

Republic of The



Gambia

PERCEPTIONS OF COMMUNITY MEMBERS AND HEALTH WORKERS ON COVID-19 VACCINES

Directorate of Health Research

Ministry of Health

The Gambia

August 2021

Additional information about Perceptions of community members & health workers towards COVID-19 vaccines may be obtained from the Directorate of Health Research (DHR), FIB Building, Kairaba Avenue; Phone: 2122669/3247910; Email: sainey_sanneh@ymail.com

Suggested citation: The Directorate of Health Research (DHR). 2021. Perceptions of community members and health workers towards COVID-19 vaccines. The Gambia: Ministry of Health

Table of Contents

Executive Summary	4
Chapter One: Introduction	7
1.1 Background	7
1.2 Rationale/Justification.....	8
1.3 Aim	9
Chapter Two: Methods	10
2.1 Study Design	10
2.2 Study Settings	10
2.3 Target Population.....	10
2.3.1 Inclusion Criteria	10
2.4 Sampling Technique and Sampling size	11
2.5 Data Collection Tool.....	11
2.6 Data Collection Procedure	12
2.7 Data Management	12
2.8 Data Processing and Analysis	12
2.10 Ethical Consideration.....	13
Chapter Three: Results.....	14
3.1 Socio-demographic data of participants.....	15
3.2 Knowledge of Participants on COVID-19	16
3.3 Perception of vaccines	21
3.4 Participants Sources of information	26
3.5 Vaccination Uptake.....	30
3.6 Health workers' perception of vaccines and vaccine hesitancy	41
3.7 Demographic Characteristics of participants	42
3.8 COVID-19 perception.....	43
3.9 Vaccine Perception	47
3.10 Vaccine Hesitancy	52
Chapter Four: Conclusion and Recommendations.....	56
4.1 Conclusion	56
4.2 Recommendations.....	57
Reference List	58

Executive Summary

Background: There have been many myths and misconceptions surrounding the COVID-19 pandemic; this has led to many people being hesitant about taking the vaccine. Since the arrival of the vaccines in the Gambia, the acceptance rate has not been as fast as desired. The most effective known way of combating the pandemic is through vaccines; therefore, if the acceptance of these vaccines is low, this will cripple the country's fight against the pandemic. This study explores the perception of prominent community members, opinion leaders, etc., about COVID-19 and the vaccines. The perception of prominent members of society could trickle down to community members. Therefore, if we can elicit the thoughts and views of these community members, the findings could help guide policy and intervention strategies in increasing the uptake of the vaccine.

Methodology: An explorative, descriptive study using qualitative techniques was applied in this study. This study was conducted in the Western Region of the Gambia, i.e., Western 1 and 2. The study population includes prominent community members such as Alkalolus, women leaders, youth leaders, local politicians, health care workers within selected communities and ordinary citizens. Twenty-four community members and 12 health care workers were interviewed in this study, making up a total of 36 interviews. A purposive sampling technique was used to select participants of this study. Semi-structured interviewer guides were used to collect data to meet the study's goals and objectives. Face-to-face in-depth interviews were carried out to get the perceptions of community members on COVID-19 vaccines. Interview data were audio-recorded, the data collected were transcribed, coded, and analysed for the generation of themes with the aid of qualitative data analysis software Doc-tool.

Results: The participants had satisfactory knowledge of COVID-19. Most of the participants were able to name the signs and symptoms of COVID-19. The participants were also abreast with the WHO recommended preventive strategies and mentioned a few, such as social distancing, cough etiquette, handwashing etc. While there was a general acceptance of the existence of COVID-19 in the Gambia, some respondents suggested that it is merely a severe form of a common cold that was labelled COVID-19 and that it is not much of a problem.

Participants had a favourable view of vaccines; the participant was aware of infant welfare vaccines given to children and expressed trust and belief in the ability of the vaccine to protect their children from childhood illnesses. They also believed that this has led to the eradication of so many diseases such as polio. A participant noted that when the IWC vaccines arrived in

the country, there was some controversy, but now there is a general acceptance of those vaccines. With regards to COVID-19 vaccines, one recurring subject among respondents is their trust in healthcare workers. Participants believe that because the vaccine is brought in by the government and promoted by health care workers, it must be safe and effective as the health workers will not support anything that will harm the population. There was a general trust and belief that the vaccine could protect them from contracting COVID-19 and that rumours on social media should be disregarded. Regarding adverse /side effects of the vaccine, the participants mentioned no serious adverse effects when quizzed on whether they knew anyone who had an adverse effect.

Participants also shared their sources of vaccine information; several sources were mentioned, such as radios, television, and healthcare workers within their communities. It was revealed that participants believed that health information received should be thoroughly vetted through consultation with health care workers before any decision is made concerning it.

Furthermore, there were contrasting views on vaccine acceptance and hesitancy by the study participants. The findings showed that while some of the participants believed that COVID-19 does not exist and that the vaccines are meant to reduce the African population, others were receptive to the vaccine and expressed complete faith in the government and healthcare system regarding the vaccine. The findings also revealed that the vaccine refusals resulted from negative rumours and misconceptions on different social media platforms. Most of the participants admitted to not being vaccinated, giving varying reasons. One of the reasons cited is the unavailability of vaccines. Most health facilities had run out of stock at the time of data collection; others said they were too busy to go and get vaccinated and would not close their businesses to go and get vaccinated. Some of the participants expressed concerns concerning the side effects of the vaccine.

Finally, the interviewed health care workers believed in the efficacy of the vaccine; however, some of them expressed concerns about the efficacy and the side effects of the vaccine. Some of the interviewed health workers revealed that they were not satisfied with the information on vaccine safety coming from the health ministry. They believed it was not exhaustive and convincing.

Conclusion: This study employed qualitative techniques to explore the perception of community members such as Alkalo's, youth leaders, market leaders etc., on COVID-19 and COVID-19 vaccines. The study also aims to identify vaccine hesitancy, accessibility, and sources of information on COVID-19 and its vaccine. The findings showed that participants had both good knowledge and awareness of COVID-19. The general perception of the participants towards the vaccine shows a willingness among participants to get vaccinated and a favourable opinion towards vaccines. However, others expressed concerns about the safety of the vaccine and its accompanying side effects. The most common source of information, as stated by the participants, was radios, televisions etc. The participants generally expressed trust in the healthcare workers and willingness to adhere to whatever suggestions or advice that health workers give. It is recommended that more sensitization is made using health care workers as findings show community members' trust.

Keywords: Community members, COVID-19, Hesitancy, Health workers, Vaccines

Chapter One: Introduction

1.1 Background

Coronavirus disease 2019 (COVID-19) is a respiratory tract infection caused by a newly emergent coronavirus that was first identified in Wuhan, China, in December 2019.¹ The disease is highly infectious which in most severe cases progress to acute respiratory distress syndrome, septic shock and eventually end-organ failure.²

Globally, as of the 3rd of September 2021, a total of 221,507,899 confirmed cases of COVID-19, including 4,581,062 deaths, have been reported. According to the 365th National Outbreak Situational Report (SITREP), the Gambia registered 9,789 confirmed cases of COVID-19 with 328 deaths.³

Following the advice of the Emergency Committee convened under the International Health Regulations (2005), the WHO Director-General declared the current outbreak of COVID-19 a Public Health Emergency of International Concern (PHEIC) on the 30th of January 2020 and called for collaborative efforts of all countries to prevent the rapid spread of COVID-19, which was subsequently followed by issues of temporary recommendations to all member states including the Gambia.⁴

As the outbreak continues to evolve, member states were urged to implement adequate measures to prevent the introduction of the virus to new areas or reduce human-to-human transmission in areas where cases are yet to be reported. Significant public health measures were highlighted in achieving these goals, including quarantine measures, isolation and treatment of confirmed cases, travel restrictions, halting social gatherings, vaccination, etc.

As the world is amid a COVID-19 pandemic, WHO and partners work together to track the pandemic, advise on critical interventions, distribute vital medical supplies to those in need, and more so in the development and deployment of safe and effective COVID-19 vaccines. The COVID-19 vaccine has saved millions of lives by preparing the body's natural defence mechanism to recognise and fight off the viruses. Getting vaccinated provides personal protection and people around you; thereby, you are less likely to get the disease and more likely to infect someone else. This is particularly important to protect people at increased risk for severe illness from COVID-19, such as healthcare providers, older or elderly adults, and people with other medical conditions.

As of the 18th of February 2021, at least seven different vaccines across three platforms have been rolled out in countries. Vulnerable populations in all countries are the highest priority for vaccination in which the Gambia is not an exception. The COVID-19 vaccine is a critical new tool in the battle against COVID-19, and it is very encouraging to see that many of its vaccines proved successful. Hence, to achieve a high acceptance rate, communities should be essentially and constructively engaged.⁴

1.2 Rationale/Justification

The Gambia registered its first case of COVID-19 on the 16th of March 2020. Then on several measures were adopted by the country to interrupt the transmission nationwide. These include the closing of schools, suspension of public gatherings, closure of all non-essential public places, spatial distancing, respiratory etiquette, restriction on the number of passengers allowed on public transport, mandatory quarantine of travellers into the country, isolation and care for infected suspected cases.⁵ However, cultural, geographic, and religious factors may strongly influence the effectiveness of these measures.⁴ Rapid assessment of the local context regarding community/public perception on the COVID-19 vaccine is deemed paramount for evaluating both the drivers of success and potential barriers in the Gambia to inform the planning of the most appropriate and culturally acceptable vaccination methods.

Strong rumours on the COVID-19 vaccine have become ubiquitous in the Gambia, which has ultimately led to undesirable behaviours among the public, including vaccine hesitancy (low uptake), that may potentially contribute to a rapid increase in transmission of the virus (especially if people are reluctant to take the COVID-19 vaccine). To effectively design strategies to combat these rumours, it is crucial to understand the nature of people's perceptions of the vaccine and their beliefs and attitudes towards the disease and prevention and treatment efforts. Therefore, this project will involve a rapid qualitative assessment of community perceptions towards the COVID-19 vaccine to document feelings and perceptions of community members throughout the evolution of the vaccination campaign in the Gambia. This documentation will provide further assessments, inform current support activities, and generate useful information for policymakers and expanded programmes on immunisation (EPI) programs in designing appropriate vaccination strategies and interventions in the country. This makes such an undertaking assessment essential in the Gambia as it will provide evidence-based information for further assessment.

1.3 Aim

To explore community members' and health workers' perceptions of COVID-19 and COVID-19 vaccines to provide the information needed towards increasing the uptake of COVID-19 vaccines in The Gambia.

Objectives:

- a) To assess the knowledge of community members on COVID-19
- b) To explore the perception of community members on vaccines
- c) To identify community members' sources of information relating to COVID-19, including Vaccine
- d) To gauge community members' willingness and accessibility to vaccination
- e) To explore health workers' knowledge, attitude, and perception of the COVID-19 vaccine.

Chapter Two: Methods

2.1 Study Design

The study was an exploratory, descriptive study that applied a qualitative technique. Qualitative in that our goal was to investigate and comprehend the meaning that individuals or groups attribute to a social or human issue.⁶ Qualitative technique is most appropriate in investigating meanings, attitudes, values, and beliefs of people.

2.2 Study Settings

The study was conducted in the two West Coast Health Regions I and II, spanning from Banjul to Kalagie. It consists of Banjul City Council, Kanifing Municipal Council and West Coast Region. The study is the most densely populated, with an overall population of 699,704 and a population density of 397/sq km (2013 census). West Coast Health Region I extend from the greater Banjul area, the Kanifing Municipality and part of the West Coast Region with an estimated population of about 357,000. West Coast Health Region II extends from the Kombo's to all the Foni District with about 392,000 people. The parts of the study areas are urban, other peri-urban and rural.

