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Study of the Factors Associated with the Acceptability of the Coronavirus Vaccine in Adults in Kinshasa in the Commune of Lemba in 2022

Rodrigue Nakasala^{1*}, Ngayuna Nkiene Jacques² and Joel Bonyoma Lisoma²

¹Epidemiologist, Kinshasa, Congo DR MOH, Ochi Akwiwu ibe, ICF IDDS Project-USA, Senegal

²Cheick Anta Diop University, Senegal

ABSTRACT

Introduction: The coronavirus disease 2019 (COVID-19) is a global pandemic caused by the novel coronavirus SARS-CoV-2. The main challenge in COVID-19 vaccination is vaccine acceptance. In this study, we aimed to investigate the factors associated with vaccine acceptance among adults in Kinshasa, specifically in the Lemba commune, in 2022.

Methods: A descriptive and analytical cross-sectional study was conducted in Kinshasa, DRC, from December 1st to December 31st, 2022. The study included adult men and women who had resided in Lemba commune for at least 6 months. A two-stage random sampling technique was used, and data were collected through individual interviews at participants' homes after obtaining their consent. Data were entered into Epi Info 7, and descriptive and multivariate analysis was performed using logistic regression with R software, version 4.0.5.

Results: A total of 422 households were surveyed, with participants' ages ranging from 19 to 70 years and a mean age of 35.38 years $\pm$ 9.84 years. The majority of participants were aged 25 to 59 years (93.8%), and there were more women than men (81.5%). Most participants were single (68%), and 72% had a university level of education. Approximately 43.4% of respondents had accepted the COVID-19 vaccine. Factors associated with vaccine acceptance included a history of chronic illness (ORa=0.69 [0.27-1.71]), exposure to misinformation or vaccine hesitancy from social media (0.22 [0.11-0.42]) and media (ORa=0.16 [0.05-0.21]), fear of vaccine side effects (ORa=0.74 [0.40-1.38]), fear that the vaccine would endanger life (ORa=0.63 [0.35-1.12]), vaccine hesitancy (ORa=0.04 [0.01-0.08]), and ease of getting vaccinated (ORa=0.83 [0.36-0.91]).

Conclusion: Several factors associated with COVID-19 vaccine acceptance were identified in our study population. It is important to address these factors to improve vaccine acceptance.

*Corresponding author

Rodrigue Nakasala, Epidemiologist, Kinshasa, Congo DR MOH, Ochi Akwiwu ibe, ICF IDDS project-USA, Senegal.

Received: January 27, 2024; **Accepted:** February 05, 2024, **Published:** February 10, 2024

Keywords: Vaccine Acceptance, COVID-19, Adult, DRC

Introduction

Coronavirus disease 2019 (COVID-19) is a contagious and pathogenic viral infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a specific type of coronavirus that was first discovered in Wuhan, in China it was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020 [1].

The pandemic caused by COVID-19 has infected more than 125 million people and killed at least 2.5 million people worldwide and is becoming one of the leading causes of death, it remains an important public health problem [1]. Although many efforts have been made worldwide to implement control strategies including travel bans, isolation of confirmed cases and close contacts, social distancing and hygiene measures, the transmission of the virus is likely to rebound when these strategies are lifted [1]. Among the many possible strategies to control this pandemic, mass

vaccination remains the best strategy [2]. Obtaining effective results from vaccination depends not only on accessibility, which remains a major challenge in Africa, but also on the acceptability of the vaccine and the willingness of the population to be vaccinated [3]. Thus, one of the main obstacles to achieving high vaccination coverage is vaccination hesitancy or refusal [4,5]. The World Health Organization (WHO) defines the acceptability of vaccination as the non-refusal of vaccination if the vaccine was offered [6]. Around the world, studies show a very wide variability in acceptability vaccine against COVID-19, with rates ranging from 29.4% to 86.0% [7-13]. In other studies, the acceptability of the coronavirus vaccination was approximately greater than or equal to 70% [14]. A survey in 15 African countries had shown that around 80% of people were willing to accept the COVID-19 vaccine once it is available and considered safe (safety) and effective (protection against infection). Although the overall results are encouraging, there are significant regional differences in Africa [15].

