



## Original Article

## The Implementation of a Community-Based Hand Washing Initiative to Slow the Spread of COVID-19 in Cameroon

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### ABSTRACT

**Background:** With an armed conflict prevailing in the Northwest and Southwest regions since 2016, Cameroon faces significant challenges of limited medical attention and insufficient availability of health services. In the wake of the COVID-19 pandemic, the overall vulnerability to disease is therefore increased. The WHO has emphasized several measures to prevent the spread of COVID-19, such as hand washing with soap and water. However, the dissemination and quality of health information within Africa has historically been ineffective. Such information is not easily accessible and recommended health measures are not always implemented. In efforts to promote the dissemination of health information and recommended health guidelines for COVID-19 in Cameroon, we implemented a community-based health initiative surrounding hand washing. **Methods:** We simultaneously distributed soap and disseminated public health guidelines on COVID-19 to various neighborhoods in Cameroon, within the cities of Bamenda and Yaoundé. Dissemination of information within each neighborhood was coordinated with assistance of community leaders. COVID-19 information was shared in many forms including verbal communication and physical demonstrations of how to properly wash hands. **Results:** Between March 2020 and August 2020, 13 soap distributions were carried out in five neighborhoods. Overall, we reached an estimate of 1247 households, 5300 people and delivered approximately 3390 units of soap throughout the distributions. A lack of awareness on COVID-19 precautions was observed within the communities visited. In addition, many people lacked access to soap, making it difficult to follow public health guidelines to practice hand washing. **Conclusion:** Our work supports previous studies that highlight the importance of community leaders in community-based initiatives and provides new insights in light of the current pandemic.

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### INTRODUCTION

On 11 March 2020, the World Health Organization (WHO) declared the coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a global pandemic. To date, millions of people in over 100 countries worldwide have been affected.

Since October 2016, Cameroon has reeled from an armed conflict which has negatively impacted the human rights and quality of life of millions of people (1–3). Access to health services significantly declined within the Northwest and Southwest regions, leaving people who require medical attention without proper aid (4–6). The collective consequences of the pandemic and the shortcomings in

health services due to the crisis lead to greater risks of disease (7). Notably, over half the reported COVID-19 cases in Central Africa emanate from Cameroon (8), demonstrating a significant impact on the country.

Public health measures to prevent transmission have been the main implications in slowing the spread of COVID-19 worldwide. However, the access to and dissemination of health information within African countries in general has historically been limited (9–11).

The WHO has emphasized hand washing with soap for at least 20 seconds as an effective measure in reducing the spread of COVID-19. Although maintaining hand hygiene is a cost-efficient and practical practice for controlling communicable diseases, the prevalence of hand washing with soap in general within African countries is estimated to be only 14% (12). In Cameroon, limited access to running water and soap are factors that contribute to the lack of hand washing practices (13). This exemplifies barriers people may face in adhering to public health guidelines.

Previous community-based prevention programs have found success in mitigating incidences and burden of highly transmissible diseases (14,15). By utilizing various interventions that create change among individuals, groups, and organizations, these programs have systematically involved community leaders increasing awareness and educating the target population (16,17). Community leaders are crucial because they can actively encourage target groups in abiding to preventative practices (18–21). As authority leaders who represent and advocate for their members, community leaders can also help promote adherence and acceptance of novel practices (22–24).

In this article, we introduce and discuss the implementation of #SoapFor237 #SavonPour237, a community-based hand washing initiative within Bamenda and Yaoundé in Cameroon. Initiated in March 2020, our initiative was established in response to the COVID-19 pandemic and incorporates community leaders. The goal is to help provide resources and opportunities to make it easier for Cameroonians, in serviced areas, to follow public health guidelines.

## MATERIAL AND METHODS

### Program Description

Our core planning team consisted of an informal, non-political and non-partisan group of volunteer collaborators from Cameroon and Canada. In consideration with the social and political circumstances, we took an informal approach and emphasized openness and inclusiveness to reach as many people as possible within the country. The roles of the Canadian partners included but were not limited to fundraising through grants and soliciting donations, and setting up a website (<https://www.camerooncovid19.com>) for COVID-19 information dissemination.

