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ORIGINAL RESEARCH

Contribution of Information-Education-Communication in the adoption of Universal Health Coverage by the populations in the Economic and Monetary Community of Central Africa in 2020.

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Abstract

Aims: This study aims to assess the knowledge of people from Central Africa about Universal Health Coverage and show the contribution of Information-Education-Communication for its adoption.

Methods: a cross-sectional analytical study across 4 of 6 Central African Countries was conducted. Independent variables are sociodemographic characteristics. Dependent variables are knowledge about Information-Education-Communication and Universal Health Coverage. The questionnaire was disseminated by WhatsApp images or word file or copy/paste of the text and send to the contacted and trained focal points. From the Smartphone, the filmed or transferred data were entered into a CSpro 5.0 input form. Mean score calculations and Odd Ratio with 95 % Confidence Interval for $p < 0.005$ were used to make associations.

Results: the Universal Health Coverage had never been heard of by 56.3% of the participants. The Universal Health Coverage was defined as health insurance by (43.9%), free care (30.3%). Respondents with secondary and higher education are more likely to have heard of the UHC than respondents with no education or those with elementary education [OR = 2.95 (1.01-8.64), $p = 0.021$] and [OR = 4.27 (1.50 – 12.16), $p = 0.002$] respectively.

Conclusion: 9.3% of the Economic and Monetary Community of Central Africa (CEMAC) population is aware of the Universal Health Coverage; 89.4% of these accept universal health coverage in their country, and 87.4% of them think that the Information Education Communication could enable better adherence to the Universal Health Communication. Implementation of Universal Health Coverage for the general population and adoption of Information-Education-Communication to promote Universal Health Coverage and pool efforts and affiliation procedures in the CEMAC zone is very important.

Keywords : Universal Health, Coverage, Central Africa



Introduction

According to WHO's definition, Universal Health Coverage (UHC) is achieved when 'all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship' (1, 2). Universal Health Coverage « is driving the global health agenda; it is embedded in the Sustainable Development Goals (SDGs) and is now designated by an official United Nations UHC day on December 12. 'Although many sub-Saharan African countries have made efforts to provide universal health coverage for their citizens, several of these initiatives have achieved little success' (3,4). Local health authorities need guidance on how they can set fair and sustainable priorities (5,6). 'Progressive realisation is invoked as the guiding principle for countries on their own path to UHC and achievement of the SDG health targets. It refers to the governmental obligations to immediately and progressively move towards the full realisation of UHC, recognising the constraints imposed by limited available resources' (7).

Information-Education-Communication (IEC) is a process for individuals, communities and societies to develop communication strategies to promote health-promoting behaviour (8). Africa's population is young and the burden of non-communicable and communicable diseases is a double burden, the lack of health knowledge could become a triple burden if nothing is done for IEC to move towards disease-related communication for development and universal health coverage to prevent, detect and treat diseases early and cheaply (9, 10). Within the Economic and Monetary Community of Central Africa (CEMAC) countries, university health

coverage seems to be unknown to the population despite the commitments made by the states to move towards it (11-14). The objective of this work was to study the contribution of IEC in the adoption of universal health coverage by the populations in the CEMAC zone in 2020.

Methods

Study design: This was a cross-sectional, analytical, interventional study conducted from July 15 to July 30 2020 in the major cities of the CEMAC countries as Cameroon, Central African Republic (CAR), Congo, Gabon, Equatorial Guinea (EG) and Chad.

Study population: Residents of the CEMAC countries, whose general population is estimated at 55 781 513, constituted the target population studied (15). Residents under 15 years of age and those who refused to answer the questionnaire were not included.

Sampling: Probabilistic and exhaustive type of sampling was chosen. The sample size, to ensure representativeness, was calculated using Daniel SCHWARTZ's formula (16):

$$N = \frac{p(1-p)(z_{(\alpha/2)})^2}{i^2}$$
 where N is the minimum sample size, p is the prevalence of UHC in Africa (50%), $Z_{(\alpha/2)}$ is the confidence level of the study at risk $\alpha = 95\%$, i.e. 1.96, i is the accepted printing error on either side of the result, i.e. 5%. We obtained $N = 403$.