Another African study had shown that the proportion of individuals declaring that they would refuse a vaccine against COVID-19 was 14.3%, the proportion declaring uncertainty was 22.1% [16].

The same study also showed that intentions to accept vaccination decreased over time while refusals increased [16]. Several factors can influence the acceptability of the vaccine (professional status, gender, age, education, income) [17]. In the DRC about 60% of the population intended to be vaccinated using all available vaccines. From April 19, 2021, to July 7, 2022, 3,211,479 people had received one dose, 2,099,000 people two doses, i.e., complete coverage and an acceptance rate of approximately 3.8% of the total population [18]. This rate was far from the objective set by the authorities, which was to ensure the vaccination of at least 60% of the general population [19]. At the same time, the virus continued to spread. As of July 11, 2022, the Democratic Republic of Congo had 91,393 cases including 1,735 deaths, representing a case fatality rate of 1.9% [20]. Large-scale vaccination efforts were needed and governments around the world had to develop vaccination strategies [21,22]. To prevent the spread of the COVID-19 pandemic, there must be safe and effective vaccines that people intend to get vaccinated when they are available [23]. The greatest challenge to vaccination, despite its multifaceted nature, remains vaccine acceptability. The evaluation of its scope, its scale as well as the various associated factors is necessary.

Methods

Type and Period of Study

This was a descriptive and analytical cross-sectional study in Kinshasa in the DRC precisely in the commune of Lemba from December 01 to 31, 2022.

Study Population

These were adults aged 18 and over from the commune of Lemba in Kinshasa, including (Kimpwanza, madrandele, school, Masano, fair, Salongo, Livulu, Mbanza Lemba, Kemi, Molo, Gombele, Commercial, Mbanza-Lemba, Tadi, Djaga, Malolo).

Sampling

Inclusion Criteria

Included in this study were adult men or women aged 18 and over residing in the commune of Lemba for at least 6 months.

Non-Inclusion Criteria

Adults residing in the municipality of Lemba for less than 6 months as well as those who refused to participate in the study were not included.

Sample Size Calculation

The sample size was defined by the SCHWARTZ.

Given the non-respondent rate to the study of 10% at most, the sample size will be 422 individuals.

Sampling Procedures

Random sampling at two levels was done:

At the first stage, the selection of households was made by systematic sampling by dividing the size of the sample over the number of neighborhoods in the municipality of Lemba ($422/16=26$ households). A total of 26 households surveyed in each district, considering that each district has at least 150 households, the total number of households was divided by the number of households surveyed: $150/26=5.7$. This gives us a survey step of 5 households to skip before surveying the next household.

In the second degree the selection of people to be surveyed, a person meeting the criteria was taken from each household by drawing lots and if several people meet the criteria a drawing lots with the number of people to be surveyed had made it possible to select a single person randomly.

Collection Method

The collection was carried out through a household survey by individual interview with adults residing in the municipality of Lemba.

Fundraising Actors

Data collection required 16 investigators organized into 8 teams of 2 investigators. Each team had a leader who was the team leader (most experienced interviewer). The latter was guided by the main coordinator of the study.

Team leaders and interviewers had all undergone training (3 days) during which the data collection tool was reviewed. The team leaders were made aware of the need to verify that the selection of households complied with the methodology. At the end of the training, a pre-test of the questionnaires including the use of the questionnaires was organized in order to identify any problems or inconsistencies in the tools, to estimate the daily workload and the duration of administration of the household questionnaires.

Operational Definition of Variables

Some independent variables were measured with the 5-point Likert scale (strongly agree = 5 to strongly disagree = 1). Following the WHO definition, we moved the results to a variable with 3 modalities: Completely agree and agree, neither agree nor disagree and disagree and completely disagree, these independent variables, which are composed of a 5-point Likert scale, were dichotomized into binary variables (Yes = Completely agree and agree; No = Other).