These regions comprise an extensive number of towns and villages, which represents both rural and urban Gambia. Out of the numerous settlements in these two regions, six communities were selected. Four communities, Sukuta, Bakau, Fajikunda, and Brikama, represent the urban Gambia, and two of the communities, Gunjur and Sanyang, represent the rural Gambia. Health workers who participated in this study were obtained from the corresponding health facilities in the selected communities.

2.3 Target Population

The target population is opinion leaders and people viewed as influential in their respective communities. Also targeted were health care workers currently in the selected study sites.

2.3.1 Inclusion Criteria

Community members who have at least 18 years of age and consented to participate in the study voluntarily.

2.4 Sampling Technique and Sampling size

The purposive sampling method was used to select six communities or settlements within our study area. This approach was chosen because it allows the researcher to pick volunteers who are homogeneous in characteristics and have a lot of knowledge about the study's goal. Purposive sampling is a non-probability sampling approach in which the researcher uses multiple ways to pick all available participants who meet the requirements.⁷ The approach also helps the researchers to select volunteers informed about the topics under investigation ^[9,10]. Purposive sampling, according to Neuman (2011), relies on the judgment of key informants to pick instances, or it selects cases with a specific aim in mind. ⁷ This sampling method was applied given that this study was qualitative, which is mainly soliciting views and perceptions and not to look for statistical power. The communities purposively selected were Bakau, Faji-kunda, Brikama, Sukuta, Gunjur and Sanyang. In each of the selected communities or settlements, gatekeepers were used to identify the community leaders, including the Village Head or Alkalo, the Religious Head or Imam, Village Development Committee Chairperson, Women Leader and Youth Leader. Also selected for interview were two health care workers in each community sampled for the study that has a health facility. The health workers interviewed were mainly a nurse and a Public Health Officer. The second sampling technique used was convenience sampling to select influential community members available during the data collection period. The point of data saturation occurs when new data gathering reveals no new developing topic. ⁸ As a result, data saturation was reached by the twenty-fourth participant, resulting in a sample size of fourteen (24) community and opinion leaders for the community members and 12 interviews for the health workers, making it a total of 36 interviews.

2.5 Data Collection Tool

Interviews using a semi-structured and open-ended interview guide was developed. The tool allowed flexibility and helped the researcher probe and solicit more detailed explanations in the interviewee's words. The interview guide has six components: demographic information of the participant and sub-themes for probing on participants' knowledge and perception on COVID-19, including vaccination and their source of information about COVID-19. The tool was pre-tested for applicability and content.

2.6 Data Collection Procedure

A face-to-face interview was done with each participant at a location of their choice and in a language of their choosing. In each selected community, interview sessions were conducted with four influential community members, including the Village Development Community Chairperson, Islamic Religious Head called Imam, Women leader and a Youth Group Leader. Thirty-six in-depth interviews were conducted across the selected communities, six (6) in each West Coast Health Region. The health facility interviews were with the Public Health Officer and a Nurse. During the interviews with the interviewee's consent, it was tape-recorded and noted taken during the interviews. The interviews were in strict adherence to COVID-19 protocols, including ensuring physical distancing and wearing of face mask, to name but a few. Each interview lasted for between 30 and 45 minutes.

Table 1: Summary of the Participants

Selected regions	Community Interviews	Health Interviews	worker	Total
Western 1	12	6		18
Western 2	12	6		18
Total	24	12		36

2.7 Data Management

After completing all the interviews, the tape-recorded information and notes were packed and delivered Principal Investigator by hand. Discussions among the directorate staff were held on matters arising during the interview. Additionally, soft copies of the study materials were duplicated password protected as a backup.

2.8 Data Processing and Analysis

The interview data, including tape-recorded and field notes, were translated from local languages, i.e. Wolof and Mandinka as the case may be, and transcribed verbatim. The data were analyzed through multiple readings to identify commonly emerging themes

and concepts that were identified and classified. In other words, this was a "method of fitting data together, of making the imperceptible obvious, of linking and attributing consequences to antecedents. It is a process of conjecture and verification of correction and modification, suggestion and defence ".⁹ Thematic content analysis was done to discover, analyse and identify patterns within data.

The transcribed data was examined multiple times to identify commonly emerging themes and concepts. These were further analyzed and grouped to identify the most important objectives of the current study. The frequently emerging themes and concepts were organized accordingly to identify pertinent issues of relevance relating to COVID-19, including participants perception of vaccination. Typical statements were used for citation.

2.10 Ethical Consideration

Ethics approval for the parent study from which this present study is part was granted by the Joint Gambia Government/Medical Research Council Ethics Committee. Additionally, an introductory letter from the Director of Health Services of the Ministry of health was provided as proof of a Gambia Government sanctioned study and presented at selected health facilities.

As usual, participation in the study was voluntary and free from coercion. For each potential participant, the information sheet was clearly read and interpreted in the language the participant understood. Each consented participant signed the consent form provided.

Chapter Three: Results

Details of the findings of this study related to the research questions are presented in this chapter. The findings are presented under the ensuing headings; Socio-demographic characteristics of participants, Knowledge on COVID-19, perception towards Vaccines, sources of vaccine information, vaccination uptake and health workers' perception towards vaccine hesitancy

Table 2: Themes and sub-Themes Generated

Theme	Subthemes
1. Knowledge on COVID-19	a) Knowledge of Signs and Symptoms b) Knowledge on COVID-19 Preventive strategies c) The Existence and Risk of Contracting COVID-19 d) Impacts of COVID-19 on People's Daily lives
2. Perception towards Vaccines	a) Perception towards IWC vaccines b) Perception towards COVID-19 Vaccines
3. Sources of Vaccine Information	a) Hear information b) The decision to take COVID-19 Vaccine c) Awareness by the health care workers
4. Vaccination Uptake	a) Hesitancy/Refusal b) COVID-19 Vaccination Status c) Future Vaccine Acceptance d) Mass COVID-19 Vaccination e) Community Vaccination Barriers f) Increasing Vaccine uptake g) Access to Vaccination Services

3.1 Socio-demographic data of participants

A total of 36 interviews were conducted in six different communities in both Western 1 & 2. Amongst this group of people, 33.3% (n= 12) were health workers. In the non-health worker category, 66.7%, most of the participants interviewed were between the ages of 51-60, representing a total of 34.8% (n=8), and most of them were also males representing 70.8% (n=16). Amongst this non-health worker category, less than half of the participants attained tertiary education 37.5%(n=8), followed by those at the secondary level, while those with non-formal education was 20.8%. The assessment also revealed that most of the participants were local administrative leaders (41.7%), while religious leaders made up 29.2%. This group of participants can influence decisions in the communities and serve as role models to others in their respective communities.

Table 3: Sociodemographic Characteristics of Participants

Age Range	Male	Female
31-40	2	1
41-50	4	1
51-60	3	5
61-70	6	0
>70	2	0
Total	17	7
Marital status		
Married	17	6
Widowed	0	1
Educational Level		
No formal education	1	4
Primary level	1	1
Secondary	5	1
Tertiary	8	1
Arabic	2	0
Occupation		
Local administrative leader	8	2
Politician	1	1
Ordinary citizen	1	4
Religious Leader	7	0

3.2 Knowledge of Participants on COVID-19

Knowledge is a fundamental component that can influence people's attitudes towards health-seeking behaviours. A lack of knowledge can greatly hamper effective vaccine uptake. The development of a COVID-19 vaccine to combat the disease's spread and overwhelming effect is still ongoing, and as the pandemic advances, new, more effective vaccines are likely to be developed. Vaccine delivery is continuing, and the public acceptance of the COVID-19 vaccine is crucial.¹¹ The participants' knowledge was examined based on the ability of participants to give a general overview of their understanding of COVID-19. The signs and symptoms, modes of transmission, preventive strategies state if they believe they are at risk of contracting the disease, the belief about the existence of COVID-19 in the country, and the pandemic's effect in the individual's daily life. A study revealed that the knowledge and practice of residents towards COVID-19 had been differentiated to a certain extent. However, there are still deviations or deficiencies in residents' understanding of specific important knowledge and adoption of relevant preventive measures.¹² The findings are somewhat similar to our findings which revealed some form of differences in participant's level of knowledge.

In this study, the knowledge of participants on COVID-19 was quite impressive. Generally, most of the participants had some form of knowledge with regards to the COVID-19 phenomenon. Several participants expressed this information.

3.1.1 Knowledge of Signs and Symptoms

It was noted that most participants were able to give two or more signs and symptoms and modes of transmission of COVID-19, such as;

... there is always fever, you have nasal congestion, you will not be able to take smell your smell will be affected, sometimes you have a cough, nasal congestion and red eyes" (P9, 55yrs/E, Female, Ordinary Citizen).

Another participant has this expression to say,

....'continuous headaches with sneezing frequently sometimes general body weakness we have seen such kinds of people, and we were told the person has some signs of COVID-19 and usually they are taken to quarantine"... (P18, 50yrs/A, Male, Religious Leader)

Another said; *... "The signs and symptoms are a lot of coughing, sneezing and a general sense of feeling unwell" (P23, 67yrs/B, Male, local Adm. Leader)*

Despite the higher number of participants being able to say a few signs and symptoms of COVID-19, a few could not tell the signs and symptoms. This was expressed by a participant who said;

I don't know the signs of the corona, but it's having relations with all those other kinds of sickness

Another also said, *...I cannot know that since, but we believe it is common cold (P10, 35yrs/E, Male, Local Adm. Leader).*

Another participant made a sarcastic statement expressing his disbelief about the existence of COVID-19.

"...because people have died, and they say Coronavirus killed them. High blood pressure patients die, and they say they are killed by corona you understand....., some people go to the hospital and come back and then all of a sudden you take them to the hospital, and they get admitted then they say its corona..." (P3, 64yrs/D, Male, Religious Leader).

3.1.2 Knowledge of COVID-19 Preventive Strategies

Preventive strategies are another component used to measure the level of knowledge of community members on COVID-19. This has been one of the major steps that have been put in place to ensure that the virus is put under control. Most of the participants in this study were able to express knowledge of the various recommended strategies by the WHO. People understood the importance of social distancing and other preventive measures prescribed by the WHO. Most participants have the confidence to defeat the disease but showed concern for coronavirus threat and are aware of its prevention. A study in Ethiopia revealed that respondents exercised one or more recommended preventive measures to avoid COVID-19 infection.¹³ Their study findings are similar to the findings of this particular study, as showcased by some of the participants' responses.

"We protect ourselves from getting the virus by social distancing, frequent hand-washing and being tactful in dealing with patients" (P23, 67yrs/B, male, Local Adm. Leader)

while some expressed similar sentiments such as;

"You must make yourself clean, through regular hand washing, avoid handshakes before people, social distancing; you have to try always to be clean and put on clean clothes" (P19, 39yrs/A, Male, Ordinary citizen).

"So if you want to protect yourself, you put on masks, sneeze in your elbow and discard used tissues in the dust bin to avoid spreading to others" (P17, 62yrs/A, Male, Local Adm. Leader).

"So to avoid getting the disease, we should always wash our hands, avoid handshaking especially in public, use face masks and maintain social distancing" (P8, 59yrs/F, Male, Local Adm. Leader).