Our main objectives consisted of:

- 1) Promotion of hand washing with soap
- 2) Dissemination of accurate COVID-19 information

### Promotion of Hand washing – Soap Distribution

A local lead volunteer was responsible for organizing the soap distributions within each neighbourhood. Local lead volunteers approached the Quarter heads of various neighbourhoods to introduce #SoapFor237 #SavonPour237 and ask for permission and support with participating in the initiative. Quarter heads are neighbourhood leaders who represent the Chief/Fon Palace and are responsible for the traditional governance within a specific neighbourhood (25). Once permission was received, the amount of soap was determined by the number of citizens and households overseen by the Quarter heads and the amount of funds available.

### Soap Supply

Local lead volunteers identified groups within the neighborhoods that produced or supplied liquid or bar soap made from locally available resources, such as recycled oil. Once a potential soap supplier group was identified, a mutual agreement form was signed to confirm the partnership. Soap was then purchased from the producers for a specified amount on an agreed price. The local lead volunteers reported the agreed costs to the core planning team and funds were transferred through Western Union for soap purchasing. The Quarter heads were notified of the ongoing discussions.

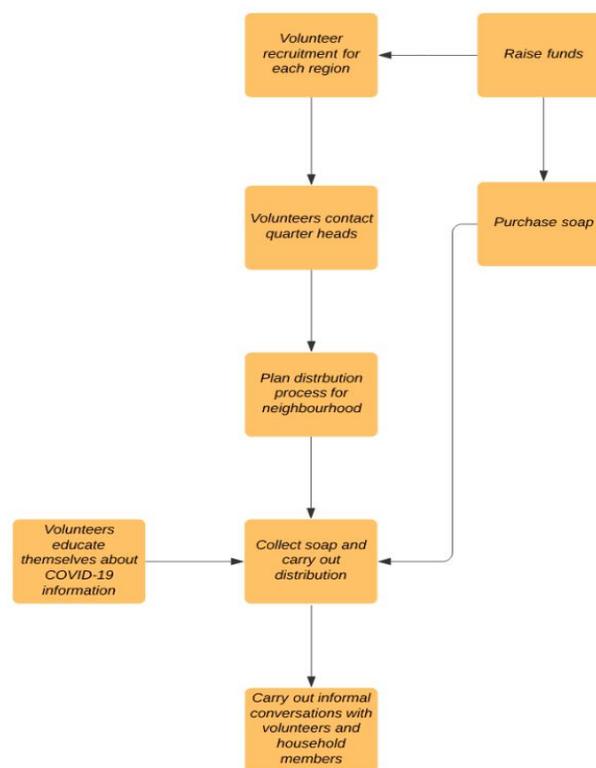


Figure 1. Flow chart of the intervention.

### Soap Distribution

Once the soap was purchased, a date was chosen and communicated to the local soap supplying groups and the Quarter heads for pick up and distribution. Other partner volunteer organizations assisted in bringing the soap to the Quarter heads. All volunteers were asked to wear masks for personal protection during the process. Soap

distribution commenced in one of the following ways depending on the neighborhood:

1. Volunteers, with the support of the Quarter heads, distributed soap to each house, travelling door to door.
2. The Quarter head summoned up to five household heads, representatives from each household, per day to the Quarter head's compound where the soap was distributed by the volunteers to each household head.

The soaps were distributed to the community members at no cost.



Figure 2. Volunteers delivering soap during a soap distribution.

### Sharing of COVID-19 Information

Before the distributions, volunteers familiarized themselves with COVID-19 information, such as the recommended preventive guidelines provided by the WHO (26) and updates about the progress of the pandemic in Central Africa<sup>8</sup> with a focus on Cameroon. While distributing the soap to the households, volunteers with support from the Quarter heads simultaneously verbally shared information about the existence of COVID-19 and prevention information to the community members. Volunteers mainly discussed how the virus is spread, the importance of hand washing with soap, physical distancing, wearing face masks, practicing contactless greetings, limiting unnecessary outings, discouraging large gatherings and, advising any sick individuals to visit or contact the hospital. Volunteers also performed visual demonstrations on how to properly wash hands with soap. By wearing masks and socially distancing while performing the soap distributions, the volunteers also acted as representative examples of adhering to the public health guidelines.

### Monitoring and Evaluation Methods

After each distribution, a feedback form was filled out by each lead local volunteer (Figure 3). A total count of the approximate numbers of households visited, people reached, and soap distributed were collected. The locations of the neighborhoods where the distributions were carried out were noted.

Working with gathered quantitative data, local lead volunteers reflected on the soap distribution experiences

and shared suggestions to improve the process. In addition, several informal conversations were held with Quarter heads, other general volunteers and households, to gather information on the impact and effectiveness of our initiative.