In the analytical part, age was grouped into groups under 25, 25 to 59 and 60 and over, marital status was grouped into two classes: married and unmarried, and level of education has also been grouped into two classes uneducated and educated to facilitate their interpretations. Acceptability was defined in our study as the non-refusal of vaccination if the vaccine was offered [6]. Acceptability was measured using 'Yes' and 'No' questions, respondents were asked: 'Do you intend to accept the COVID-19 vaccine if it is available in the future? », Accordingly, respondents who did not refuse the vaccine were considered to have accepted the COVID-19 vaccine.

Data Entry and Analysis

The data were entered on Epi info 7 and the quantitative analyzes with the R software version 4.0.5.

Descriptive Study

The quantitative variables were described through the mean with its standard deviation, median with the extremes. The qualitative variables were described by frequency with a 95% confidence interval and presented by frequency tables and figures adapted according to the type of variable.

Analytical Study

Bivariate Analysis

For the analytical study, crosses of variables were made to reflect certain concerns expressed in the objectives. The Chi 2 test was used with an alpha risk of 5%. Variables with a p value < 0.05 were considered significant.

The Chi2 test was used to compare proportions with an alpha risk of 5% and the student test was used to compare means with an alpha risk of 5%.

Multivariate Analysis

The modeling of the acceptability of the vaccine with 2 yes/no modalities by a multivariate logistic regression was done. All variables with p values less than 0.25 were in the bivariate analysis of the initial model, to build the final model, the stepwise top-down selection procedure in each model was performed. The association between the dependent variable and the independent variables was determined using adjusted odds ratios (ORs), with 95% confidence intervals (95% CI).

Validity of the Study

Validity of the Statistical Conclusion

The dependent variable studied was the acceptability of the vaccine. The sample size was calculated taking into account the alpha risk of 5%. The sample size was increased to compensate for non-respondents and to have more precision. The conditions of application of the various statistical tests were checked before their application. R software was used for multivariate analysis to control for possible confounding factors.

Internal Validity

Before the study, a review of the literature had made it possible to master the subject and its context. After the study, the analysis was made by modeling to limit confusion bias. To reduce bias, the interviewers were rigorously trained by the study manager on how to approach the people to be surveyed.

The variables were well defined and some even redefined to reduce memorization bias.

Construct Validity

Interviewers were recruited and trained to ensure collection and facilitate collection.

External Validity

The results of this study can be generalized to the whole country if we consider that the characteristics are similar everywhere.

Ethical Considerations

The collection was carried out anonymously with consent after authorization from the health authorities of the municipality of Lemba. To this end, participation in this study was voluntary. The data collected will remain confidential.

Result

Distribution of individuals according to socio-demographic characteristics

The majority of participants were between 25 and 59 years old (93.8%), there were more women than men in this population (81.5%), the majority of participants were single (68%) and the vast majority of people surveyed had a university level (72%) (Table I).

Table I: Socio-Demographic Characteristics (N=422)

Socio-demographic Characteristics (%)	Absolute Frequency(n)	Relative Frequency
Age		
Under 25	13	3,1
25 to 59 years	396	93,8
60 years and older	13	3,1
Sex		
Female	344	81,5
Male	78	18,5
Situation Matrimoniale		
Single	287	68
Married	130	30,8
Divorced	1	0,2
Widow	4	1
Niveau D'Instruction		
Without official instructions	4	1
Primary	4	1
Secondary	105	25
Academic	306	72
Postgraduate	3	1

Acceptability of the Covid19 Vaccine

The study reveals that about 43.4% of respondents had accepted the vaccine against covid 19 and about 56.6 of them had refused to be vaccinated, (Table).

Table II: Acceptability of the vaccine against Covid-19 (N=422)

Acceptability of the Vaccine	Absolute Frequency(n)	Relative Frequency (%)
Yes	183	43,4
Not	239	5,66

Bivariate Analysis

Socio-Demographic Characteristics

The average age among those who had accepted the vaccine was 34.35 years and 32.55 years among those who had refused the vaccine. These two means are statistically different (p= 0.0168). No statistical link was found between vaccine acceptability and socio-demographic characteristics (TableIII).