Sample size by country : the general population by country was 23 779 022 (Cameroon), 5 745 135 (CAR), 5 279 517 (Congo), 2 074 656 (Gabon), 2 015 334 (EG) and 15 162 044 (Chad). To obtain the sample per country, we used the following formula $n = (\text{country population} \times 403) / \text{general population}$ for the 6 countries. Thus, we obtained 182 for Cameroon, 42 for CAR, 40 for



Congo, 16 for Gabon, 15 for EG and 110 for Chad.

Data collection tool and collection procedure: We used a questionnaire with two sections, a definition and concepts. The questionnaire was disseminated by WhatsApp images or word file or copy/paste of the text and send to the contacted and trained focal points. Through relationships with NGOs Adolescence et Santé, Exit Gate from Gabon, Whatapps contacts were made in the capitals of the countries; volunteer interviewers were trained and deployed in the city respecting the barrier gestures also those who could fill in numerically did so. In the end, there was one principal interviewer in each country except Cameroon where there were two. The questionnaires were filled in and collected in the community face to face in focus groups of less than 5 people and through the WhatsApp network on the questionnaire sent online. For the digital responses, questionnaires were sent by WhatsApp to the country correspondents who collected the responses via whatsapp before transmitting them via the same channel or internet.

Variables Independent variables : sociodemographic characteristics (Age, Gender, Level of education, Marital status, Occupation. Dependent variables : Knowledge of IEC and UHC, Attitudes towards IEC and UHC, Adoption of IEC and UHC.

Data entry and analysis: from the Smarthphone, the filmed or transferred data were entered into a CSpro 5.0 input form, imported and analysed using SPSS. Mean score calculations and OR with 95 % CI for $p < 0.05$ were used to make associations.

Ethical considerations: Requests for authorisation were sent to the Ministries of Health of the 6 countries with acknowledgement of receipt. Informed consent file submitted to participants who read and agreed before participating in the interview.

Results

A total of 403 questionnaires, of which 100 were on hard paper and 303 on digital, were submitted and transferred to the population. Only 302 responded, i.e. a participation rate of 74.94% (302/403). Out of 6 countries, 4 returned the questionnaires. Cameroonian participation represented 37.7%, Congolese 34.2%, Gabonese 18.5% and Central African 9.6% (*Table 1*).

Sociodemographic characteristics : The mean age was 31.29 ± 10.74 years. The 25-34 age group accounted for 39.1%; the 15-24 and 35-44 age groups for 29.1 and 18.9% respectively. The female and male sex represented 46% and 54% respectively, sex ratio: 1.17 (163/139). Higher education was found in 52% of the participants. The marital status revealed 65.9% of single people. Unemployed participants represented 47.7% (*Table 1*).

Table 1. Sociodemographic characteristics of participants

Variables	Number	Percentage (%)
Country participation rates		
Cameroon	114	37.7
Central African Republic (RCA)	56	18.5
Congo	103	34.2
Gabon	29	9.6
Age (years) : Mean/SD 31.29 (10.74); Min/Max 15/74		
15-24	88	29.1
25-34	175	58.0
45-54	39	12.9
Sex		
Sex ratio : 1.17		
Female	139	46.0
Male	163	54.0
Education		
No education	22	7.3
Primary	21	7.0
Secondary	101	33.4
University	158	52.3
Marital status		
Single	199	65.9
Married	86	28.5
Divorced	14	4.6
Widowed	3	1.0
Sector of activities		
Public	51	16.9
Private	64	21.1
Liberal	38	12.6
Without	149	49.4

Knowledge of UHC and IEC: the UHC had never been heard of by 56.3% of the participants. The information sources mentioned by the participants were television (25.8%) and social networks (28%). The UHC was defined as health insurance by (43.9%), free care (30.3%) participants. The concept of IEC was

not known by 63.6% of participants. Social networks, health structures and television represented 24.1%, 24.1% and 15.7% respectively. The participants who acknowledged not having received IEC on UHC represented 59.3% (**Table 2**).