3.1.3 Belief in the existence of COVID-19 and risk of contracting the virus

The existence of COVID-19 in the Gambia is still a myth in the hearts of a few Gambian populates. The study figured out that most people feel at risk and believe in the existence of the virus in the country. Nonetheless, few members of the population are still either in a dilemma or ignorant of the existence of COVID-19. This behaviour could have a vastly negative impact on the effective implementation of preventive strategies. This may be because they lack the understanding of the phenomenon, or it could simply be a result of ignorance. When asked about the existence of the disease and if they are at risk of contracting the virus.

These were a few responses;

.... 'of course because I travel with a vehicle where a lot of people are boarding that vehicle so I may not know who is with corona or so, I may get it from there".... (P10, 35yrs/E, Male, Local Adm. Leader)

"The reason why you will contract a disease is usually lack of personal hygiene, if you don't observe personal hygiene and also clean your environment, in the long run, you will be dirty, and if you are dirty, you might contract a disease" (P18, 50yrs/A, Male, Imam)

"Yes, it's highly possible because in our culture we are always together during..." (P14, 60yrs/D/female, Local Adm. Leader).

Even though most participants portrayed a high level of knowledge, that was insufficient to bring about attitudinal change. This was supported by a Knowledge, Attitude and Practices (KAP) study conducted in Venezuela. Their analysis reported that knowledge by itself had no association with optimism and had little association with self-reported practices. They concluded that knowledge is insufficient to prompt behaviour change.¹⁴

Despite participants accepting that they are at risk of contracting the COVID-19 virus, they still believe that it would be challenging to adhere to the safety measures based on the cultural setup and relationships, which threaten many peoples safety. An expression by respondents are noted;

'What happens to your family and friends happens to you because you cannot escape. They would have to come to you, and you have to help them' (P20, 60yrs/B, Male, Local Adm. Leader).

Yes, I don't know, but I cannot guarantee that because I am a community leader and I cannot drive anybody away, yes I am at risk (P13, 82yrs/D, Male, Local Adm. Leader)

Regardless of the majority expressing that they are definitely at risk of contracting the virus, here is a contrast by another participant... *'I am not at risk because am usually alone indoor' (P11, 44yrs/F, Female, Ordinary Citizen).*

Another person said; *'...that is what people are saying, but in my case, I don't know, I don't... that is because I don't see it with my eyes' (P11, 44yrs/F, Female, Ordinary Citizen)*

This has shown a lack of knowledge with regards to the exposure risk factors of COVID-19. This is supported by a study that revealed that public awareness regarding the COVID-19 pandemic was significantly influenced by people's perceived risk, information source, and health-related knowledge.¹⁵

3.1.4 Impacts of COVID-19 on People's Daily lives

With the components mentioned above of knowledge about the presence of COVID-19, participants were also questioned about the effects of the pandemic on their everyday lives.

A statement jointly delivered by ILO, FAO, IFAD, and WHO states that the pandemic has affected the entire food system and has laid bare its fragility. Border closure, trade restrictions, and social distancing have prevented farmers from their usual farming activities, thus interrupting domestic and international food supply chains. The pandemic has rendered a lot of people jobless and placed millions of livelihoods at risk, with those in low-income countries, particularly the marginalised populations, including small scale farmers and indigenous people, being hardest hit (WHO 2020).¹⁶

The pandemic has other various impacts on livelihood such as; service sector not being able to provide their proper services, disruption in celebration of cultural, religious and festive events, undue stress among the population, social distancing with peers and family members, closure of tourist centres and religious places amongst others.¹⁷

Most of these effects, as mentioned earlier, were reiterated by participants in this study, such as;

....." Indirectly it has affected me because it has changed a lot of things in terms of people's earnings just like those the tourist guest travelling to western countries to and from and even our people in the west most of them were doing something, and now it has greatly diminished, and if you ask them they tell that it's because of COVID-19" (P12, 56yrs/F, Male, Local Adm. Leader)

Another also said, " we are facing a lot of difficulties, especially in our markets. Everything went up, and poor people are finding it very difficult to survive our economy is going down it is not easy for me" (P4, 58yrs/D, Female, Local Adm. Leader).

A study noted that during the early months, the pandemic did have negative psychological impacts on students.¹⁸ Even though this study did not assess the impact on students, some participants were able to express some issues that students faced.

...oh, that's plenty, even our children in schools have been affected the school has employed a system whereby they divided the children into two groups one group goes to school one week. The other goes the following week, so it is every other week" (P17, 62yrs/A, Male, local Adm. Leader).

In a study conducted in India, the findings revealed that the majority of the respondents declared that the village/city lockdown policy had a significant impact on their daily life, but most of them held an optimistic attitude toward the control of the COVID-19.¹⁹ A participant's sentiment supports this;

...it has affected our meetings because people were not allowed to attend meetings without masks; this was a regulation made by our leader" (P17, 62yrs/A, Male, Local Adm. Leader).

.

3.3 Perception of vaccines

This theme captures the views of community members towards vaccines in general. This section has been categorised into three sub-themes, including perception of infant welfare clinic (IWC) vaccines, perception of COVID-19 vaccines and adverse reactions/ side effects of the COVID-19 vaccine.

3.2.1 Perception of IWC vaccines

Perception of IWC vaccines describes the opinions and thoughts of the participants towards vaccines that are administered to children as part of their routine immunisation during infant welfare clinics. The findings showed that all the participants knew the routine immunisation services available at the health centres. All the participants in the study had a favourable opinion of IWC services. Most of the participants believed that the arrival of IWC vaccination programmes has led to the eradication of so many childhood diseases. Some also mentioned that the IWC vaccines are beneficial for the prevention of diseases in general.

One of the participants said, *'It is imperative to take care of your children. Infants taking vaccination are seen as someone who is under utmost care. Prevention is better than cure. If you don't do so and the child gets sick, the struggles required to care for them are unbearable in many cases. To have treatment requires time and money. All these put the child in a painful situation. When I was having my children at their infant age I make so they take all necessary vaccines..... since it helps children not to fall sick by contracting other diseases easily; in that case, it is excellent as it helps us the parents in the prevention of deadly diseases'* (P1: 51yrs/B, Female, Business Woman exposed)

They are good. I've got seven children by the Grace of God. They all took the vaccines, and I did not see any harm about them..... Such vaccines could improve the growth and development of children and help them stay healthy (P22: 76yrs/A, Male, Market Leader suggested).

I agree that people take their children to infant clinics for immunisation because before, the unpredicted deaths among infants have now been reduced. Like polio, it's gone now, and we no longer see such within our community (P002, 71years/C, male, alkali)

Furthermore, another participant gave a detailed account of the benefits of vaccines and listed some of the childhood diseases that used to be highly prevalent in The Gambia but are now rarely seen or heard. He stated *'According to the Mandinka saying: It is better to get prevention*

than seeking treatment. Since I was young, I have strongly believed in childhood vaccination because I knew that Western people have made it clear that certain diseases cannot be treated but can prevent through vaccination. From what I understand, vaccination has greatly reduced and eliminated certain childhood diseases in the Gambia. These include polio, measles, whooping cough, tetanus, and many others. These diseases during my childhood time were many in the Gambia, but now you won't hear such conditions here in the country due to vaccination. I can attest to that (p5, 68years/E, male, religious leader).

Another participant recounted how when the IWC vaccines newly arrived in The Gambia, there were so many rumours about it. So many people raised doubts about its safety, according to her. Her exact words were:

'You know those days when these injections first came to this country, when we started childbearing, they used to scare us that when you allow your child to be injected with it, they can become disabled. We used to hear all these; they used to say if they inject your child with the injection, he will suffer from "daino" (which is the local name for polio). Thank God the world has now evolved, and the people have become enlightened. The health practitioners have also been doing a lot of sensitisations to an extent that everybody agreed and saw the need of taking the injection. Every month one need to take your child to the hospital, those that need to be injected were injected and those who need the medicine were given the medicine, and now I know this practice is very strong in this country' (P21: 60yrs/B, Female, Market Leader exposed).

Furthermore, one of the participants narrated a negative experience his child encountered after taking a vaccine at the IWC clinic. He mentioned that *'ah (.) the injection they give to children. (..) I have a personal experience with my child. The doctor that injected the child is not like the drug was bad, but the way the doctor injected the child. I think he was injected wrongly; the middle goes to the right place. I think it touched the muscles, and this disturbed the child. That really disturbed me too, but with the help of God, we were able to put in different measures until we were able to reverse the situation. So, when that happens, most of the people in my home and the neighbourhood were also afraid to take their children to the hospital for the injection' (P18: 50yrs/A, Male, Religious Leader).* However, he was quick to add that he believes vaccines are good and that it was the person injecting that did not inject his child correctly, and that was what led to the problems *'They (my neighbours) were saying if you take*

your child to the hospital, you saw what happen to so's child, it was not the injection but the doctor. The injection, I think, is good because most of my children has taken it. Most of my children that has been going to nurse often I observe that it takes time before they get sick, so I know the injections are working. It has helped me just that I told you one disadvantage of it that I have experience, but that also happens to be the fault of someone. But all the people that I saw so far, so good. I have not had any that has developed disability from it; I think it is good and should be taken.' (P18: 50yrs/A, Male, Religious Leader)

3.2.2 Perception towards COVID-19 vaccine

The study identified the views and beliefs held by the participants regarding COVID-19 vaccines. The general perception among respondents is that vaccines are good and safe and that the COVID-19 vaccines could protect them from contracting the disease. Also, an interesting perception about COVID-19 vaccines emerged from participants' faith and belief in healthcare workers and the government. Most participants suggested that the government will not allow any harmful or fake drug to come into this country and that 'knowledgeable' people/experts should be listened to and trusted. For example, a participant stated *'I don't think a new drug/vaccine will be produced across the continent and reach the Gambia with a fake safety. Anything recognized and recommended worldwide by experts can never be something fake. In my case, I trust the vaccine 100%.'* (p7, 40years/F, male, ordinary citizen)

.....Aaah, the injection? You know, anything that has a lot of talk and controversy tends to get people scared. As for the covid vaccine..... In this market, no one has ever come to inject us, but in my opinion, if our government is behind it, then I know that our government will not allow anything that will harm people; I don't think they will allow an injection (vaccine) that is bad. If it is from our health workers and our government, I don't think they'll allow that. Anything that they bring, perhaps it will provide the way forward for the citizens. Because if they bring something that will make the citizens suffer, it means the government is suffering. The government and we are all the same as we are citizens of this country, so I don't think they will bring anything that will harm us except if they do not know but if they know. So I don't think they will bring something that will harm us, so they would be there and bring us something that will affect our health, so I think the vaccine is good (p4, 58years/D, female politician).

Interestingly, one of the respondents who took the vaccine suggested that health authorities gathered and sensitise us to take the vaccine and recommend it to others. She stated, *'it is good because, as I said earlier, I had taken it. The health workers at the facility informed us so that if we go home, we can call others to go and take it. They told us that we don't have the money to pay all to take the vaccine, but since we gave your head of party groups, you can influence others to come and take it..... I know it can very well prevent us from the disease, and it is the only well-known weapon to control COVID-19'* (p4, 58years/D, female politician).

In addition, the study's findings showed that the participants are conscious that there are so many rumours going around about the COVID-19 vaccine. However, they suggested that people should not take heed to these rumours. One of the participants noted, *'we have a lot of information that the vaccine is not good for us to take it at that time, but now we have seen that that is fake information given to us. Now many people are taking the vaccine because of the misinformation that was given that when you take the vaccine so and so, that is not the case nowofcourse, yes. It can prevent you from covid with the guidelines'* (P10, 35yrs/E, Male, Local Adm. Leader).