Socio-Demographic Characteristics		OR	
	Vaccine Acceptability <i>n</i> (%)		p. value
Age group			0,873
Under 25	5 (38,5)	Réf.	
25 to 59 years	173 (43,7)	0.82 [0.24;2.54]	
60 years and older	5 (38,5)	1.00 [0.19;5.19]	
Marital statues			0 ,211
No married	133 (45,5)	Réf.	
Married	50(38,5)	1,34 [0.88;2.05]	
Sex			0 ,864
Female	148 (43)	Réf.	
Male	35(44,9)	0,93[0.57;1.53]	
Chronic diseases			0 ,211
Not	171 (44,5)	Réf.	
yes	12(31,6)	1,73 [0.86;3.66]	

The table below shows that there was no statistically significant relationship between vaccine acceptability and trust ($p = 0.169$), between vaccine acceptability and provider trust ($p = 0.874$), and also between acceptability and the perception that the vaccine would reduce the risk of having covid19 ($p = 0.864$). However, a statistically significant link was found between acceptability and having tested positive for covid 19 ($p = 0.001$), (Table IV).

Motivations	Acceptability <i>n</i> (%)	OR	p. value
Confiance in the vaccine			0,169
No	133(43,4)	Réf.	
yes	50(43 ,1)	0,93 [0,47-1,84]	
Testedpositivecovid			0,001
No	170 (45,1%)	Réf.	
Yes	13 (28,9%)	2,00 [1,04-4,09]	
Riskreduction			
Not	35 (44,9)	Réf.	
Yes	148 (43)	1,08 [0,65-1,77]	

Environment Conducive to Vaccination

The study shows that there was a link between acceptability and the freedom to get vaccinated ($p<0.001$), between acceptability and the ease of accessing the health professional ($p=0.002$), and also between acceptability and ease of getting vaccinated ($p <0.001$), however no statistical link was found between acceptability and the ability to find information on the coronavirus ($p=0.629$) (TableV).

Enabling environment for vaccination	Acceptability <i>n</i> (%)	OR	p. value
Freedom to get vaccinated.			<0,001
Not	150(44,8)	Réf.	
Yes	33 (37,9)	0.27 [0.13;0.51]	
Easy access to the health professional to be vaccinated			0,002
Not	169 (46,4)	Réf.	
Yes	14 (24,1)	0.37 [0.19;0.69]	
Ease of getting vaccinated			0,001
Not	153(47,3)	Réf.	
Yes	30(30,6)	0.48 [0.24;0.91]	
Ability to find information about coronavirus			0, 629
Not	27 (41,5)	Réf.	
yes	156 (43,7)	0.76 [0.37;1.50]	

Social Influences

The source of false information or intox on the vaccine was significantly associated with the acceptability of the vaccine ($p < 0.001$), about 17.9% people had obtained information from the street, 22.2% from political authorities - health, 56.4% of the media and around 43.9% of social networks. No statistically significant relationship was found between acceptability and sources of vaccine safety information ($P = 0.07$). (Table VI).

Influences sociales	Acceptability n (%)	OR	p. value
Source of false information about the vaccine			<0,001
From Politico-health authorities	2 (22.2%)	Réf.	
From the street	17 (17.9%)	1.37 [0,01-1,10]	
From Media	110 (56.4%)	0.23 [0,03-0,8]	
From Social networks	54 (43.9%)	0.39 [0,05-0,9]	
Source of vaccine safety information			0,07
From Politico-health authorities	134 (40,7)	Réf.	
From Social networks	2 (16,7)	3.23 [0,82-23,3]	
From the street	1 (50)	0.69 [0,02-27,0]	
From religious authorities	45 (58,4)	0.49 [0,29-0,81]	
From media	1 (50.0%)	0.69 0,02-27,0]	

Multivariate Analysis

After adjustment, the logistic modeling had made it possible to identify the factors associated with the acceptability of the vaccine against the coronavirus among adults in Kinshasa in the commune of lemba, which were the existence of a history of chronic disease, the different origins of the false information or poisoning about vaccination against the coronavirus, concerns about the side effects and the dangerousness of the vaccine against the coronavirus and the reluctance to vaccinate. Table VII presents the adjusted odds ratios of the different factors studied in the context of modelization.