#### Feedback about soap distribution

Thank you for participating in the #SoapFor237 initiative. We hope you and your group found it rewarding and that it made a difference in your community. We want to hear your feedback so we can keep improving our logistics and content. Please fill this quick survey and let us know your thoughts.

Email address:

Please report on your soap distribution here for the #SoapFor237 group.

1. What QUARTER or NEIGHBOURHOOD are you reporting about? Please provide the name of the quarter/neighbourhood, the city, and any other information to help us locate it.
2. What date are you reporting on? (Month/Day/Year)
3. Where did the soap come from? Provide information about the name of the group who made it, or who you bought it from.
4. What is the name(s) of the Quarter head/other community leaders who were involved?
5. How many HOUSEHOLDS did you reach on this date?
6. As an estimate, how many PEOPLE were reached in these households?
7. What worked well in distributing the soap? Please provide as much information as you can.
8. What were the main difficulties, and how did you overcome them?
9. What were your key takeaways from this event? What did we learn?
10. How much money did you receive from #SoapFor237 to carry out this distribution? Was other money added? Please be as accurate as possible. Having this information will help us to improve. Please explain.
11. How satisfied were you with the logistics? (1 = Very dissatisfied 5 = Very satisfied)
  - a. Orientation to the #SoapFor237 initiative:
  - b. Communication:
  - c. Obtaining the soap:
  - d. Reporting structure:
12. Additional feedback on logistics - please especially share suggestions that might help others.
13. Any additional comments regarding this initiative and how it could be improved (please not just about money, unless you have ideas for raising funds)
14. Please enter the names of the people who completed this report. Thank you!!

Figure 3. Modified version of the soap distribution feedback form.

## RESULTS

Between March 2020 and August 2020, 13 soap distributions were carried out in six neighborhoods in Cameroon, within Bamenda and Yaoundé:

- Etoug-Ebe, Yaoundé
- T.K.C, Yaoundé
- Bayelle 1, Bamenda
- Upper Futru, Nkwen, Bamenda
- Ntambang, Bamenda
- Abango, Nkwen, Bamenda

On average per distribution, an estimate of 95 households and 400 people were reached with an estimate of 260 units of soap distributed. Cumulatively, after the 13<sup>th</sup> distribution, we reached approximately over 1247 households, 5300 people and delivered approximately 3390 soaps (Figure 4).



Figure 4. Cumulative estimates of the total number of households and people reached, and soaps distributed.

Regular conversations with the volunteers revealed that many community members were unaware of the existence of COVID-19 and/or the recommended precautionary measures. When information was shared during the soap distributions, community members appeared positively engaged. Many community members asked numerous follow up questions ranging from the status of a cure or treatment, the rationale behind physical distancing measures and how to properly wash their hands. However, the advice to maintain physical distancing was often difficult for the community members to adhere to and was frequently not followed. Informal conversations with the household members revealed that many expressed difficulties in remaining home and to sustain providing food for their families. Thus, they were forced to go ahead with their daily routines from which they earn their income and provide meals to their families, which often entailed being in crowded areas.

“We discovered that [much of] the community is still ignorant about the preventive measures against COVID-19.” - Community volunteer, Yaoundé

Unexpectedly, denial, avoidance, and refusal to believe any news regarding COVID-19 was prevalent among some community members. Despite the efforts of the local volunteers communicating the risks, the members sometimes exhibited belief perseverance against its existence and considered it more an issue present in other countries around the world. Nevertheless, the majority of the community demonstrated elevated engagement and willingness to adapt the preventive measures.

In addition, many community members reported not having soap in their households. Consequently, some people who were already aware of public health guidelines, expressed their inability to adhere to them due to the lack of resources.

“There are many people who wished to wash their hands every minute but had no savon (soap) at their disposal.” - Community volunteer, Bamenda.

## DISCUSSION

Initially launched in Bamenda and Yaoundé, we aimed to slow the spread of COVID-19 by promoting hand washing in Cameroon. Community leaders played crucial roles in the success of our initiative. They helped ease the introduction of our efforts, encouraged participation within Cameroonian communities, and supported the sharing of information and resources about COVID-19. In accordance to previous studies, our work further supports the importance and impact community leaders can

contribute in the dissemination of information and resources in community-based initiatives (20,27).

Lead local volunteers were also crucial in establishing and maintaining relationships with the Quarter heads, local soap making and supplying organizations, and other partner volunteer organizations in Cameroon. This recognition emphasizes the importance of building and maintaining good relationships within the community in order to make community-based interventions such as our initiative possible.