Similarly, another participant expressed his views on vaccines and addressed the high volume of misinformation and rumours about the vaccines that are going on. He also responded in the affirmative, just like the rest of the participants, when asked whether he believes the vaccine can protect him from contracting the virus. Below is his statement:

I know that many things are said about the vaccine, but it is safe because there must be a good reason why the vaccine is produced and circulated worldwide and is also approved by WHO, responsible for our overall health worldwide. This alone is sufficient for one to believe in the vaccine.....Yes, it can potentially prevent us from catching corona, provided we take it (P8, 59yrs/F, Male, Local Adm. Leader).

3.2.3 EFFECT OF THE COVID-19 VACCINE

Many of the participants expressed their thoughts on the vaccine and its side effects. While most of the participants know someone who took the vaccine, laziness, headache and diarrhoea, among several others, were cited as side effects. They have heard people who took the vaccine complain. However, a few others revealed that they do not know anyone who took the vaccine, while those that affirmed that they know someone who took the vaccine said they have heard no adverse reaction being complained of by these persons. For instance, one participant retorted, *'.....I know one of my elders within the community who took the injection, and he told me that he had not experienced any serious side effects, and I haven't seen anyone or hear that it has caused harm to someone (P002: A 71years/C, male, alkali)*. Another participant expressed the lack of side effects. She said, *".....Subahanalie" (an Arabic word meaning God forbid). They were the ones encouraging us to take it. They said we had taken it and even a small headache we have not experienced it. They advise me to take it too. One day, I went to the hospital to inquire about it, and I was told they had gone somewhere and were not back yet. Then I told my in-law to inform me anytime they are around to take It (P21: 60yrs/B, Female, Market Leader exposed).*

..... I've not seen anyone yet because I have not detected any, and I've not heard it from anyone as well (p12,56years/C, male community leader).

.....So far, as I told you, they said after taking it in the first one, their bodies start, some will experience general body pain, but I think that is normal. There are some drugs that you know; I take them. I don't move; I just sit at the same place. So don't take that as an excuse or say see what it did to so and so, no, don't be afraid of it take it (P18: 50yrs/A, Male, Religious Leader cited)

.....First, I started with my mother. She is now 92 years. I forced her to take it. She took it before me. I forced her she took it, and I also took all the two vaccines. Two weeks ago, she took her second dose of the vaccine.....No, Even my mother didn't tell me anything because she would have told me if she had any reaction. After all, I am always the one who gives her paracetamol. When she took the vaccine, she never told me anything (P22: 60yrs/B, male, youth leader exposed).

However, few of the participants shared their experiences and others that they either knew or heard of any adverse effects of the COVID-19 vaccine. None of the participants knows of anyone with an adverse reaction; however, mild side effects of the vaccine such as laziness, headache etc. has been mentioned by several participants

.....yes, one of my friends took the vaccine because her child works at a health facility and asks them to take the vaccine....I asked my friend if what the covid vaccine did to me has done the same thing to her; she told me that I also have diarrhoea, loss of appetite and dizziness, but she told that it is just for a while and the symptoms will disappear (p4, 58years/D, female politician).

..... No, the only thing I heard from others is that the vaccine is used to make you lazy when you take it initially, but this is normal since it does not distract you from your daily activities (p5, 68years/E, male, religious leader).

No, the only thing they complained about was laziness, and this only lasts for a day in most cases (p7, 40years/F, male, ordinary citizen)

3.4 Participants Sources of information

All the study participants have one or more means of where they get information concerning COVID-19 vaccines. Some think it is crucial to have more than one source of information since you might not have detailed and realistic information from one, but many sources will help you know much about the topic.

Most homes in the country have television where they can watch many news channels at their convenient time. Daily, newspapers are sold from different outlets on the street at a low cost; this allows many to access it easily.

3.3.1 Hear information;

'I do hear the information about the injection from TVs, radio and by reading newspapers' (p2, 71years/C, male, alkali)

Others believe that when it comes to information, one needs to rely on leaders who are always highly informed and do not give false information. Chiefs are the contact point within the community, and they can give strong orders, so based on that, their words are not to be considered false. This makes many people readily accept information given by chiefs.

'I get information through our chief he will call us any information even not the covid vaccine, TVs and some of my children' (p4, 58years/D, female politician)

'as I said early from TVs or from people' (p3, 64years/D male Imam)

The ones I trust most include the ministry of health, Fatunetworks and the Gunjur online platform. I trust these platforms because they used to invite medical experts to discuss the COVID-19 pandemic frequently. (p7, 40years/F, male, ordinary citizen)

Source of information matters since true information is mostly given by experts in the field. For example, if it is about health, the health professionals should be in a better position to answer and clear any doubts. Information from social media is not very scrutinised to see how realistic they are. It gives ground to many people to freely send unauthenticated news. Now many people have found out that if you willingly take such news, you may easily disgrace yourself.

'Mainly from the ministry of health, radio programs, tv. These are the most trusted sources of information to which I can attest. This is because social media has been misinforming a lot of people in this recent generation.' (p5, 68years/E, male, religious leader)

Others see it differently as social media has been well-used in this present generation as the fastest source of information. It is easily accessible; Many people have mobile apps which are easily used and user friendly.

'WhatsApp and social media platforms. We've heard it all over with a lot of information.' (p12, 56years/C, male community leader)

3.3.2 Decision to take COVID-19 vaccine

Determining the truth of COVID-19 related information can be difficult for some people, but it has to be done on the fact-finding ground to filter rumours from the truth. Others believe the whole situation to be frustrating. Nowadays, most people think to have good knowledge of COVID-19, but the saddest part is that most people know less. Such people are the ones who give out false information to others.

Finding out the truth can be confusing, especially if the ones you trust are giving conflicting news simultaneously. Those who are political-minded may easily relate anything said by authorities as politics. This will make it much more confusing if their own political leader knows less about the given news.

'well, that question is tough; I don't know everything about the corona is just confusing.'
(P1,61years/C, Female, ordinary citizen)

'yes, it's because if you have two things at hand, you must think about them before you conclude; it will destroy your mind before you realize the truth. That was what happened' (p12,56years/C, male community leader)

On the contrary, others believe it is not a matter of confusion but rather patience and authenticity of the source. Some people have special channels or people who they believe no matter what the situation might be.

Others have in mind that a responsible adult should be able to distinguish what is true from false. Some information is easily believable provided what has been said is what is going on, and people see it. As a result, the impact is easily noticeable, making an individual accept the information given to them.

'Before, I totally agree with anything from the media. I make sure the source is authentic, so I believe everything about it, and once I hear it from these media, I automatically believe it. In fact, what makes me believe more is like what I told the way people are dying now is not just ordinary something is behind it which is this disease'. (p2, 71years/C, male, alkali)

'We hear all soughs of information, but we always relate it to our knowledge in Quran and provide the one giving the information is trustworthy.' (p3, 64years/D male Imam)

'normally when I receive information from these people, I don't find any difficulties to take it since I trust them and believe they will not mislead me' (p4, 58years/D, female politician)

For some people, information needs to be verified by experts in the field.

'I confirm my information through health worker if you look at it well on another tv they interview or ask the health care provided in connection to the disease, so that is where this media house takes the information to others. We are aware that there are some people naturally who are denying anything which comes their way. I was talking with one community member, a religious leader who preaches people; he told me that this injection and the disease itself are all fake, and they want us to be separated even at the time of prayers.' (P2, 71years/C, male, alkali)

'Yes, I used to do that, especially when I heard a rumour about Corona in the community.' (P5, 68years/E, male, religious leader)

Few people think verifying information is a waste of time, and they want to have nothing to do with COVID-19 vaccine information. They have no clue about the importance of information verification.

'I never go to anyone. I don't have an idea. am always at home and never go to the health centre to ask.' (P11, 44years/E, female, ordinary citizen)

'I don't verify it.'

'To be frank with you, that has never happened.'

3.2.3 Awareness by a health care worker

People often think it is necessary to confirm all information related to health with health care workers since it is their domain.

'yes, I do; if I hear the information and see the impact, I automatically believe in it. I have children who are health care providers; as you know her, I make sure she clarified that part for me if I have any doubt. Another one is there who you may not know, and he is also a doctor'. (p3, 64years/D male Imam)

Others said they do not have time to contact health care workers on certain issues related to COVID-19. Health care workers at the facility level are mostly engaged in many health-related issues. This makes one not have much time with people and fully explain to them.

Some people believe that the previous false news, as we might call it, has already been engraved into people's minds, so it will not be easy for people to drop the old concept and take in new information unless health care workers can convince the people otherwise.

Distance is another factor that makes it more difficult for people to communicate with health care workers. Many senior health care providers work daily, as do the community members, so seeing each other is very difficult.

'well, I don't do any of such, but all that I know is the bad name that proceeded the good name of the injection, and you people are late to come.'

'I did not go to any health care provider since going to the health facility is my other problem, and I make sure any time I come across one I make go used of them like for example, when you told me that you are a health care provider didn't I ask you that we were told that the vaccine is finished in the country and how can we have our second dose and you told me it will be available soon.' (p4, 58years/D, female politician)

3.5 Vaccination Uptake

Despite the tremendous efforts in increasing vaccination coverage in the Gambia, several factors may strongly influence the uptake of vaccines, particularly the COVID-19 vaccine. Thus, the present study evaluated both the drivers of success and potential barriers of the Gambia vaccination program to identify the most appropriate and culturally acceptable vaccination methods. The in-depth analysis of the data has revealed several findings towards vaccines, interestingly the COVID-19 vaccine newly introduced in the Gambia.

3.4.1 Hesitancy/Refusal

The analysis suggested several factors towards the low uptake of vaccines during the COVID-19 vaccination period in the Gambia. A slight majority of the respondents shows no signs of hesitancy or refusal towards vaccine utilization. Yet, a good number of participants had indicated some form of vaccine hesitancy/refusal concerning the COVID-19 vaccine due to quite a few reasons. The most significant reason was a lack of trust in the safety of the COVID-19 vaccine, as apparently revealed during the analysis. Nearly half of the respondents have issues with regard to the safety surrounding the vaccine.

"The vaccine was rejected in some countries because of the safety and now why the Gambia is accepting it" (P2: 71 yrs/C, Male, Retired Teacher).

"Coronavirus does not exist, and even the vaccine they produced is not true. They have come to reduce the African population" (P9:55yrs/E, Female, Ordinary Citizen).

Moreover, most of the refusals are due to beliefs surrounding the existence of COVID-19. They claimed that the phenomenon portrays a fake circumstance globally, more so the production of its vaccine.

"I am not still convinced about corona at all. So, anything that has to do with its vaccination, I am not interested" (P3:63yrs/D, Male, Religious Leader).

The principal factor that drives these misconceptions was negative rumours implicated by famous social media worldwide. Most of the misinformation regarding the existence and safety of the COVID-19 vaccine were widely circulated through social media, leading to misconceptions among the public, particularly the illiterates.

"I refused to take the vaccine because of so much information I've heard on social media about the safety of the vaccine" (P14:60yrs/D, Female, Women's Group Leader).

Furthermore, respondents suggested series of opinions towards vaccination denials, particularly when it comes to COVID-19 vaccination. The different views of the participants show that most of the denials are due to ignorance, stubbornness, misinformation, political differences, and denial of the existence of COVID-19. The respondents' opinions suggested that most of the refusers strongly believed that this was established to generate revenue for the government. The respondents strongly believed that many people who cannot read and write mostly relied on hearsay. Their decisions are mostly based on those they trust the most, regardless of whether those people are knowledgeable in the issue at hand or not. If those people happen to disagree, obviously, they will also disagree without any further verification. Therefore, the role of influential leaders in society in terms of decision making was critically expressed by the participants.

