten from the health district. Meanwhile, Cycle of Support for Rural Development shares “*monitoring and evaluation sheets*” to get the population’s opinion on the activities, and impacts on behavior. Positive Generation uses its “*monitoring application*” which is “*weekly reviewed*”. Aripia as reported by the Coordinator (2021) carries out field surveys “*once every month to assess activities, impacts, communication strategies efficiency, and every two months, to assess knowledge, attitude, and practices*”. For association the Volunteers for Progress and Well-Being, they observed changes from neighborhoods that come up with “*cleaning days*” and pregnant women who “*seek treatment*” in hospitals when sick. After 3 or 5 months community leaders convoke their people and ask questions, and if the results are “*not satisfactory*”, they go back and sensitize. Canal 2 International’s journalist Madam Fotso (2021) revealed that “*Canal 2 International has the Dimat study which evaluates to know which program is most watched*”.

Also, on the period and frequency of activities, only Positive Generation intervenes “*everyday*”. For Cycle of Support for Rural Development, it’s “*from September to December*” for pregnant women and during the “*long holidays*” for children. Aripia intervenes “*during festive periods*” like “*11 February*”, “*June*”, “*March*”, “*December*”, and “*November*” which is the month for international days.

The methods used were effective, but they also had a number of drawbacks that limited their ability to intervene.

II.5. Disadvantages of field actors’ communication strategies for malaria:

According to participants from the non-governmental organizations, some people are “*hostile*” during community campaigns. Others receive “*multitude of information*” and end up being confused. The Coordinator of Aripia (2021) emphasized on “*limited financial resources*”.

Also, regarding the period and frequency of activities, Cycle of Support for Rural Development’s Chief of activities and monitoring (2022) reported “*it’s not possible to carry out sensitization whenever we feel as to because there are days which are not accessible, for example weekends*”. Meanwhile, association the Volunteers for Progress and Well-Being educates only during “*insecticide treated nets distribution campaigns*”. The media houses sensitize only when it’s the most talked about topic in communities, and usually spontaneously. According to the Editor in chief (2021), “*Royal FM radio’s family health program airs on Sundays from 1pm-3pm*”. Meanwhile, Madam Ngamo (2021) revealed “*Canal 2 International’s check-up program airs during prime hours on Tuesdays at 9:30pm, and is rebroadcasted the following day*”. Also, media participants find it difficult to get “*in contact with*

resource persons” and “can’t tell who was impacted” by the messages. Moreover, they “do not carry out field studies” nor “air programs regularly” on malaria. On the duration of media program(s), it depends on the “topic treated” but most importantly on the “standard time” stated by the media houses. For Canal 2 International television, it’s “26 minutes”.

Concerning their methods of assessing communication tactics and activities, all the participants admitted they observed changes in behavior and know it’s as a result of their activities through “feedbacks” but can’t tell if the people are being honest. Cycle of Support for Rural Development uses its monitoring and evaluation sheet every six weeks after raising awareness and during general cleaning days in neighborhoods. But, the Chief of activities and monitoring (2022) admitted that “the evaluation carried out after a month and a half is not enough, we need to assess every 6 months but project sponsors and partners do not approve it, making our efforts useless because people after a short period of time without any follow up go back to their old ways”. Meanwhile, Positive Generation and the media houses do not carry out field surveys.

Furthermore, on criteria for choosing communication tactics, Cycle of Support for Rural Development bases its choice on the “activity and objective to be attained”. Meanwhile, Aripia depends on their “personal expertise” and “chosen zone” to carry out activities. Media participants admitted they “do not consider” factors before choosing a strategy because they target the “entire population”. They only use “simple terms” to be “understood”.

Lastly, concerning a budget for malaria, only Positive Generation has one which permits to “sensitize yearly”, with “indicators” and “objectives”. Meanwhile, other participants declared they do not have a “fix budget”, and their “activities” depend on “sponsored projects”. Also, they face “population resistance”, and “difficulties” in “accessing” certain neighborhoods to monitor their activities.

With the current data, the Secretary General of association the Volunteers for Progress and Well-Being (2022), and the Chief of activities and monitoring of Cycle of Support for Rural Development (2022) confirmed that the strategies are “not efficient” enough to “motivate” a permanent change in behavior due to “irregular” and “inconsistent” activities and their inability to meet the “demands” of the people. This explains why the communication strategies are not well planned out and applied. As suggested by some participants, the strategies need to be “strategically” chosen, “efficient” and “target-based”. Those that are not “value-considerate”, are “less likely” to be appreciated by the people and for a message to “reach” the target audience, be “understood” and “accepted”, they need to use the “appropriate” and “adequate” channel(s) of information which is appreciated by the people.

To be more efficient, the field actors’ emphasized on government support. They insisted on a “fix budget”, “subventions”, “funds”, and proper “monitoring and evaluation systems”. Also, the Coordinator of Aripia (2021) emphasized “all actors should sensitize that is the media, the Ministry of Public Health, and international partners”. Moreover concerning media houses, Madam Ngamo (2021) suggested that “organizations should

produce 4-5 minutes shots, distribute to media houses and also, media houses should produce crawls, and make interactive programs". Moreover, Royal FM radio's Editor in chief (2021) responded that *"the government can create an android application, produce cosmetic products with insecticides, and other key actors in the fight against malaria should communicate on their activities and projects"*.