Our findings on the lack of knowledge about COVID-19 within the visited neighborhoods of Bamenda and Yaoundé supports previous findings on ineffective health information dissemination within African countries (9–11). Reports on the lack of soap exposes existing barriers in following the public health guidelines. This information emphasizes the need to investigate and to address difficulties in preventing the worldwide spread of COVID-19, and the unequal adherence to public health practices, especially in preparation for future health crises.

At the time of writing, to increase our reach we aim to gradually expand to all the regions within the country. This expansion can significantly increase the number of individuals having access to soap and overall make adherence to the public health guidelines more practical and accessible in Cameroon. Along with our efforts, we recognize that more actions are needed to improve interventions in slowing the spread of the disease.

## Challenges

Throughout the initiative, we experienced some challenges. One challenge was the inconsistent and lack of communication with the local lead volunteers in Cameroon. The variable weather conditions and unstable technological connections severely limited the availability of internet access (28), negatively impacting the progress of our efforts. To address this, we established various modes of communication (synchronous and asynchronous) and utilized multiple platforms (Zoom, Whatsapp, and, Skype). Most of the discussions were carried out during synchronous weekly meetings (via Zoom) and supplemented by continuous asynchronous communication (via Whatsapp) especially when internet connection in Cameroon was inaccessible. Nevertheless, this demonstrates a need for a more reliable communication system in the country.

A second challenge was related to project funding. In the initial stages of our initiative, we had garnered interest and support from many volunteer organizations and individuals around the world. However, it became difficult to sustain the energy, momentum, and enthusiasm to continue as we started to lose the interest and support that we had initially received. As an initiative that relies in part on general donations, this reduction in support led to a decline in available funding, further slowing our efforts and impact.

The third challenge was related to impact evaluation. An ideal impact evaluation would have allowed us to measure and assess both knowledge on COVID-19 and hand washing behavior of community members before and after soap distribution. However, having started the initiative as

a reaction to the rapid spread of the virus, pre-initiative evaluation was not feasible. Moreover, in our attempt to make this initiative informal and less invasive to increase our acceptance by community members, designing a realistic model of program evaluation showed to be challenging. We considered several well-known program evaluation models, but they were very resource intense and complex for this type of project (29–31). We finally decided on obtaining feedback from community members after soap distribution as a form of data collection for evaluation.

### Lessons Learned/Recommendations

#### *Importance of establishing an effective structure*

Taking time to develop a process of delivering the intervention to community members was key to this initiative. For this project, the design of the process to deliver soap and information was strategically thought through and local community leaders were involved in every step. Despite our familiarity with the Cameroonian context, getting the perspective of each of the specific communities was crucial when designing the process. Communities were experiencing the impact of COVID-19 in Cameroon and had much to contribute about these experiences. This careful design took in consideration cost-effectiveness and feasibility. As mentioned previously, full scale impact evaluation was not integrated into the project which resulted to a less effective method in the evaluation. We realized the importance of addressing impact evaluations from the beginning, such that different evaluation approaches would be considered and included in the process. We therefore recommend and stress the importance of careful planning and developing a process that considers all aspects while involving community members in meaningful ways.

#### *Education of the volunteers*

Our initiative relies on volunteers to provide accurate information to the community. This goal can only be achieved if the volunteers are well educated and are able to easily communicate the information. This education is not only focused on local volunteers knowing facts about COVID-19, but also involves them practicing the behaviors being promoted to community members. We learned that implementing a more intense system of educating the volunteers might have been a more effective and reliable method in ensuring that they were relaying the correct information and were knowledgeable to answer questions brought up by the community. We therefore recommend that future related initiatives incorporate funding and time for training and education to assure consistency and accuracy of information to be disseminated.

#### *Importance of relationships within the local community*

For community-based initiatives that rely on collaboration from the community, establishing relationships with local partner organizations and community leaders supports its feasibility. Our work would not have been possible without the partnerships of several local groups supplying and helping to distribute the soaps for the soap distributions and support received by the Quarter heads.

As a result, we emphasize the importance of building and maintaining strong relationships with local community members, community groups, and having them involved, while leveraging existing networks for additional support.