"Some people refused to take the vaccine because they relate it to politics" (P2: 71yrs/C, Male, Retired Teacher).

"Most of these people believe that corona is not real (fake), and as a result, most of them did not believe in the safety of its vaccine" (P5: 68yrs/E, Male, Religious Leader).

"Most of them disagreed because they were misinformed. The bad name of the vaccine preceded the actual vaccination campaign, that was the reason many people deny in taking the vaccine" (P4: 58yrs/D, Female, Lady Councilor).

"They say that if they take it they will die and some said you would be paralyzed if you take it. Others are saying that if young girls take it can lead to infertility" (P6: 50yrs/F, Male, Politician).

"People's way of thinking is different, and people see things differently. You can say the moon is there and not everyone will see it at the same time" (P9: 55yrs/E, Female, Ordinary Citizen).

"Naturally, there are people who are difficult to deal with; they don't even obey God. Whatever happened, they question its credibility unless if it comes their way. You know it is very difficult to convince such people" (P12: 56yrs/B, Male, Religious Leader).

"Some people are protesters, so a protester is always a protester all the time" (P13: 82yrs/D, Male, Local Administrative Leader).

"Some people are made, just like how the devil is. Whether it is good or bad, they just want to see that whatever they said is what should be done" (P20: 60yrs/B, Male, Youth Leader).

3.4.2 COVID-19 Vaccination Status

A larger proportion of the respondents were not vaccinated against the COVID-19 vaccine. However, a reasonable number of them indicated receipt of the vaccine, particularly the first dose. Availability of the vaccine was a challenge for some of those who had received the first shot of the vaccine.

"I took the first shot, and I was told it is finished for my second dose, so am waiting for that" (P1: 51yrs/B, Female, Businesswoman narrated)

"I have already taken my first dose of the vaccine" (P2: 71yrs/C, Male, Retired Teacher).

"I went to the facility to take it, but it was not available" (P18: 50yrs/A, Male, Religious Leader)

"I have not yet taken the vaccine" (P15: 42yrs/F, Male, Religious Leader).

Moreover, the in-depth analysis further revealed some of the circumstances that had led to non-vaccination among most of the study participants. It was exposed that vaccine availability, busy schedules/business, locating vaccination sites, vaccine side effects etc. were major reasons for most respondents who were not vaccinated against the COVID-19 vaccine.

"I could not receive the vaccine because I was told that it was out of stock. There was a day we went to the hospital to take it, and we were told by one guy she is a lady, and I don't want to mention her name for safety reasons that the vaccine was out of stock" (P4: 58yrs/D, Female, Lady Councilor).

"I was not vaccinated because I don't know where to receive the vaccine" (P11: 44yrs/F, Female, Ordinary Citizen).

"I am afraid of the side effects of the vaccine. Injection always disturbs me whenever I take it" (P19: 39yrs/B, Male, Ordinary Citizen).

"I always have a very busy schedule. For me I don't even think about taking this vaccine, me when I wake up in the morning, I head to my shop...what I care about is making my money (laughs)...." (P21: 60yrs/B, Female, Businesswoman expressed).

"I was told that the injection would be coming to Fajikunda, yes to be candid, I heard of it at one point in time, but I was never aware that it has arrived" (P23: 63yrs/B, Male, Community Leader).

3.4.3 Future Vaccine Acceptance

A significant proportion of the respondents expressed eagerness to receive the COVID-19 vaccine whenever it is made available to them in the future. Yet, a few indicated vaccine denial and hesitancy.

"Yes, I will take it if I know the venue and will ask my family to take it, too" (P5: 68yrs/E, Male, Religious Leader).

"Of course, why not. In fact, I am currently eager to take my second dose" (P2: 71yrs/C, Male, Retired Teacher).

"Before, I refused to take the vaccine, but now I will accept it if made available" (P12: 56yrs/B, Male, Religious Leader).

"Still, I am not sure whether I will take it unless I have clear evidence" (P17: 62yrs/A, Male, Building Constructor).

"I will never take this fake vaccine, and I will not encourage others to take it" (P3: 63yrs/D, Male, Religious).

3.4.4 Mass COVID-19 Vaccination

Opinion towards mass vaccination among the majority of the participants strongly suggested the need to embark on a nationwide vaccination campaign to avert COVID-19 in the country. Numerous positive views were made regarding rolling out of the COVID-19 vaccine among the general population. However, very few participants expressed contrary views on the proposition due to their opinions on the safety issue.

"That is what needs to be done. Everyone should take it since the minister has taken it..... I believe we can all take it" (P1: 51yrs/B, Female, Businesswoman).

"Everyone should receive this vaccine because according to one Mandinka saying, if you succeeded and your neighbour didn't, you have still not succeeded. This means if some are vaccinated against corona, and others are not, the vaccinated ones are still not safe completely" (P3: 63yrs/D, Male, Religious Leader).

"That will be a good idea because we are all at risk since the virus has no boundary. People should take it because the sickness does not know if you are a child or an adult" (P5: 68yrs/E, Male, Religious Leader).

"Good thing, in fact, I will be number one to be vaccinated. If up to 60 to 70% take it, then that's good, then you'll see to it that those that take it will be more than those who didn't take it" (P12: 56yrs/B, Male, Religious Leader).

"Well, if they say everyone should take the vaccine, well, they will have to take it too. If the president says everyone must take the vaccine, he must take it too... we would see him appear on tv and take it himself, then we can take it" (P21: 60yrs/B, Female, Businesswoman).

"Giving out COVID-19 vaccine to everyone will be a good idea, but for me, I won't take the vaccine as I mentioned earlier to you" (P3: 63yrs/D, Male, Religious Leader).

"No, it's bad because the vaccine is not safe, we all know that. It should be left to people's conscience. For me, I will not recommend that since there are so many talks about this COVID-19 vaccine" (P22: 76yrs/A, Male, Market Leader).

3.4.5 Community Vaccination Barriers

Undoubtedly, it can be attributed that the presence of vaccination barriers in communities can potentially contribute to a rapid increase in transmission of the Coronavirus in the Gambia, particularly if people are reluctant to take the COVID-19 vaccine in addition to other measures. To effectively design interventions to fight against these barriers, it is deemed paramount first to understand major circumstances surrounding the implementation of community vaccination activities. Therefore, the present study vigorously examined some of the major challenges associated with COVID-19 vaccination at the community level. The respondents made series of diverse suggestions as key factors challenging vaccination in communities. The most significant factor, as highlighted by the majority, is the safety misconception surrounding the vaccine implicated by negative rumours that ubiquitously circulated through social media since the beginning of the pandemic. The participants remarkably expressed a lack of thorough sensitization in communities before and during the vaccination campaign. It was strongly stressed that the Ministry of Health should have thoroughly sensitized all the communities even before starting the vaccination; this was the mistake noticed by the community.

"We have heard a lot of scary information about the vaccine from the beginning of the pandemic up to now. There have been many rumours and controversies, so many audios have been released on social media. Others believe that it is a slow killed method invented by white people" (P11: 44yrs/F, Female, Ordinary Citizen).

"People were informed earlier through social media that the corona vaccine that was produced is not good even before it reaches the Gambia" (P5: 68yrs/E, Male, Religious Leader).

"We listen to people who have little knowledge about the disease" (P15: 42yrs/F, Male, Religious Leader).

"Some of the reasons why many people are not willing to take this vaccine include political affiliation, low level of awareness, and stubbornness" (P2: 71 yrs/C, Male, Retired Teacher).

"Community lack thorough sensitization on the vaccine leading to misconception or misinformation on the vaccine safety. The majority of the community members were misinformed and currently live with negative perceptions of the vaccine" (P4: 58yrs/D, Female, Lady Councilor).

"Some of our religious scholars, sometimes they just set one day, and if they are enjoying preaching, they will start saying this disease they are talking about is the white man's disease, and they want to use it to fight the religion. They serve as an obstacle because people trust them and listen to them; these are very powerful people, people trust them because they don't usually see them in anything useless" (P20: 60yrs/B, Male, Youth Leader).

"It is not a priority of many people, maybe only to those who are travelling" (P18: 50yrs/A, Male, Religious Leader).

"People here don't trust the vaccine. Lot of rumours surrounding COVID-19 and the vaccine" (P9: 55yrs/E, Female, Ordinary Citizen).

3.4.6 Increasing Vaccine uptake

With the aim to increase the uptake of COVID-19 vaccination services in The Gambia, the assessment profoundly evaluated the respondents' opinions on modalities of increasing vaccine

uptake among the populace. The finding had revealed unanimous suggestions from the participants. Prominently, the need to continue and strengthen the sensitization programs in communities to clear rumours and misconceptions was robustly stressed by the vast majority. Communication avenues such as schools, Friday sermons, 'Bantabas', CBOs, community radios & village development committees (VDCs), RCH clinics were apparently exposed. It was significantly mentioned that the authorities need to continuously talk to people about the importance of the vaccine to gain their trust and make them believe that this vaccine is not something that can harm. Interestingly, the subjects equally exposed the issue of introducing Health Pass/proof of vaccination in public institutions and vehicles.

"If the Ministry of Health embarks on a nationwide sensitization, we will understand better and will accept the vaccine. The health care workers themselves should be involved in this sensitization. With this, lot of people will be convinced to take the vaccine which I am sure of" (P11: 44yrs/F, Female, Ordinary Citizen).

"People should be adequately sensitized to increase their awareness level. Misconceptions must be eliminated first to gain people confidence in the vaccine. With these, I am sure many people will accept taking the vaccine" (P2: 71yrs/C, Male, Retired Teacher).

"If the government could clarify these allegations, then people might be confident enough to take the vaccine" (P21: 60yrs/B, Female, Market Leader).

"Is about talking to people because people understand the vaccine differently. People should be well informed about the importance of this vaccine and that the vaccine is very safe and recommended by the World Health Organization. I am sure with this, a lot of people who denied the vaccine would end up positively change their minds" (P3: 63yrs/D, Male, Religious Leader).

"The vaccinators should reach those who are far from the health facility" (P7: 40yrs/F, Male, Ordinary Citizen).

"Engage the religious leaders through the Supreme Islamic Council in the country and sensitize them. They can relay the information in their Friday sermons" (P12: 56yrs/B, Male, Religious Leader).

"Proof of vaccination should now be considered as a requirement in public institutions such as banks, offices, even in public vehicles just like how the immigration officers ask for the ID card of passengers etc. It will be like how they restrict international travellers without proof of COVID-19 vaccinations and testing. If this is done, many people will now see the need to take the vaccine, which in turn will improve the vaccine uptake" (P18: 50yrs/A, Male, Religious Leader).

"I will not encourage anyone to take it, neither will I discourage" (P17: 62yrs/A, Male, Building Constructor).

3.6.7 Access to Vaccination Services

Accessibility was examined as a key determinant for the uptake of vaccination services. The finding revealed a series of diverse views and suggestions related to the utilization of vaccination services in The Gambia. As cited, a slight majority of the study participants showed some patience to get vaccinated against COVID-19, despite their busy schedules and daily family affairs due to the importance of the vaccine. However, a significant number of respondents, particularly those in business, expressed unfavourable waiting times as a barrier to get vaccinated because of the low priority attached to the vaccination compared to their daily operations.