Statistically significant interactions were found by analyzing the final model with the best AIC. For people with a history of chronic disease, a statistically significant difference was not found between the existence of a history of chronic disease and vaccine acceptability, so there was no link between vaccine acceptability and the existence of a history of chronic illnesses. Regarding the source of origin of false information or intoxication on the vaccine, the results had shown a link between the acceptability of the vaccine and the sources of origin of false information or intoxication on the vaccination. Individuals who received this information from the media ($ORa = 0.16 [0.05-0.21]$) or social networks ($ORa = 0.22 [0.11-0.42]$) were less likely to accept vaccination against coronavirus. People who received the false information or poisoning about the coronavirus vaccine from the media or social media were 0.16 times and 0.22 times less likely to accept the coronavirus vaccine, respectively. It had not been demonstrated the existence of statistically significant links between vaccine acceptability and the fear of side effects of the vaccine ($P = 0.3$), between vaccine acceptability and the statement that the vaccine could put my life in danger ($P = 0.12$). Finally, a statistically significant link was found between vaccine acceptability and reluctance to vaccinate ($ORa = 0.03 [0.01-0.08]$). Individuals who reported vaccine hesitancy were 0.03 times less likely to accept coronavirus vaccination than those who did not report vaccine hesitancy.

Table VII: Factors Associated with the Acceptability of the Coronavirus Vaccine

Characteristic	OR adjusted	P-value
Chronic illness		
No	—	
Yes	0,69 [0,27-1,71]	0,4
Source of false information or poisoning about the vaccine		
From Politico-health authorities	—	
From street	0,51 [0,09-4,09]	0,5
From Media	0,16 [0,05-0,21]	<0,001
From Social networks	0,22 [0,11-0,42]	<0,001
Vaccine could have side effects		
No	—	
Yes	0,74 [0,40-1,38]	0,3

Vaccine could put my life at risk		
No	—	
Yes	0,63[0,35-1,12]	0,12
Reluctance to vaccinate		
No	—	
Yes	0,03[0,01-0,08]	<0,001

Discussion

Limits of the Study

The study had limitations, it was limited to the commune of Lemba in Kinshasa, which may restrict the generalization of the results to the entire population of Kinshasa. Socio-demographic characteristics and attitudes towards vaccination may vary in other parts of the city. Additionally, this study was based on self-reported data collected through individual home interviews. Some information may have been influenced by memory or perception bias.

Socio-Demographic Characteristics

The study showed that the majority of people (93.8%) were between the ages of 25 and 59, a young population. The majority of people in this sample were women (81.5%) and most people were single (68%) and more than a third were married (30.8%).

Most of the people in this study had university education (72.5%). These results are slightly similar to those of A Faye et al in the study on factors associated with vaccine hesitancy in Senegal which found 67.1 % of people aged between 25 and 59 years and Steward Mulenda et al on the prevalence and factors associated with acceptance of the COVID-19 vaccine in Zambia which found 94.9 out of all respondents % had a higher education level [31,34].

This could be explained by the fact that the Congolese population is mostly young and educated, in addition to the fact that the study was conducted in the city of Kinshasa province where the majority of the population is young and educated.

Our study does not demonstrate any statistical link between acceptability and socio-demographic characteristics. Studies in Zambia and Ethiopia, respectively, found different results than ours: respondents over 41 years old were more likely to accept the COVID-19 vaccine compared to the 18-23 age group [34]. Attending secondary school and above, being older than 46, having a chronic disease were related to intention to accept the COVID-19 vaccine, adult populations who had a chronic disease were almost three times more likely to accept the COVID-19 vaccine than adult populations who did not have a chronic disease [40].

A study conducted in Libya had shown that acceptance was statistically associated with younger age groups, in particular 31-40 and 41-50 years [49].