Table 2. Knowledge of participants about UHC and IEC

Knowledge	Number N = 302	Percentage %
Have you heard about UHC ?		
Yes	132	43.7
No	170	56.3
What is the UHC ?		
Health insurance	58	43.9
Mutual insurance	4	3.0
Free care	40	30.3
Dont't know	24	18.2
Other	3	2.3
Not specified	3	2.3
You heard through which channel?		
TV	34	25.8
Radio	18	13.6
Social networks	37	28.0
Health structure	20	15.2
Other	18	13.6
Not specified	5	3.8
Have you heard about IEC ?		
Yes	108	35.7
No	192	63.6
Not specified	2	0.7
You heard through which channel?		
TV	17	15.7
Radio	16	14.8
Social networks	26	24.1
Health structure	26	24.1
Other	22	20.4
Not specified	1	0.9
Was there an IEC on UHC?		
Yes	39	36.1
No	64	59.3
Not specified	5	4.6



Attitudes towards the IEC and UHC: the UHC was accepted in their country by 89.4% of participants; 81.8% were willing to enrol and 88.4% accepted the IEC on UHC. Participants without UHC represented 89.4%; of the 9.3% with insurance 42.9% had full coverage (**Table 3**). The origin of the UHC fund was not known for 28.8%. 80.5%

of the participants were willing to practice IEC. IEC on UHC does not exist in their country according to 55.6% of the participants. 87.4% of the participants felt that UHC is necessary for the population; 74.8% had not been trained on IEC and 87.4% thought that IEC can improve adherence to UHC.

Table 3. Attitudes of participants towards UHC and IEC

Attitudes	Number N =302	Percentage %
Do you agree with the UHC in your country ?		
Yes	270	89.4
No	30	9.9
Not specified	2	0.7
Are you ready to subscribe to the UHC ?		
Yes	247	81.8
No	55	18.2
Would you accept the IEC on UHC ?		
Yes	267	88.4
No	29	9.6
Not specified	6	2.0
Have you subscribed to an UHC ?		
Yes	28	9.3
No	270	89.4
Not specified	4	1.3
If yes Total or Partial ?		
Total	2	7.1
Partial	12	42.9
Not specified	14	50.0
Are you willing to practice IEC ?		
Yes	243	80.5
No	56	18.5
Not specified	3	1.0
In your country has there been IEC on UHC ?		
Yes	30	9.9
Enough	23	7.6
Not enough	78	25.8
No	168	55.6
Not specified	3	1.1

Have you ever been trained on IEC ?		
Yes	75	24.8
No	226	74.8
Not specified	1	0.4
Does IEC lead to better adherence to UHC ?		
Yes	264	87.4
No	36	11.9
Not specified	2	0.7

Influences of socio-demographic factors on the level of knowledge: respondents with secondary and higher education are more likely to have heard of the UHC than respondents with no education or those with elementary education [OR = 2.95 (1.01-8.64), p = 0.021] and [OR = 4.27 (1.50 – 12.16), p = 0.002] respectively.

Public, private and liberal sector workers are more likely to have heard of the UHC than non-employees [OR = 8.67 (4.26-17.66), p < 0.001], [OR = 2.39 (1.29 – 4.44), p = 0.00] and [OR = 2.34 (1.11 - 4.91), p = 0.013] respectively. Workers are more likely to have heard of the IEC than non-workers (**Table 4**).