"It worth a full day for me to wait and take this vaccine because I don't joke with my health" (P2: 71yrs/C, Male, Retired Teacher).

"There was a time when some of the women had to stop going to RCH clinics because they were misinformed by the social media and other negative people in the community and diaspora that health care workers at the health centres are giving COVID-19 vaccine to children during clinics" (P4: 58yrs/D, Female, Lady Councilor).

"A maximum of one hour, this is because I am a businesswoman and that, I can't wait so long on the queue" (P4: 58yrs/D, Female, Lady Councilor).

"I would not mind being there the whole day. As long as I leave my home and say that I am going to take the vaccine, I will make sure that that day I get it" (P12: 56yrs/B, Male, Religious Leader).

"I will never even visit the vaccination site" (P3: 63yrs/D, Male, Religious Leader).

"People like us don't have time to make queue at health facilities to get vaccinated. I cannot make a line to take the vaccination. If you are not sick, it is not easy to take part in such (P18: 50yrs/A, Male, Religious Leader).

In fact, that's the main issue, because as you can see, I am not sick, so what's the point of going and join a queue. It does not worth it for me to close my business and go out and queue for the vaccination" (P21: 60yrs/B, Female, Market Leader).

Furthermore, the analysis on the preferred vaccination sites exposed various points such as health facilities, home (house-to-house) and market. A vast majority suggested a health facility as an ideal vaccination point that was slightly more than those who had recommended house-to-house (home) for various reasons. Yet, an insignificant proportion suggested market points due to their business engagements.

"Prefer having it at the health facility which is much more secure as it is well kept" (P1: 51yrs/B, Female, Businesswoman).

"If I'm told to wait in my house, I would appreciate that because that is a sign of respect" (P10: 35yrs/E, Male, Local Administrative Leader).

"I will be very comfortable to receive the vaccine at our health centre" (P4: 58yrs/D, Female, Lady Councilor).

"If there are mobile teams, I prefer my home" (P12: 56yrs/B, Male, Religious Leader).

"If it is at the hospital, it might be difficult to take my family there for vaccination, but if it is at home, I can call them to come out and take the injection" (P23: 63yrs/B, Male, Community Leader).

"If they come here (to the market) to administer the vaccines, I will take it" (P21: 60yrs/B, Female, Market Leader).

“Health facility is safer because anybody can pretend to be a vaccinator and come to our homes” (P12: 56yrs/B, Male, Religious Leader).

“Compound-to-compound since people like us don’t have time to make a queue to take the vaccine” (P18: 50yrs/A, Male, Religious Leader).

“Our homes, if not many people would not like to go and make a queue to be vaccinated” (P19: 39yrs/A, Male, Ordinary Citizen).

Ultimately, the decision to pay for vaccination services among the respondents was greatly dictated by the value or priority attached to the vaccine, the study discovered. The opinions made strongly anticipate for low utilization of vaccination services provided payment is attached to the vaccine. This suggests that if the payment is levied on the vaccine, the desire coverage or uptake of the COVID-19 vaccine would seriously decline in the country. It was apparently anticipated that many people might decline to take the vaccine if the ministry decides to levy cost to the vaccine, as buttressed by the vast majority. Thus, payment for vaccination services can potentially lead to low utilization of vaccination services in the country, opinions suggested.

“I am willing to pay any amount within my financial capacity just to get the vaccine because, as I said earlier, I don’t joke with my health” (P2: 71yrs/C, Male, Retired Teacher).

“I will find the money and get myself vaccinated as prevention is better than cure” (P1: 51yrs/B, Female, Businesswoman).

“I do pay for my health when I visit these private health facilities and pharmacies, so why not this one. I will pay for it” (P9: 55yrs/E, Female, Ordinary Citizen).

“I learned that the vaccine is free of charge, and this does not make me take the vaccine. So, you should know that I will never put my money to get vaccinated against corona” (P3: 63yrs/D, Male, Religious Leader).

“It is currently provided free of charge, and still lot of people denied taking it, talk less of attaching a cost” (P4: 58yrs/D, Female, Lady Councilor).

“I will never pay for vaccination. I don’t have what to eat, but I will go and spend money on unknown injection” (P17: 62yrs/A, Male, Building Constructor).

“Something that I have not taken for free, why would I pay to take (laughs)” (P21: 60yrs/B, Female, Market Leader).

3.6 Health workers’ perception of vaccines and vaccine hesitancy

This section presents the results from the in-depth interviews conducted among health workers in the Gambia on their perceptions of COVID- 19 disease and vaccine. It covers the themes and subthemes generated from the analysis of the transcripts. The results of this section are presented in three thematic areas. For each theme, some subthemes capture the significant voices reflecting the various perceptions of health workers about COVID-19 and vaccines in general and how these perceptions influence their behaviour. In order to ensure confidentiality and anonymity of participants’ responses, alphanumeric codes were used to identify the participants, e.g. P1 representing Participant 1 (see Table 1.1 above). The table below gives a summary of the themes and their corresponding subthemes:

Table 3: Summary of theme and sub-themes from health worker interviews

Theme	Subtheme
COVID Perception	Awareness of COVID-19 Existence
	Nature of COVID-19
	Disease Prevention and Control
	Efficacy of the Vaccines.

Vaccine Perception	COVID Vaccines perception.
	Vaccine safety information.
	Motivation to take the Vaccine.
Vaccine Hesitancy	Health worker vaccine hesitancy
	Perceptions of vaccine hesitancy
	Implications of vaccine hesitancy

3.7 Demographic Characteristics of participants

A total of twelve (12) health workers were purposively and conveniently sampled from hospitals in the Gambia and engaged in a one-on-one in-depth interview on their views and opinions about COVID-19, vaccine, and vaccine hesitancy. Eight (8) were recruited from public hospitals and four (4) from private hospitals. According to Guest, Bunce, and Johnson (2006), a minimum of 12 in-depth interviews and above are enough to reach saturation and generate codes and themes in a qualitative study. The age of the health workers interviewed ranged from 22 to 50 years. Seven (7) of the health workers were male (58.33%), and five (5) were females (41.67%). Five (5) of the participants were public health Officers (PHO) (41.67%), Six (6) were nurses (50%), and one (1) was a Public and Environmental Health Professional (PEHO) (8.33%). Eleven (11) of the participants were Muslims (91.67%), and one (1) was a Christian (8.33%). All the health workers who participated in the study were married, and most of them were Public sector workers (10). Two of the participants worked in both the public and private sectors. Table 1.1 below gives a summary of the participants interviewed.

Table 5: Summary of Participants demographics

Participant	Age	Sex	Religion	Place of birth	Marital status	Occupation	Sector
P1	22	Female	Islam	Sanyang	Married	Nurse	Public
P2	34	Female	Islam	Gunjur	Married	PHO	Public
P3	39	Female	Islam	Latri-Kunda	Married	Nurse	Public/Private
P4	24	Male	Islam	Gunjur	Married	Ass. PHO	Public
P5	27	Male	Islam	Brikama	Married	PHO	Public
P6	32	Male	Islam	Sukuta	Married	PHO	Public/Private
P7	40	Male	Islam	Kunata	Married	Nurse	Public
P8	50	Male	Islam	Foni	Married	Nurse	Public
P9	29	Male	Islam	Banjul	Married	Nurse	Public
P10	30	Male	Islam	Barajali	Married	PHO	Public
P11	33	Female	Christian	Banjul	Married	Midwife	Public
P12	32	Female	Islam	Farafenni	Married	PHO	Public

3.8 COVID-19 perception

This theme captures the cognitive representation of COVID- 19 among health workers. The theme considers awareness of the existence of the disease among health workers in the Gambia, perceptions about the nature of COVID and explores participants' opinions about disease prevention and control. The narratives of all participants point out that participants believed that COVID exists and is very real in the Gambia. The narrative also revealed that participants were aware of factors that contributed to the development of the disease, symptoms associated with the disease, how the disease progressed and how it could be controlled. Three sub-themes formed under this theme and are discussed below, namely, Awareness of COVID-19 existence, Nature of COVID-19 and Disease Prevention and Control.

3.8.1 Awareness of the existence of COVID -19

All the health workers who participated in the study stated that they knew and believed that COVID- 19 exists in The Gambia and is not something that politicians have fabricated. The quotes below capture this;

“Yea, I believe in that COVID-19 in the Gambia because I have my colleagues who were once positive and they explained their problem when they contracted the virus” [P6, male, 32 years, Public health Officer].

“Of course, yes, COVID does exist in the country”. [P8, male, 50 years, Nursing]

“COVID-19 is in the Gambia. Because in the first place, what will convince me is the Gambia is not separated from the entire world, and we all know that the world is a global village now. This is my own observation, last year around tobaski, there were numerous deaths, even here, where I work as Public Health Officer. People called me on two occasions that they found someone dead on the street. This has never happened in the Gambia since I know myself or since I joined Health, and I worked in many regions as a Public Health officer. So, putting all these together and also putting expertise opinion, I believe that COVID is real in the Gambia”. [P10, male, Public health Officer].

“I am convinced about COVID-19 because training has widened my knowledge about the disease and its existence. I have seen cases who are in isolation and people being taken to the treatment centres.”

From the quotes above, it is obvious that health workers in the study were fully aware of the existence of COVID-19. Participants stated that coming into contact with victims of the disease made them believe in the existence of the disease. Also, awareness stemmed from knowledge of the impact of the disease on individuals and professional exposure through training on COVID-19 prevention, treatment and diagnosis.

3.8.2 Nature of COVID-19

Another interesting issue that emerged from the narrative was the perception of participants about the nature of the disease. The narrative revealed that the majority of the health workers perceived COVID -19 as a deadly disease that could be transmitted from one person to another. The quotes below illustrate this:

“People called me on two occasions that they found someone dead on the street. To me, this has never happened in the Gambia since I know myself or since I joined Health, and I worked in many regions as a Public Health officer. So, putting all these together and also putting expertise opinion, I definitely believe that COVID is real in the Gambia”. [P10, male, Public health Officer]

“though is a new disease that just came in before there were other diseases which were also dangerous, and then they kill, and they are also transmittable diseases from one person to another”. [P2, female, 34 years, Public health Officer]

“.....causing more trouble and exposing themselves to other micro-organisms that will lead to their deaths. ... probably cause them chronic illnesses that might not even be able to be prevented later on”. [P8, male, 50years, nursing]

“.....in pandemic situations like COVID-19”. [P5, male, 27years, Public health Officer]

“..... they prevent people from getting a communicable disease like meningitis, yellow fever many even COVID-19 and other infections”. [P9, male, 29 years, nursing]

From the narrative above, it can be observed that almost all health workers understood the nature of COVID- 19. Some perceived it as a pandemic that affected various aspects of an individual’s life. Others also compared it to other infectious diseases like yellow fever, meningitis, and measles, which will lead to other severe chronic conditions and death when not prevented.

3.8.3 Prevention and control

A substantial number of participants mentioned that COVID-19 could be prevented and controlled. They were of the view that COVID could disappear from the system and cease to be a global pandemic if the right measures were put in place.

“.....if we look at the history of this vaccination or immunization, I think there are positive things that the country has achieved in this, so this is why I said people should not be hesitant

to take the COVID-19 vaccines. Well, vaccines are good as they prevent people from getting communicable diseases like meningitis, yellow fever and even COVID-19 and other infections. If you look at the conditions like polio, measles, meningitis, we are getting an immunization, and you can see the complete decline of this, and you hardly see this condition in the country is simply because of this vaccine, so when this other one comes which has been approved by the WHO and our ministry of health, I think there is something that people need to take we should not be even thinking about it”—[P7, male, 40 years, Nurse].