The discrepancy in these results could be explained by the difference in the study environment, the method used and the study parameters.

The Acceptability of the Vaccine Against Covid 19

Our study reveals that approximately 43.4% of respondents were ready to accept the covid 19 vaccine and approximately 56.6 of them had refused to be vaccinated. A similar study in Zambia reported a covid vaccine acceptability rate of approximately 33.4% of people who were willing to accept the vaccine if it was made available

to them [34]. Acceptance of the COVID-19 vaccine among the Congolese adult population was lower than that reported in Ethiopia at 62.6% [40] and Senegal at 54.4% acceptability rate, 32.8% refusal rate and 12.9% hesitation rate [31].

This low acceptability rate found in our study could be attributed to the fact that participants were skeptical about the potential adverse effects and effectiveness of the COVID-19 vaccine. In addition, the low number of confirmed COVID-19 infections in Kinshasa during the study period could also have contributed to this low rate of acceptance of the covid19 vaccine.

Factors Associated with Acceptability

Motivation

Our study did not find the existence of statistically significant links between vaccine acceptability and fear of side effects of the vaccine ($P = 0.3$), between vaccine acceptability and the assertion that the vaccine could my life in danger ($P = 0.12$), between vaccine acceptability and ease of getting vaccinated ($P = 0.7$). A statistically significant link was found between vaccine acceptability and reluctance to get vaccinated, people who reported vaccine hesitancy were 0.03 times less likely to accept coronavirus vaccination than those who did not report vaccine hesitancy. Other studies had indicated that many people who knew that COVID-19 vaccines reduce transmission of the virus were more likely to accept the COVID-19 vaccine, respondents concerned about potential adverse effects and vaccine effectiveness were less likely to accept vaccination, some respondents did not accept vaccination due to concerns about vaccine efficacy [34].

The proportion of vaccine hesitants who thought it was not useful to get vaccinated was 23.3% versus 9.0% who thought it was useful ($p < 0.001$). The proportion of individuals who refused to be vaccinated because the vaccine could put their health at risk was higher than the proportion who said the vaccine would not put their health at risk (67.9% versus 22.8 %, $p < 0.001$) and individuals who said getting vaccinated would not help protect them from the virus, those who thought most people important to them would not think they should be vaccinated against COVID- 19 when vaccinated they were more likely to be vaccine hesitant or not to accept the vaccine [31]. Our results highlight the importance of vaccine hesitancy as a key factor influencing vaccine acceptability. Fear of vaccine side effects, perceived risk to life from the vaccine, and ease of access to the vaccine were not determining factors in the decision to accept the coronavirus vaccination.

Environment Conducive to Vaccination

Our study had shown that there was a link between the freedom to get vaccinated, the ease of access to health professionals to get vaccinated, the ease of getting vaccinated and the acceptability of the coronavirus vaccine. Respondents who indicated having the freedom to get vaccinated had a significantly higher probability of accepting the vaccine than those who did not ($p < 0.001$). Similarly, respondents who indicated that they did not have easy access to a healthcare professional to get vaccinated had a significantly higher

probability of accepting the vaccine than those who did not ($p = 0.002$), those who indicated having an ease of getting vaccinated had a significantly higher probability of accepting the vaccine than those who did not have this ease of getting vaccinated ($p = 0.001$). However, there was no statistically significant relationship between the ability to find information about covid 19 and the acceptability of the vaccine ($p = 0.629$).

Other studies had found that people who receive correct or adequate information about the benefits of vaccines are likely to receive the COVID-19 vaccine, compared to those who receive incorrect or insufficient information, many people who knew that the COVID-19 vaccines reduce virus transmission were more likely to accept the COVID-19 vaccine [34]. Individuals who thought it was unimportant or undesirable to get vaccinated, individuals who said getting vaccinated would not help protect them from the virus, and individuals who thought most people important to them would not think they should be vaccinated against COVID-19 when the vaccine was offered to them were more likely to be vaccine hesitant, as well as individuals who felt it was undesirable to get vaccinated against covid-19 [31].

