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Analyses of acceptance (intention to receive, time frame before going to receive, uptake, and hesitancy) and the factors that influence the acceptance of COVID-19 vaccination among community members and health workers in Ebonyi state in Nigeria

Submission date
05/03/2022

Recruitment status
No longer recruiting

Registration date
16/03/2022

Overall study status
Completed

Last Edited
13/07/2023

Condition category
Infections and Infestations

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims

Coronavirus disease 2019 (COVID-19) is a very serious disease that started at the end of 2019. By 3rd January 2022, COVID-19 had affected more than 346 million people and killed over 5.5 million people across the world. By 26th January 2022, it has affected about 252,000 people and killed about 3100 people in Nigeria. It has also affected the economy of many countries. COVID-19 can be controlled by strategies like avoiding crowds, use of face masks, frequent hand washing with soap and running water, and frequent use of alcoholic hand sanitisers. However, the easiest and most reliable way to control COVID-19 is likely by vaccinating people with a COVID-19 vaccine. COVID-19 vaccination reduces the chance of getting COVID-19, reduces the seriousness of the disease, and also reduces the chance of dying from COVID-19. COVID-19 vaccination offers the safest, surest, and fastest way of protecting the public from COVID-19 and this can be so when all categories of people including adults and children are vaccinated. This is so because COVID-19 can affect all categories of people.

COVID-19 vaccination started in Nigeria in March 2021 and the Nigerian government and international partners are making COVID-19 vaccination more available for the people in Nigeria. However, the problem now is that contrary to what was expected, the percentage of people who have received COVID-19 vaccination is still very low in Ebonyi state and in Nigeria as a whole. This may be partly due to the fact that many people, including health workers, do not want to accept the vaccination.

This study aims to find out how many of the community members and health workers in Ebonyi state accept COVID-19 vaccination. That is, how many have received the vaccination, how many are planning to receive the vaccination, and how long they think it will take before they go and receive it. This study also wants to find out about the factors that influence whether people accept COVID-19 vaccination or not. The findings from this study will help the Ebonyi state and

Nigerian government as they are planning how to increase the percentage of community members and health workers who accept and then receive COVID-19 vaccination.

Who can participate?
1. Community members who are aged 15 years and above in villages (or communities) which are very close to primary health care centres where they provide health care for pregnant women and children including routine childhood immunisation
2. Health workers who are working or living in Ebonyi state

What does the study involve?
28 villages or communities will be randomly selected. In each of the villages selected, all households will be visited and all persons aged 15 years and above, who accept to be interviewed, will be asked whether they have received COVID-19 vaccination. Those that have not received COVID-19 vaccination will be asked whether they plan to receive it. Those that plan to receive COVID-19 vaccination will be asked how long they think it will take before they go and receive it. All the health workers in Ebonyi state who accept to be interviewed will be asked the same questions. Some community will be asked to discuss COVID-19 and COVID-19 vaccination and to give their opinion about the factors that influence whether people accept and receive COVID-19 vaccination. Some health workers will also be asked to discuss COVID-19 and COVID-19 vaccination and to give their opinion about the factors that influence whether health workers accept and receive COVID-19 vaccination.

What are the possible benefits and risks of participating?
There will be no immediate or direct benefit to participants. The potential benefit is improvement in COVID-19 vaccination policy on how to increase the percentage of people who have received COVID-19 vaccination in order to prevent people from getting and dying from COVID-19 in Ebonyi state and Nigeria. There are no obvious or anticipated risks in participating in this study.

Where is the study run from?
Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA) (Nigeria)

When is the study starting and how long is it expected to run for?
May 2021 to May 2022

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Ugwu I. Omale
omaleiu@gmail.com

Contact information

Type(s)
Principal investigator

Contact name
Dr Ugwu Omale

ORCID ID

https://orcid.org/0000-0001-6586-8992

Contact details
Department of Community Medicine
Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA)
Ebonyi State
Abakaliki
Nigeria
480
+234 (0)7035094245
omaleiu@gmail.com

Additional identifiers

Study information

Scientific Title
COVID-19 vaccination acceptance among community members and health workers in Ebonyi state, Nigeria: a concurrent-independent mixed method analyses of intention to receive, timeliness of the intention to receive, uptake, and hesitancy to COVID-19 vaccination and the determinants

Study objectives
Current study hypothesis as of 21/04/2022:
The primary hypotheses include:
1. Strong COVID-19 experience and perception increases COVID-19 vaccination acceptance (increases the intention to receive, timeliness of the intention to receive, and uptake and reduces hesitancy) compared with not strong COVID-19 experience and perception
2. Increase in COVID-19 experiences and perceptions score increases COVID-19 vaccination acceptance
3. Good COVID-19 vaccination expectation and perception increases COVID-19 vaccination acceptance compared with poor COVID-19 vaccination expectation and perception
4. Increase in COVID-19 vaccination expectations and perceptions score increases COVID-19 vaccination acceptance
5. Acceptance factor (COVID-19 risk-COVID-19 vaccination benefit perception or disease risk-remedy benefit perception [DR-RB or DRRB perception]) is significantly associated with COVID-19 vaccination acceptance
6. Positive COVID-19 vaccination process experience and perception (positive availability/access factor) increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination compared with negative COVID-19 vaccination process experience and perception (negative availability/access factor)
7. Increase in COVID-19 vaccination process experiences and perceptions score increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination
8. Acceptance-availability/access factor is significantly associated with the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination
9. Increase in acceptance factor score increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination compared with increase in availability /access factor score

10. The positive categories of COVID-19 experiences and perceptions, COVID-19 vaccination expectations and perceptions, and COVID-19 vaccination process experiences and perceptions respectively increase COVID-19 vaccination acceptance compared with the negative categories