### CONCLUSION

#Soapfor237 #SavonPour237 is a community-based initiative with a goal to slow the spread of COVID-19 through the promotion of practical and feasible efforts. The initiative aimed at providing people in Cameroon with the ability to follow public health guidelines. This was done by distributing soap for hand washing and sharing COVID-19 knowledge. In addition, this report provides insight into the collective efforts of the establishment of a community-based health intervention in response to a rapidly evolving pandemic.

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### REFERENCES

1. Amnesty International. Cameroon: Horrific violence escalates further in Anglophone regions [Internet]. 2018. Available from: <https://www.amnesty.org/en/latest/news/2018/09/cameroon-horrific-violence-escalates-further-in-anglophone-regions/>
2. OCHA. Cameroon: North-West and South-West - Situation Report No. 20, As of 30 June 2020 [Internet]. 2020 Jul [cited 2020 Sep 15]. Available from: [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/sitrep\\_june\\_2020\\_20jul\\_final\\_version\\_v2.pdf](https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/sitrep_june_2020_20jul_final_version_v2.pdf)
3. OCHA. Emergency Response Plan - Cameroon North-West and South-West - Summary (May 2018) [Internet]. Available from: [https://reliefweb.int/sites/reliefweb.int/files/resources/cmr\\_nw\\_sw\\_fa\\_2018-05\\_summary\\_v07\\_light\\_0.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/cmr_nw_sw_fa_2018-05_summary_v07_light_0.pdf)
4. FRANCE 24. Hospital on front line of Cameroon anglophone conflict [Internet]. 2018 May. Available from: <https://www.france24.com/en/20181005-hospital-front-line-cameroon-anglophone-conflict>
5. Human Rights Watch. Cameroon: People With Disabilities Caught in Crisis [Internet]. 2019 May. Available from: <https://www.hrw.org/news/2019/08/05/cameroon-people-disabilities-caught-crisis>
6. Kindzeka M. Cameroon Doctors Overwhelmed with Patients [Internet]. VOA; 2018 Nov. Available from: <https://www.voanews.com/africa/cameroon-doctors-overwhelmed-patients>
7. Kindzeka ME. COVID-19 Cases Top 1,000 in Crisis-Prone Cameroon. 2020 Apr 18; Available from: <https://www.voanews.com/covid-19-pandemic/covid-19-cases-top-1000-crisis-prone-cameroon>
8. Africa CDC. Coronavirus Disease 2019 (COVID-19). Available from: <https://africacdc.org/covid-19/>
9. Anasi SNI. Access to and Dissemination of Health Information in Africa: The Patient and the Public. *J Hosp Librariansh* [Internet]. 2012 Apr [cited 2020 Aug 20];12(2):120–34. Available from: <http://www.tandfonline.com/doi/abs/10.1080/15323269.2012.666647>