The accessibility to information on vaccination, the availability of vaccines and the community awareness campaigns organized during the epidemic period would justify this association between freedom to be vaccinated, ease of access to health professionals to be vaccinated, to get vaccinated and acceptability of the vaccine against covid 19.

Social Influences

Regarding the source of false information or poisoning about the vaccine, our study had shown that individuals who received this information from the media ($ORa = 0.16[0.05-0.21]$) or social networks ($ORa = 0.22[0.11-0.42]$) all had a significantly lower risk of accepting coronavirus vaccination. People who received the false information or poisoning about the coronavirus vaccine from the media or social media had 0.16 times and 0.22 times lower risk, respectively, of accepting the coronavirus vaccine than those who did not. we're not receiving.

A similar study in Zambia had shown that people who received correct or adequate information about the benefits of vaccines were more likely to accept the coronavirus vaccine compared to those who received incorrect or insufficient information [34]. Another study in Ethiopia had shown that adult populations who had good knowledge and information about the COVID-19 vaccine were significantly associated with accepting the vaccine [40]. The media plays an important role in immunization and influences the community in positive or negative ways. Other studies have shown that negative media reports demotivate the community regarding vaccine uptake [47].

The hot example of whooping cough vaccination shows that media controversies over vaccination were leading to a decrease in vaccination coverage and therefore a 10-to-100-fold increase in the number of cases in unvaccinated countries compared to countries vaccinated [48]. Nowadays there are various sources like social networks where many positive and negative experiences are shared by individuals. Such recitals add a new dimension to health information, usually filled with pessimism, opinions related to vaccines, potentials, and vaccine-preventable diseases, for this reason, it is necessary for health authorities to provide adequate information to the general population on the adverse effects of vaccines before their deployment.

Good communication about vaccination would help the adult population to know the benefits of the coronavirus vaccination program and to accept the vaccination.

Our results would be justified by the fact that the media and social networks can be channels for the dissemination of misinformation and conspiracy theories regarding vaccines, misleading or unsubstantiated information about vaccination that had circulated rapidly during the pandemic period had create confusion and mistrust regarding the acceptability of vaccines.

Recommendations

After reading the results of this study, we propose to formulate various recommendations.

Towards the population

- Have confidence in vaccination because it is the most effective means of prevention.
- Do not take into consideration all false information on vaccination circulating in the streets, media and social networks.

For health personnel

- Encourage patients to get vaccinated against coronavirus.
- Provide good information about coronavirus vaccination to patients.

To the DRC Ministry of Health

- Put in place an effective communication plan to inform the population of the benefits of vaccination against the coronavirus, in the municipality of Lemba, to improve the rate of vaccine acceptability.
- Strengthen the skills of health professionals in communication about vaccination.
- Organize community awareness campaigns specific to coronavirus vaccination in the commune of Lemba, in order to reduce the rates of hesitancy and refusal to be vaccinated.
- Intensify community awareness on the coronavirus and vaccine-preventable diseases through media and social networks throughout the national territory.
- Strengthen policies focused on vaccination in the city of Kinshasa and specifically in the municipality of Lemba, by implementing incentive measures and facilitating access to vaccines.

To the scientific community

- Carry out an exhaustive study on the factors associated with vaccine acceptability against the coronavirus throughout the Democratic Republic of Congo to understand the determinants of vaccine acceptance in different regions of the country.

Conclusion

In conclusion, this study conducted in the commune of Lemba in Kinshasa provided important information on the acceptability of the coronavirus vaccine in adults. The results revealed that nearly 43.4% of those surveyed agreed to be vaccinated. The study identified several factors associated with the acceptability of the vaccine, such as the notion of a history of chronic disease, the sources of false information or intoxications on the vaccine coming from social networks and the media, the fear of the side effects of the vaccine, fear that the vaccine is life-threatening, vaccine hesitancy, and the perception that it is easy to get vaccinated against the coronavirus. It is crucial to act on these identified factors in order to improve vaccine acceptability in our environment.

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