The secondary hypotheses include:
1. Knowledge, attitude, and practices about COVID-19 are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; and COVID-19 vaccination process experiences and perceptions
2. Sources of information about COVID-19 are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; and knowledge, attitude, and practices about COVID-19
3. Sociodemographic characteristics are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; knowledge, attitude, and practices about COVID-19; and sources of information about COVID-19
4. Professional or work-related attributes of health workers are significantly associated with: COVID-19 vaccination acceptance, COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; knowledge, attitude, and practices about COVID-19; and sources of information about COVID-19

Previous study hypothesis:
The primary hypotheses include:
1. Strong COVID-19 experience and perception increases COVID-19 vaccination acceptance (increases the intention to receive, timeliness of the intention to receive, and uptake and reduces hesitancy) compared with not strong COVID-19 experience and perception
2. Increase in COVID-19 experiences and perceptions score increases COVID-19 vaccination acceptance
3. Good COVID-19 vaccination expectation and perception increases COVID-19 vaccination acceptance compared with poor COVID-19 vaccination expectation and perception
4. Increase in COVID-19 vaccination expectations and perceptions score increases COVID-19 vaccination acceptance
5. Acceptance factor (COVID-19 risk-COVID-19 vaccination benefit perception or disease risk-remedy benefit perception [DR-RB or DRRB perception]) is significantly associated with COVID-19 vaccination acceptance
6. Positive COVID-19 vaccination process experience and perception (positive availability/access factor) increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination compared with negative COVID-19 vaccination process experience and perception (negative availability/access factor)
7. Increase in COVID-19 vaccination process experiences and perceptions score increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination
8. Acceptance-availability/access factor is significantly associated with the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination
9. Increase in acceptance factor score increases the intention to receive, timeliness of the intention to receive, and uptake of COVID-19 vaccination compared with increase in availability /access factor score

The secondary hypotheses include:
1. Knowledge, attitude, and practices about COVID-19 are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination

expectations and perceptions; and COVID-19 vaccination process experiences and perceptions
2. Sources of information about COVID-19 are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; and knowledge, attitude, and practices about COVID-19
3. Sociodemographic characteristics are significantly associated with: COVID-19 vaccination acceptance; COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; knowledge, attitude, and practices about COVID-19; and sources of information about COVID-19
4. Professional or work-related attributes of health workers are significantly associated with: COVID-19 vaccination acceptance, COVID-19 experiences and perceptions; COVID-19 vaccination expectations and perceptions; COVID-19 vaccination process experiences and perceptions; knowledge, attitude, and practices about COVID-19; and sources of information about COVID-19

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Approved 15/01/2022, Ebonyi State Health Research and Ethics Committee (Ebonyi State Ministry of Health, Block 5, New Secretariat Complex, Centenary City, Abakaliki, Ebonyi State, Nigeria; +234 (0)9065211521; ebonyistateministryofhealth@gmail.com), ref: EBSHREC/15/01/2022-02/01/2023
2. Approved 17/02/2022, Research and Ethics Committee of Alex Ekwueme Federal University Teaching Hospital Abakaliki (Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA), Ebonyi State, Nigeria; +234 (0)8039558074; enquires@aefutha.gov.ng), ref: AE-FUTHA/REC/VOL3/2022/004

Primary study design
Observational

Study design
Observational cross sectional study

Study type(s)
Other

Health condition(s) or problem(s) studied
COVID-19 (SARS-CoV-2 infection)

Interventions
Analytical cross-sectional survey with a concurrent-independent mixed data collection and data analysis and interpretation method. Quantitative data will be measured through a community member survey and a health worker survey at a single timepoint. Qualitative data will be measured through focus group discussions (FGDs) with community members and FGDs with health workers at a single timepoint.

Intervention Type
Other

Primary outcome(s)

The intention to receive, timeliness of the intention to receive, uptake, and hesitancy to COVID-19 vaccination measured using a population-based household survey and a health worker survey at a single timepoint

Key secondary outcome(s)
Measured using a population-based household survey and a health worker survey at a single timepoint:
1. COVID-19 experiences and perceptions
2. COVID-19 vaccination expectations and perceptions
3. COVID-19 vaccination process experiences and perceptions
4. Knowledge of COVID-19
5. Attitude towards COVID-19 and COVID-19 vaccination
6. Practices about COVID-19
7. Main source and most trusted source of information about COVID-19

Completion date
09/05/2022

Eligibility

Key inclusion criteria
Clusters (a cluster is a geographical community (village(s) or settlement(s)) which is the immediate catchment area of a primary health care (PHC) centre):
1. Having at least 200 households or a population of 1000 people
2. The PHC centre is providing basic maternal and child health care services including routine childhood immunisation
3. Can be easily accessed with a car
4. The cluster head gives verbal consent/permission

Community members:
1. Aged 15 years and above
2. Gives verbal consent or assent
3. Have resided in the community for at least one year (for the focus group discussions)

Health workers (both clinical and non-clinical staff in public and private health care sectors):
1. Working or living in Ebonyi state
2. Gives verbal consent
3. Have at least 1 year of working experience (for the focus group discussions)

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group
Mixed

Sex
All

Total final enrolment
12101

Key exclusion criteria
Does not meet the inclusion criteria

Date of first enrolment
12/03/2022

Date of final enrolment
09/05/2022

Locations

Countries of recruitment
Nigeria

Study participating centre
Ebonyi state
South-east Nigeria
-
Nigeria
480

Sponsor information

Organisation
Alex Ekwueme Federal University Teaching Hospital Abakaliki (AEFUTHA)

Funder(s)

Funder type
Other

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		12/07/2023	13/07/2023	Yes	No
Protocol article		15/12/2022	16/12/2022	Yes	No