10. Edwards A, Zweigenthal V, Olivier J. Evidence map of knowledge translation strategies, outcomes, facilitators and barriers in African health systems. *Health Res Policy Syst* [Internet]. 2019 Dec [cited 2020 Sep 17];17(1):16. Available from: <https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-019-0419-0>
11. Edejer TT-T. Disseminating health information in developing countries: the role of the internet. *BMJ* [Internet]. 2000 Sep 30 [cited 2020 Sep 17];321(7264):797–800. Available from: <http://www.bmj.com/cgi/doi/10.1136/bmj.321.7264.797>
12. Freeman MC, Stocks ME, Cumming O, Jeandron A, Higgins JPT, Wolf J, et al. Systematic review: Hygiene and health: systematic review of handwashing practices worldwide and update of health effects. *Trop Med Int Health* [Internet]. 2014 Aug [cited 2020 Jul 18];19(8):906–16. Available from: <http://doi.wiley.com/10.1111/tmi.12339>
13. REACH Initiative. Cameroon: Water, sanitation and hygiene needs assessment (December 2018) - Cameroon [Internet]. Available from: <https://reliefweb.int/report/cameroon/cameroon-water-sanitation-and-hygiene-needs-assessment-december-2018>
14. Bhutta ZA, Salam RA, Das JK, Lassi ZS. Tackling the existing burden of infectious diseases in the developing world: existing gaps and the way forward. *Infect Dis Poverty* [Internet]. 2014 Aug [cited 2020 Jul 28];3(1):28. Available from: <https://idpjournal.biomedcentral.com/articles/10.1186/2049-9957-3-28>
15. Salam RA, Das JK, Lassi ZS, Bhutta ZA. Impact of community-based interventions for the prevention and control of malaria on intervention coverage and health outcomes for the prevention and control of malaria. *Infect Dis Poverty* [Internet]. 2014 [cited 2020 Jul 28];3(1):25. Available from: <http://idpjournal.biomedcentral.com/articles/10.1186/2049-9957-3-25>
16. Merzel C, D’Afflitti J. Reconsidering Community-Based Health Promotion: Promise, Performance, and Potential. *Am J Public Health* [Internet]. 2003 Apr [cited 2020 Jul 18];93(4):557–74. Available from: <http://ajph.aphapublications.org/doi/10.2105/AJPH.93.4.557>
17. Blackburn H. Research and Demonstration Projects in Community Cardiovascular Disease Prevention. *J Public Health Policy* [Internet]. 1983 Dec [cited 2020 Jul 18];4(4):398. Available from: <https://www.jstor.org/stable/3342219?origin=crossref>
18. Goodman RM, Wheeler FC, Lee PR. Evaluation of the Heart to Heart Project: Lessons from a Community-Based Chronic Disease Prevention Project. *Am J Health Promot* [Internet]. 1995 Jul [cited 2020 Jul 28];9(6):443–55. Available from: <http://journals.sagepub.com/doi/10.4278/0890-1171-9.6.443>
19. Sikkema K. Outcomes of a randomized community-level HIV prevention intervention for women living in 18 low-income housing developments. *Am J Public Health* [Internet]. 2000 Jan [cited 2020 Jul 28];90(1):57–63. Available from: <http://ajph.aphapublications.org/doi/10.2105/AJPH.90.1.57>
20. The CDC AIDS Community Demonstration Projects Research Group. Community-level HIV intervention in 5 cities: final outcome data from the CDC AIDS Community Demonstration Projects. *Am J Public Health* [Internet]. 1999 Mar [cited 2020 Jul 28];89(3):336–45. Available from: <http://ajph.aphapublications.org/doi/10.2105/AJPH.89.3.336>
21. Atkinson J-AM, Fitzgerald L, Toaliu H, Taleo G, Tynan A, Whittaker M, et al. Community participation for malaria elimination in Tafea Province, Vanuatu: Part I. Maintaining motivation for prevention practices in the context of disappearing disease. 2010;16.
22. Haslam SA, Platow MJ. The Link between Leadership and Followership: How Affirming Social Identity Translates Vision into Action. *Pers Soc Psychol Bull* [Internet]. 2001 Nov 1 [cited 2020 Sep 2];27(11):1469–79. Available from: <https://doi.org/10.1177/01461672012711008>
23. Steffens NK, Haslam SA. Power through ‘Us’: Leaders’ Use of We-Referencing Language Predicts Election Victory. *PLOS ONE* [Internet]. 2013 Oct 23;8(10):e77952. Available from: <https://doi.org/10.1371/journal.pone.0077952>
24. Soto-Mota P, Macchia L, Gómez M. Building Trust to Face the COVID-19 Pandemic in Developing Countries. 2020 Aug 31; Available from: <https://behavioralscientist.org/building-trust-to-face-the-covid-19-pandemic-in-developing-countries/>
25. Lekunze M. African security, complex adaptive systems and resilience. In 2019. p. 23–47.
26. World Health Organization. Coronavirus disease (COVID-19) advice for the public. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>
27. Hien LTT, Takano T, Seino K, Ohnishi M, Nakamura K. Effectiveness of a capacity-building program for community leaders in a healthy living environment: a randomized community-based intervention in rural Vietnam. *Health Promot Int* [Internet]. 2008 Aug 28 [cited 2020 Sep 2];23(4):354–64. Available from: <https://academic.oup.com/heapro/article-lookup/doi/10.1093/heapro/dan035>
28. Meh BIN J, Ofeh MA, Che SB. Impact of the Corona Pandemic on Household Welfare in Cameroon. *J Econ Manag Sci* [Internet]. 2020 Sep 4 [cited 2020 Sep 14];3(3):p25. Available from: <https://j.ideasspread.org/index.php/jems/article/view/680>
29. Green LW, Kreuter MW. *Health promotion planning: an educational and ecological approach*. Mountain View, California: Mayfield Publishing Company; 1999.
30. Lock K. Health Impact Assessment. *Br Med J*. 2000;320(7246):1395–8.
31. Letts L, Law M, Pollock N, Stewart D, Westmorland M, Philpot A, et al. *A Programme Evaluation Workbook for Occupational Therapists: an Evidence-Based Practice Tool*. Ottawa: CAOT; 1999.