GENERAL CONCLUSION

This study focused on malaria, a problem that has long been prevalent in Cameroon. The investigation was "An evaluation of health communication strategies for malaria in Yaoundé". It aimed to bridge the gap between Cameroon's professed objective of completely eradicating malaria and the reality of the situation. The government created interventions that were carried out by key players such as non-governmental organizations and media houses in order to achieve the goal. These interventions included behavior-change communication, monitoring, and evaluation. However, the mission's objective was not achieved. This study intended to enable the government and policy makers determine whether the field actors' communication techniques contributed to the failure of the strategies and how to improve them. For the purpose of this study, non-governmental organizations (Cycle of Support for Rural Development, Association the Volunteers for Progress and Well-Being, Aripia, and Positive Generation), and media houses (Canal 2 International television and Royal FM radio) were chosen. Data on the field actors' communication tactics were obtained through interviews. Regarding the question "how do field actors raise awareness on malaria in Yaoundé, and what are the limitations of their strategies?", the field actors used group discussions, one-on-one dialogues, and media health programs, but they ran into problems including public opposition, a lack of funding, and certain field actors lacking appropriate evaluation systems, among others. The hypothesis "field actors used interpersonal and group discussions to spread the word about malaria, but they were constrained by a lack of funding and tools needed to carry out sensitization campaigns" was approved. Based on field data, the field actors employed interpersonal and mass communication strategies, door-to-door dialogues, and media health programs. But were limited and could not contribute in the permanent eradication of malaria due to poor and ineffective communication approaches, inconsistent malaria sensitization efforts, lack of funds and tools. As the study critically examined the various field actors' activities, communication tactics and constraints, the objective of examining the field actors' communication strategies and limitations were met. The information gathered proved the communication tactics also contributed to the failure of efforts to completely eradicate malaria in Cameroon. To achieve proper and effective sensitization, the field actors' communication tactics need to be supported by regular monitoring and assessment as well as financial reinforcement. Also, limitations were discovered during the field research; the field actors' (except Positive Generation) lack of records of their activities linked to malaria hindered and lengthened the procedure. Further studies should be carried out to assess other field actors' strategies nation-wide and on the other interventions in order to bridge the gap and come up with more accurate policies and methods which are acceptable, feasible and efficient in producing change and thus, contribute towards the permanent eradication of malaria in Cameroon.

BIBLIOGRAPHY

- BAMOU R., RONO M., DEGEFA T. et al** (2021), “*Entomological and Anthropological factors contributing to persistent malaria transmission in Kenya, Ethiopia and Cameroon*”. The Journal of Infectious Diseases. 223(Supplement 2): pages 155-170.
- CHIANA N.S., NKAHE L.D., KOPYA E. et al** (2022), “*Rapid evolution of insecticide resistance and patterns of pesticides usage in agriculture in the city of Yaoundé, Cameroon*”. Parasites and Vectors. 15:186. Pages 1-15.
- COMMUNITY GUIDE** (2022), “*Guide to community preventive services. Health communication and health information technology*”. Accessed 27/05/2023. <https://www.thecommunityguide.org/topics/communication-and-health-information-technology.html>.
- CORDEN A. and SAINSBURY R.** (2006a), “*Verbatim quotations in applied social research: theory, practice and impact*”. Cathie Marsh Centre for Census and Survey Research, Manchester. Pages 1-4.
- CORDEN A. and SAINSBURY R.** (2006b), “*Using verbatim quotations in reporting qualitative social research: researchers’ views*”. York: Social Policy Research Unit, University of York. Pages 1-37.
- DELVES M., POUFFE D., SCHEURER C. et al** (2012) “*The activities of current antimalarial drugs on the life cycle stages of plasmodium: A comparative study with human and Rodent parasites*”. PLoS Medicine 9(2): pages 1-14.
- FEUMBA R. and LEVINE A.B.** (2018), “*SFD report: Yaoundé, Cameroon*”. GFA Consulting Group GmbH, Hamburg, Germany. Pages 1-53.
- FOSAH S., MBOUNA A.D., EFON E. et al** (2022), “*Influences of rainfall and temperature on malaria endemicity in Cameroon: Emphasis on Bonaberi District*”. Journal of Geoscience and Environment Protection, 10, pages 46-66.
- GHEYLE N. and JACOBS T.**, (2017), “*Content analysis: a short overview*”. Internal Research Note. Pages 1-17.
- KOLAWOLE E.O., AYENI E.T., ABOLADE S.A., et al** (2023), “*Malaria endemicity in Sub-Saharan Africa: past and present issues in public health*”. Microbes and Infectious Diseases; 4(1): pages 242-251.
- MARIANO R.M.D.S, GONÇALVES A.A.M., OLIVEIRA D.S.D., et al** (2023), “*A review of major patents of potential malaria vaccine targets*”. Pathogens, 12, 247. Pages 1-16.
- MINISTÈRE DE SANTÉ PUBLIQUE** (2019), “*Plan stratégique national de lutte contre le paludisme au Cameroun 2019-2023*”. Cameroun: Ministère de Santé Publique. Pages 1-103.