Table 4. Influences of sociodemographic factors on the level of knowledge

Sociodemographic factors	Yes	No	OR (95% CI)	p
Knowledge: Heard about UHC				
Education				
Without education	05	17	-	-
Primary	9	12	2.55 (0.68 – 9.54)	0.090
Secondary	47	54	2.95 (1.01 – 8.64)	0.021
University	88	70	4.27 (1.50 - 12.16)	0.002
Sector of activities				
Public	42	14	8.67 (4.26 – 17.66)	< 0.001
Private	29	35	2.39 (1.29 – 4.44)	0.003
Liberal	17	21	2.34 (1.11 – 4.91)	0.013
Without	37	107	144 (100)	-
Knowledge: Heard about IEC				
Sector of activities				
Public	30	26	2.89 (1.53 – 5.48)	< 0.001
Private	28	36	1.95 (1.06 – 3.60)	0.017
Liberal	21	17	3.10 (1.49 – 6.47)	0.001
Without	41	103	143 (100)	-



Discussion

The most represented age group was 25-34. The young African population may explain the predominant age ranges. More than half of our respondents were men and university education was more represented as well as the private sector of activity. The period of containment may explain the higher participation rate of men as they are more out of the home and also as workers in the private sectors have many more work constraints than those in the public sector.

Knowledge: we assessed participants' knowledge of universal health coverage and IEC and the ways in which they acquired this knowledge. More than half of the participants had never heard of universal health coverage and the concept of IEC, although we found that more than half of the respondents were employees or had attended university. Our findings clearly show the low level of knowledge and perception of universal health coverage among the urban population of the CEMAC zone countries. Taking into account the expectations of the populations of the districts of certain countries, which notably show that 'respondents seek improvements in the quality of care, community engagement activities, expansion of the range of services to include emergency referral services, and enhancement of clinical health insurance coverage to include preventive health services' (17), it is important for the countries of the CEMAC zone to initiate perspectives aimed at strengthening the implementation of the UHC by taking into account the actions recommended by the WHO and certain studies (7,18). The case of Nepal and Ghana which illustrates the role and contribution of Community health worker counseling family is

prominent (8, 19, 20, 21). Almost half of the respondents defined the UHC as health insurance. One of the paths for strengthening the practice of UHC is therefore health insurance. In the CEMAC zone, only Gabon has adopted this policy; countries are encouraged to have their population subscribe to health insurance, considering that the role of insurance in the achievement of universal coverage within a developing country context has been demonstrated (22) as well as that of the IEC (18, 23). Health services are expected to play an important role in the implementation of the UHC as more than half of the respondents mentioned these health services. Finally, we noted that knowledge of the UHC and IEC is related to the respondents' level of education as well as their business sector. CEMAC member states are encouraged to use different methods to sensitise the population on the UHC as we have noted that correspondents have mentioned social networks and television as the main sources of information on the UHC. It can be seen today that there is an increase in the number of people using social networks and television as sources of information.

Attitudes : the UHC was accepted in their country by 89.4% of participants; 81.8% were willing to enrol and 88.4% accepted the IEC on UHC. We noticed that people are willing to embrace the UHC and the concept of IEC, which many have found to be innovative. Governments can build on this to boost the UHC. But before that it would be useful to go through a situational analysis at different levels of the community and business sector as proposed by some studies (7,18).

Study limitations : for this study, Covid-19 imposed digital communication and this



seemed to be little used by the populations for the surveys; the high penetration rates and costs of the internet seemed to reduce the enthusiasm of the investigators and the surveyed population. The Spanish language in Malabo obstructed the data collection process. In Ndjamena, the investigator did not adopt the digital tool. The rainy season in Bangui and the expensive and poorly penetrating internet were reported by the investigator to explain the low participation rate.

Conclusions

Less than 10% of the CEMAC population is aware of the UHC; 89.4% of them accept universal health coverage in their country and 87.4% of them think that the IEC could enable better adherence to the UHC. Only 30% have an UHC. In view of these results, the following suggestions are proposed to the CEMAC states: Implementation of UHC for the general population, adoption of IEC as a means of promoting UHC and to pool efforts and affiliation procedures in the CEMAC zone is very important.

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