“Diseases like poliomyelitis, now polio is not being seen in the country for a long time, because of the vaccines, even measles people will suspect, but it will not be a reality so is because of these vaccines that help us so that’s why me I have the belief that if people are willing to take the vaccine, we can also forget about the COVID in the whole world because before, those diseases I mention before like diphtheria, Hib, whooping cough, those are not being seen now, tetanus and others is because of these preventable vaccines, so I believe that same thing applies to COVID..... if we definitely want COVID to go out from the world, people have to agree and accept this vaccine. When we all get vaccinated, we may have immunity; I think that can help a lot. People will forget about COVID like the other diseases”. [P2, female, 34 years, Public health officer]

“.....to prevent me from getting COVID- 19, first whenever I have to see a patient I will put on my face mask, my hand sanitiser with me, then any patient I see I have to apply my hand sanitiser. This is how I prevent myself, and when I close from work, I’ll remove my clothes, and when I reach home before my children touch me, I have to go to my bathroom and have my birth first so that I’ll be free from any infection before I transfer it to my family. I explained it to my children and my husband. This is how I prevent myself and my family”. [P2, female, 34 years, Public health officer]

Prevention includes hand-washing is first, then wash your eyes, wear a mask, distance yourself at least 2cm from another person and take the vaccine.[P11, female, 33 years, midwife]

The narrative reveals that participants perceived COVID-19 as a preventable disease and likened it to another communicable disease that has been controlled and prevented over the years. Participants believed that COVID-19 could also become an issue of the past if people followed

safety precautions like wearing masks, using hand sanitisers, maintaining social distance and getting vaccinated.

3.9 Vaccine Perception

This main theme describes participants' perceptions of the efficacy of vaccines, perceptions about the COVID- 19 vaccines, vaccine safety information and participant's desire to take the COVID-19 vaccine. Results from interviews revealed that participant's beliefs about the efficacy and side effects of the vaccine are likely to influence their motivation to take the vaccine and recommend it to those around them. It can also be observed from the narratives that the perceptions of health workers about the COVID- vaccine were influenced by COVID training received, source of information and adequacy of vaccine safety information. Four sub-themes were identified under this theme, namely, the efficacy of the vaccines, perceptions on the side effects of the vaccines, adequacy of safety information on the vaccine and motivation to take the vaccine.

3.9.1 Efficacy of vaccines

Most participants had factual and accurate knowledge about vaccines and believed in the efficacy of vaccines. The narrative below illustrates the views about the efficacy of vaccines from a participant:

"I think the vaccine is given as a prophylaxis to prevent us from having any other diseases that may be so deadly to our lives. Most of the time, the ministry of health usually tries to bring certain things that we can use to prevent ourselves from having such diseases. Vaccines are necessary for everyone to take it because it is given as prophylaxis; an example is COVID-19 in which if many people are vaccinated, the few that remained unvaccinated can get protected from herd immunity".[P1, female, 22 years, Nurse]

"Vaccines are safe and effective". [P6, male, 32 years, Public and Environmental Health Officer]

"Vaccines are actually good in disease prevention, especially in pandemic situations. To me, vaccines work, and they are effective and is a tool that we can use to prevent vaccine-preventable diseases".[P5, male, 27 years, Public health professional]

Personally, I have never been hesitant about vaccines. I have always accepted vaccines are very good for preventive measures. [P12, female, 32 years, Public health Officer]

From the extracts above, it can be noted that participants had positive views or opinions about vaccines. Almost all participants perceived vaccines as an effective way to control and prevent communicable and deadly diseases.

3.9.2 Perceptions about the COVID-19 Vaccine

Participants in the study had varied views about the potency, efficacy and side effects of the COVID- vaccine. Whereas a substantial number of participants stated that they did not experience any severe side effects after taking the vaccine, others believed that the COVID - 19 vaccine was not too safe and led to serious complications. The narrative illustrates the ambivalence on the cause of breast cancer from a participant:

“the COVID- 19 vaccine is something one needs to take. I have taken my first and second dose of the vaccine, and I don’t realize any problem, even the side effects. Most people are talking about the vaccine. I didn’t have that, so I think it’s an excellent thing for people to take this vaccine”—[P7, male, 40 years, nurse].

“The safety of the vaccine is very high, so I’m very much satisfied because I didn’t receive any adverse effects reports regarding vaccination”. [P5, male, 27 years, Public health Officer]

I have to take it. I know it is good for human consumption. That’s the first and more important thing. [P11, female, 33 years, midwife]

“I have not taken the COVID-19 vaccine because I am not convinced and am scared.....am not taking it until next year. When I am fully convinced, and I have not seen any side effects with anyone”. [P3, female, 39 years, midwife]

Also, when it comes to the COVID-19 vaccine, we hear a lot of things about it. Some are saying different side effects of it, so we are not sure because the thing is not to produce in the Gambia, and we all know researchers can do anything possible. You never know; you may die as a result of taking this vaccine. [P1, female 22 years, nurse]

The narrative above indicates that not all participants were convinced about the side effect of the COVID-19 vaccine. Some participants believed that the COVID vaccine was very effective. The side effects speculated on social media were not entirely true because they took the vaccine and did not experience any serious complications or side effects. Others, however, were still confused and uncertain about the efficacy and side effects associated with the vaccine. This made them afraid and reluctant to take it, although they were fully aware of the risk of not taking the vaccine. The quotes below capture this:

“Yes, I am fully aware of the risk of not taking the vaccine”. [P1, female 22 years, nurse]

“yes, I know that. Not taking it, I am exposing others. Yes, but they don’t know because I am conducting my radio programs”. [P3, female, 39 years, midwife]

It is evident from the narrative that some participants were more concerned about the side effect of the vaccine rather than the harm they would cause others by refusing the vaccine. Awareness of the risk they pose to others did not influence their decision to take the vaccine. Participants wanted to be sure the vaccines were safe before they took them.

3.9.3 Vaccine safety information

Information about the safety and efficacy of the COVID-19 vaccine was obtained from different sources by participants. Many participants relied on information from the experts, international media and authoritative sources such as the WHO, Ministry of Health, Regional Health Office, CDC and UNICEF. Below are some of the excerpts that illustrate this:

“WHO, Ministry of health and our Regional health Office. Anything that doubts me, I go to the WHO page for clarification”.[P6, male, 32 years, Public and Environmental Health Officer]

“.....yes I have been following the international media. I think many people did not know the importance of the vaccine as the WHO as the global health authority to guide people”. [P8, male, 50 years, nursing]

“Well, I have different sources of information. The first place is the internet, WHO website; I read a lot on the WHO website. I also attend training on COVID-19 and also, you know, through the Ministry of Health, the Gambia”. [P12, female, 32 years, Public health Officer]

A preponderance of the health worker who participated in the study mentioned that they were satisfied and convinced with the vaccine safety information provided by the Ministry of Health and partners. The narrative below captures this:

“Yea, I am satisfied because trust is reciprocal; whenever you are working with people, you need to trust whatever you have to do. What convinced me most is that the people who came with it are the same people directly dealing with the other vaccines aspects in the Gambia”. [P6, male, 32 years, Public and Environmental Health Officer]

“Yes, I am satisfied, as I have received all my doses of vaccine as I still bring people to come and take as well the dose is limited, and the only available doses are for people who took the first dose base on that those people did not have their fist, but they are ready to take any time it is available”. [P8, male, 50 years, Nurse]

“Yes, I am satisfied with vaccine safety information from the ministry of health because I don’t think the ministry will allow something bad for the people in the Gambia”. [P4, male, 24 years, assistant Public health Officer]

Contrary to this, some participants were not satisfied with the information provided by the Ministry of Health about the efficacy, potency and safety of the vaccine. Three participants

stated that the information provided was not exhaustive and convincing enough. The quotes below explain this:

“Am not satisfied that they are safe” [P3, female, 39 years, midwife]

“The ministry has not very well communicated to the people for them to know what the vaccine does and its categorization..... I believe there is an information deficiency. More work needs to be done to be sensitizing the people for them to understand before any implementation of interventions. It’s not only about these billboards and posters. It’s about getting to the people, the grassroots, and the relevant questions, and they get answers to their questions and see their own people in the forefront. In terms of information, people talk about radios, televisions. As for me, I’m not often listening to the radio. I’m not satisfied. That’s the fact”.[P12, female, 32 years, Public health Officer]

“I’m not satisfied. That’s the fact. Because when we went to NANA on the initiation of this vaccine campaign ... we went for like four days of training. There was certain thing said about the vaccine efficacy, potency, and prequalification of the vaccine. So, a layman or even if I’m a health practitioner, and I’m not a Public Health Officer, you tell me the vaccine is not pre-qualified, you put me in a funny position. I’ll tend to say why are they saying that the vaccine is not pre-qualified, then why should I take it?”. [P11, female, 33 years, midwife]

It can be observed from the narrative above that most of the participants accepted and deemed vaccine safety information adequate. This significantly influenced their decision to take the vaccine and recommend it to others or encourage others to go for it. Few participants mentioned that more explanation and clarification about the vaccine was needed to clear all misconceptions and doubts.

3.9.4 Motivation to take the Vaccine

The sub-theme discusses the desire and willingness of participants to take the COVID vaccine. Generally, the various accounts of participants indicated that they were motivated to take the

vaccine. Some had already taken the two doses of the vaccine, and others had just taken one dose and were left with one more to take. The quotes below capture this:

“Yes, I am motivated, I have taken. I have taken them both”.[P9, male, 29 years, nurse]

“Yes, I already took mine because I am already motivated”.[P5, male, 27years, Public health Officer]

“Yes, I am motivated. I have already received my first dose. Unfortunately, I couldn’t take my second dose due to vaccine shortage experienced at the time of my appointment date (next dose)”—[P4, male, 24 years, assistant Public health Officer].

Motivation and readiness of participants to take the vaccine influenced vaccine uptake significantly. Participants who were motivated to take the vaccine made sure they took the required dose. Thus they took the first and second doses. Vaccine shortage accounted for why some participants who were ready to take the vaccine could not take their second dose. However, participants were ready to take the second dose whenever it was ready. Below says; *“Of course, I am well motivated and ready to take my second dose of the vaccine”.* [P4, male, 24 years, assistant public health Officer]

3.10 Vaccine Hesitancy

This major thematic area focuses on vaccine hesitancy among health workers, their perceptions of vaccine hesitancy, the factors that contributed to vaccine hesitancy and the implication of vaccine hesitancy from the health workers perspective.

3.10.1 Health workers vaccine hesitancy

Generally, the narratives of the participants indicated that there was lower vaccine hesitancy among health workers. Almost all participants stated that they have never been hesitant or refused a vaccine for themselves or a family member. This is illustrated in the quotes below:

“I was not hesitant at all because I know the importance of taking the vaccine”[P2, female, 34 years, Public health Officer]

“No, I even encourage my kids to take it because I know the value of it”[P7, male, 40 years, nurse]

“Personally, I have never been hesitant to vaccines. I have always accepted vaccines are very good for preventive measures. I remember childhood vaccines were given to me, not with my consent because then I was a child. But since I joined the medical field and spent part of my life on vaccination and seeing statistics or data on what vaccines do in the body to eliminate certain diseases around the world, I have never been hesitant to vaccines”.[P12, female, 32 years, Public health Officer]

Evidence from the narrative above further reveals that lower levels of vaccine hesitancy reported among participants were influenced by increased knowledge about the relevance and efficacy of vaccines. Most of these participants were aware of the role vaccines play in disease prevention and control.