NATIONS UNIES POUR LES ÉTABLISSEMENTS HUMAINS (2007), *“Profil urbain de Yaoundé: Programme des nations unies pour les établissements humains”* Division de la coopération technique et régionale. Pages 1-41.

NDZEBIR I.E. (2023), *“Health communication process concerning malaria in Cameroon: the role of actors for change of behavior”*. Doctor of philosophy thesis, University of Yaoundé I.

NGADJEU C.C., TALIPOUO A., KEKEUNOU S. et al., (2022), *“Knowledge, practices and perceptions of communities during a malaria larviciding randomized trial in the city of Yaoundé, Cameroon”*. PLOS ONE 17(11). Pages 1-17.

NIBA P.T.N., NJI A.M., EVEHE M.S. et al (2021), *“Drug resistance markers within an evolving efficacy of anti-malarial drugs in Cameroon: a systematic review and meta-analysis (1998-2020)”*. Malaria Journal. 20:32. Pages 1-20.

NKONDJIO C.A., NDO C., NJIOKOU F. et al (2019), *“Review of malaria situation Cameroon: technical viewpoint on challenges and prospects for diseases elimination”*. Parasites and Vectors. 12:501. Pages 1-23.

NLINWE N.O. and ATEH T.A.E. (2020), *“Assessment of malaria predisposing factors among crop production farmers attending the Ndop District Hospital, North West Region of Cameroon”*. Journal of Parasitology Research. Volume 2020, pages 1-8.

NYASA R.B., FOTABE E.L. and NDIP R.N. (2021), *“Trends in malaria prevalence and risk factors associated with the disease in Nkongho-Mbeng; a typical rural setting in the equatorial rainforest of the South West region of Cameroon”*. PLoS ONE 16(5). Pages 1- 20.

OBASE B.N., ZEUKENG F., FORGU E.L.M et al, (2023), *“The effects of HIV infection on the immune response to malaria among pregnant women in Kumba, Southwest Cameroon: Protocol for a cross-sectional study”*. Journal of Medical Internet Research- Research Protocols, volume 12.:e38213. Pages 1-12.

OPEN UNIVERSITY (2022), *“Health education, advocacy and community mobilization module: 8 components of health communication”*. Open University. Accessed 22/02/ 2022.

<https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=165&printable=1>.

PROGRAMME NATIONAL DE LUTTE CONTRE LE PALUDISME (2019), *« Stratégie nationale de communication pour le changement social et de comportement du plan stratégique national lutte contre le paludisme (PSNLP) 2019-2023 »*. Cameroun : Ministère de la Santé Publique. Pages 1-85.

RURAL HEALTH INFORMATION HUB (2022), “*Health communication*” Rural Health Information Hub. Accessed 22/02/2022. <https://www.ruralhealthinfo.org/tool/kits/health-promotion/2/startegies/health-communication>.

SHAVA G.N., HLEZA S., TLOU F. et al (2021), “*Qualitative content analysis, utility, usability and processes in educational research*”. International Journal of Research and Innovation in Social Science, Volume V, issue VII, pages 553-558.

SUH P.F., NDILLE E.E., TCHOUAKUI M., et al (2023), “*Impact of insecticide resistance on malaria vector competence: a literature review*”. Malaria Journal, 22:19. Pages 1-11.

TUEDOM A.G.B., MATIO E.M.S., MOUKOKO C.E.E. et al (2021), “*Antimalarial drug resistance in the central and Adamawa regions of Cameroon: prevalence of mutations in p.falciparum crt, pfmdrj/pfdhfr and pfdhps genes*”. PLoS ONE 16(8). Pages 1-19.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (2019), “*Presidents malaria initiative Cameroon: Malaria operational plan FY2018 and FY 2019*”. Cameroon: United States Agency for International Development. Pages 1-61.

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT (2020), “*US president’s malaria initiative Cameroon: Malaria operational plan FY 2020*”. Cameroon: United States Agency for International Development. Pages 1-124.

LIST OF INTERVIEWED PERSONNEL

Field Actors	Post Description	Name of Personnel	Telephone number	Date of Interview
A. NON-GOVERNMENTAL ORGANIZATIONS				
1.Aripia	Coordinator of Aripia			24/11/2021
2.Cycle of Support for Rural Development	Chief of activities and monitoring		697889400	14/02/2022
3.Association the Volunteers for Progress and Well-Being	General secretary	Mr. Emmanuel		16/02/2022
4.Positive Generation	Community mobilization officer			18/02/2022
B. MEDIA CHANNELS				

1.Canal 2 International Television	Journalists	-Madam Beatrice Ngamo	677173637	30/08/2021
		- Madam Mirreil Fotso	679473983	31/08/2021
2.Royal FM Radio	Editor in chief			24/11/2021