3.10.2 Perceptions of vaccine hesitancy

The majority of health workers interviewed perceived vaccine hesitancy as a product of knowledge deficiency or vaccine misconception. The quote below captures this:

“The obstacle in my community here is that people were not coming for vaccination when we started the vaccination. Do you understand? So, one of the reasons why I presume they are not coming is: 1 many of them knew ... vaccination centre, and 2, people are not well-informed about the vaccine, they don't trust the vaccine. So, there was that doubt about the vaccine. So for me, I think the biggest obstacle is misinformation. Social media was controlling the people from the WhatsApp group, other outlets, other sources of information. There were all kinds of misinformation have been in control. So, as a result, that misinformation came before, and the ministry did not make much effort to reach out to the people using those same platforms.

People were misinformed, and as a result, they are not coming; also, people did not know there was a vaccination centre”. [P12, female, 32 years, Public health Officer]

“One of the barriers in our communities regarding uptake of COVID-19 is fear; they have a pre-existing knowledge or misinformation or rumour regarding safety and efficacy of the vaccine. So you realized that when you go out there, the majority will tell you that these vaccines are not safe and the motive behind giving these vaccines is to kill us, so we’re not sick, we don’t believe that COVID exists here we are not interested in taking it”. [P5, male, 27 years, Public health Officer]

“.....yea, because there are a lot of misconceptions about these vaccines because of the social media is a problem. A lot of audio was sent, so even a layman, even an old aged hundred years they all listen to the audio, so everybody was scared”[P2, female, 34 years, Public health Officer]

“is still this social media, the bad news came before the good news about the vaccine, so that is why most of them feel reluctant to take the vaccine. Very few people are coming for the vaccination”[P3, female, 39 years, midwife]

The narrative above shows that low vaccine uptake or vaccine hesitancy resulted from exposure to wrong or false information about the COVID vaccine. This wrong information made people develop wrong perceptions and misconceptions about the vaccine and induced a lot of fear in people. Participants mentioned that social media was the main channel for these falsehoods to the general public. As a result, most Gambians do not have adequate knowledge and understanding about the efficacy, potency and safety of the COVID- 19 vaccine.

Apart from the knowledge gap, one participant narrated that the vaccine delivery mode discouraged people from coming for the vaccine. This is captured below:

“The dose also (T: vaccine) is a ten-dose vial. We only open it when we have ten people, and as a result, the mode of delivery was an obstacle. It’s a liquid vaccine, it has doses, and after 6 hours, we have to discard it. If it were a one-doe vial, that would have been better. And as a

result, we try to pile people, as a result of that, process, and some people are from very far. And additionally, the location of the vaccination centre”. [P12, female, 32 years, Public health Officer]

Other participants also reported that poor vaccine uptake among Gambians is a result of a vaccine shortage. Below says:

“Ah, I think the shortage of the vaccine. That’s the main thing people are encountering. Because they are coming here ... they want to take it, but the vaccine is not available”[P9, male, 29 years, nurse]

The excerpts above provide evidence that another factor that accounted for poor vaccine uptake among Gambians was the unavailability of the vaccines. Some people gradually change their perceptions about the vaccine and are now motivated to take it, but the vaccine is not available. The quote below explains this:

“At the beginning, the vaccine was readily available and accessible at the health centre here to the public, but people were not forthcoming due to their misconceptions. Now, the trend is changing as people are gradually becoming informed about the vaccine's safety and importance. I can remember that two weeks ago, nearly 15 people came to receive their first dose of the vaccine but found out that the vaccine was out of stock. This shows that people are now becoming aware and convince”. [P2, female, 34 years, Public health Officer]

3.10.3 Implications of Vaccine hesitancy

Participants also stated that vaccine hesitancy implied the need to create more awareness and intensify education on the COVID vaccine.

“I feel so bad because I tend to see that they don’t understand the importance of the vaccines. The majority of them is due to an information gap, and I always advise them to consult people who know more than them”. [P6, male, 32 years, Public and environmental health Officer]

“I think I will see it as lack of knowledge one needs to talk and educate the person to know what this vaccine is for the person may not know what this vaccine is for, or someone may have polluted the mind of that person”. [P7, male, 40 years, nurse]

“I feel sometimes pathetic and sorry for the individual, and basically as a health officer, I feel I have not achieved my objective, because when seen as a Public Health officer who knows vaccine how they work and then how they can save lives, people are obviously preventing that. I feel so pathetic, especially people who don’t want to take the vaccine”. [P10, male, Public health Officer]

“I used to feel bad at the beginning. But as a health care worker, this has always created an opportunity for me to health educate them as part of my mandate. I am with the belief that if they had understood the importance of vaccines as I do, they wouldn’t hesitate or refuse to take the vaccine. What makes me feel bad is that those without receiving the vaccines are very vulnerable in the society, more so if they travel to an endemic area with vaccine-preventable diseases”. [P4, male, 24 years, assistant public health Officer]

Chapter Four: Conclusion and Recommendations

4.1 Conclusion

Rapid assessment of community/public perception towards the COVID-19 vaccine is deemed crucial for evaluating Covid- 19 vaccine hesitancy in The Gambia to inform the planning of the most appropriate and culturally acceptable vaccination methods. It is important to explore people's opinions on the COVID-19 vaccine, to provide evidence-based support for vaccination activities, and better understand Gambians' stand on the outbreak. This will help in the increment of its uptake in The Gambia. People have different thoughts and ideas towards Covid -19, and it is crucial to have a baseline idea of the challenges the government will face for its citizens to take the vaccine voluntarily. As such, it will aid in the reduction of the incidence of COVID-19.

The study used an exploratory, descriptive study design and took a qualitative research technique. To increase the acceptance vaccination rate in the country is by knowing its people's stance towards vaccine utilization. The Government, in collaboration with W.H.O, desires to see the majority been vaccinated. Various thematic areas were reviewed about community members within the community settings and health care workers who provide the service to them. This hesitancy study guides the decision-makers and the public on essential COVID-19 vaccine information. Other participants perceived the adverse reactions/ side effects more detrimentally because of wrong sources of information.

While vaccine hesitancy promotes low uptake of COVID-19 vaccination, to explore the myth in which people geared their opinion towards the vaccine. The government must elaborate widely on its source of information coverage on sensitization. This will, in turn, reduces knowledge deficits on the COVID-19 vaccine. The health care workers must be better positioned to filter information down to the community members.

4.2 Recommendations

1. A low level of Knowledge was noted amongst the illiterate group. Therefore, health education activities should be directed mainly to this group of people.
2. Train and use local community members to disseminate information within the communities to improve understanding and acceptability
3. Devise simple, clear messages for sensitization that even the last person can easily understand within the community.
4. Most community leaders believe that social distancing measures cannot adhere to due to our cultural setup and the nature of their work. Therefore, community leaders should be strengthened and empowered to act as advocates to minimise the risk of exposures
5. There is a great need to strengthen community sensitization programs to clear rumours and misconceptions, as robustly stressed by the vast majority.
6. House-to-house sensitization and vaccination campaign is recommended to promote access to COVID-19 vaccination services, as vastly suggested by most of the participants

7. Through the Directorate of Health Education and Promotion (DHEP), the Ministry of Health embarks on community engagement activities to debunk myths and dispel rumours about the COVID-19 Vaccines to increase vaccine uptake.
8. The Ministry of Health, through the DHEP, strengthen sensitization programmes on public and private media, particularly at prime times.
9. All government health workers are trained and equipped with adequate knowledge about the cause, diagnosis, care, prevention, and control measures of the COVID-19.
10. The Ministry of health should channel information through Television stations within the country by using health experts to disseminate the information.
11. The Ministry of health must position a well-active focal person at each health facility for health education in terms of outbreaks.
12. A team of health staff should be deployed to communities to do a house-to-house sensitization on any new disease outbreak to avoid negative information at the beginning from non-health experts.

Reference List

1. WHO, *Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19)*. 2020.
2. Lu, R., et al., Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. *The Lancet*, 2020. **395**(10224): p. 565-574.
3. The Gambia COVID-19 Outbreak Situational Report. Report No. 97, 2020. Epidemiology & Disease Control Unit, Ministry of Health.
4. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). In: World Health Organization/Newsroom [website]. Geneva: W.H.O; 2020.
5. His Excellency, Adama Barrow, President of the Republic of The Gambia, Second Address to the Nation on COVID-19. 2020 [cited 2020 April 6]..
6. Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Method Approaches* (4th Ed.). SAGE Publications Asia-pacific Pte Ltd.

7. Neuman W. L. (2011). Social Research Methods: Qualitative and Quantitative Approaches. (7th Edition) Pearson New International Edition. Published by Allyn & Bacon.
8. Lacey, A. (2015). The research processes. In K. Gerrish & J. Lathlean (Eds.), The research process in nursing (7th ed., pp. 15-29). United Kingdom: John
9. Kumar, R. (2011). Research methodology: a step-by-step guide for beginners. New Delhi: SAGE Publication Ltd.
10. Polit, D., & Beck, C. (2010). Essentials of nursing research: Appraising evidence for nursing research: Baltimore: Lippincott Williams and Wilkins.
11. Wibawa T. COVID-19 vaccine research and development: ethical issues. *Trop med Int Heal*.2021;26:14-19.doi:1111/tmi.13503
12. Yang K, Liu H, Ma, L, Wang S, Tian Y, Zhe F, Song of Kow, Jiang X. knowledge, attitude and practice of residents in residents in the prevention and control of COVID-19: An online questionnaire survey. *J Adv Nurs*. 2021 Apr;77(4):1839-1855. doi:10. 1111/Jan. 14718. Epub 2020 Dec 14. PMID: 33259651; PMCID: PMCID: PMC7753640.
13. Asnakew Z, Asrese K, Andualem M. Community risk perception and compliance with preventive Measures for COVID-19 pandemic in Ethiopia. 2020 Dec;2020(13): pages 2888-2897. doi: 10.2147/RMHP.S279907.
14. Bates BR, Tami A, Carvajal A, Grijalva MJ (2021) knowledge, attitudes, and practices towards COVID-19 among Venezuelans during the 2020 epidemic: An online cross-sectional survey. *PLoS ONE* 16(4): e0249022. doi:10.1371/journal.pone.0meth9022
15. Abdel Fattah, F.A.M., Dahleez, K.A., et al. (2021) “public health awareness: knowledge, attitude and behaviours of public on health risks during COVID-19 pandemic in sultanate of Oman”, *Global Knowledge, Memory and Communication*, Vol. ahead-of-print. No. ahead-of-print. doi.org/10.1108/GKMC-10-2020-0152
16. World Health Organization. Statement of the WHO global advisory committee on vaccine safety (GACVS) COVID-19 subcommittee on safety signals related to the AstraZeneca COVID-19 vaccine.2012.

17. Haleem A, Javaid M, Vaishya R Effects of the Pandemic on daily life: Curr Med Res Pract. 2020 March-April; 10(2): 78-79. doi: 10.1016/j.cmrp.2020.03.011. PMCID: PMC714210
18. Alrasheed AA, Abdulsalim S, Farooqui M, Alsahali S, Godman B (2021) Knowledge, attitude, and practice about coronavirus disease (Covid-19) Pandemic and its psychological impact on students and their studies: a cross-sectional study among pharmacy students in Saudi Arabia. 2021: 14 pages 729-749. Doi: 10.2147/RMPH.S292354
19. Journal of medical internet research 2020;22 (10): doi: 10.2196/22628