REPUBLIC OF KENYA

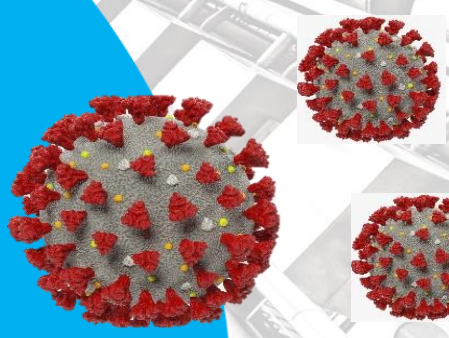
MINISTRY OF HEALTH

Community Health Services

"Afya Yetu, Jukumu Letu"

COVID-19 HEALTH EMERGENCY RESPONSE PROJECT (CHERP)

THE 7TH COVID-19 KNOWLEDGE, ATTITUDE, AND PRACTICE SURVEY REPORT



JULY 2023

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ABBREVIATIONS AND ACRONYMS

CCHFP	Certification in the College of Family Physicians
CDC	Centre for Disease Control
CDH	County Director for Health
CHERP	COVID-19 Health emergency Response Project
CHMT	County Health Management Team
CHPO	County Health Promotion Officer
CHU	Community Health Unit
CU	Community Unit
CHV/P	Community Health Volunteers/Promoters
CHW	Community Health Worker
COVID-19	Coronavirus disease of 2019
CSV	Comma-separated values
FGD	Focus group discussions
KAP	knowledge, attitude, and practices
KHIS	Kenya Health Information System
MOH	Ministry of Health
M&E	Monitoring and Evaluation
NERC	National Emergency Response Committee
PWDs	persons with disabilities
R5, R6, R7	5^{th}, 6^{th}, 7^{th} Rounds of KAP Survey
SPSS	Statistical Package for Social Sciences
STATA	Statistical Software for data science
TV	Television
UNICEF	United Nations International Children's Emergency Fund
VMGs	Vulnerable and Marginalized Groups
WASH	water, sanitation, and hygiene
WHO	World Health Organization
XML	Extensible Markup Language

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ACKNOWLEDGEMENT

The national 7th KAP survey was conducted 1st January 2023 to 1st June 2023, and it sought to better understand the current COVID-19 information in communities, level of adherence to the Ministry of Health prevention guidelines, vaccine uptake and hesitancy and changes in behavior over time. Previous KAP surveys have informed the communication and community engagement activities.

The survey was done through a collaboration between various departments in the Ministry of Health led by the Division of Primary Health Care, Division of Community Health, and The COVID-19 Health emergency Response Project (CHERP). I appreciate the officers who worked tirelessly over extended hours to update the survey tools and training package as well as the officers who were engaged in training and supervising the research assistants during data collection.

The national officers with the support of the consultant designed data collection tool and drafted the survey report. I appreciate the survey team which was coordinated by Dr. Maureen Kimani head of Community Health Division and Mr. Japheth Athanasio head of Monitoring and Evaluation in the World bank - CHERP within the Ministry of health.

Lastly, much gratitude for the funding support to implement the 7th KAP survey which was provided through World Bank supported COVID-19 Health Emergency Response.

Dr. Salim Hussein

Head, Division of Primary Health Care

EXECUTIVE SUMMARY

This survey was conducted from January 2023 to June 2023 to assess Knowledge Attitudes and Practices of the COVID-19 pandemic. The study utilized a cross-sectional, phone-based survey whereby respondents were individuals selected randomly from community health units in all 47 counties in Kenya, targeting randomly sampled household members from diverse backgrounds including VMGs. A total of 2229 respondents comprising of 2124 community members and 105 VMGs was selected through multi-stage sampling, with each County having a minimum of 35 respondents sampled.

Data collection was done through structured phone interviews for quantitative data, and Focus group discussions (FGDs) for qualitative data, with household head or their designate provided the responses to the questionnaire. Data processing and analysis was done using various tools, with the behavioral practices for taking precautions measured using the 4-pointer Likert Scale that covered the following two categories: (i) Preventive measures (i.e., wearing facial masks and practicing hand hygiene) and (ii) Social distancing (i.e., avoiding crowded places). Respondents self-reported the frequency of the practices performed during the previous week at the time of the survey, using a Likert scale.

The first objective of the survey was to **establish the current knowledge, attitude, perceptions, and practices related to COVID-19 in Kenya**. The study findings revealed that the participants, regardless of their age and gender, had a good understanding of COVID-19, in contrast to previous R5, R6 editions of the survey, given that more than 84% had COVID-19 information on at least 3preventive measures delivered in vernacular from radio programs, with the remaining receiving vernacular COVID-19 messages through television (37%), community health worker (35%), public meeting (23%), health facility (20%) and from religious meetings (19%). Majority of the respondents (67%) perceived themselves to be at a low risk of contracting COVID-19 virus, because of increased knowledge on COVID-19 practices and embracing preventive measures and guidelines put in place, as opposed to limited awareness and the negative perception of COVID-19 practices in the 5th round of the KAP survey in Kenya.

The second objective was **to establish main barriers to the adoption of key behaviors necessary for COVID-19 prevention and vaccination.** Study findings reveal that stigma and discrimination were some of the main barriers to adoption of COVID-19 prevention measures in Kenya. Despite a significant improvement in the 7th round of KAP survey in the way COVID-19 patients are treated by family members and the rest of the community, a significant number of respondents reported being gossiped by people close to them. This means that most participants had relatively negative feelings and attitudes toward their personal external life. Another barrier to efficient adoption of COVID-19 prevention measures and vaccination was misinformation and disinformation. However, the 7th round of KAP survey reveals that most respondents now prefer MOH as the reliable source of accurate information on prevention measures and vaccination.

The third and final objective of the study was **to establish the socio-economic needs arising due to COVID-19 mitigation measures.** One of the parameters used by the survey to measure the socio-economic effect of COVID-19 on households was the loss of income and financial wellbeing of household heads. Financial income, commodity prices, and food security are some of the key indicators of household welfare, with massive job losses due to previous containment measures rendering many households without a source of livelihood. Despite a slight improvement in job losses between R6 and R7, commodity prices were on an upward trajectory, meaning that households used more to buy the same unit of a good/service as compared to six months before. This therefore meant that responds were left worse-off even with the same level of income due to inflation.

The Ministry of health calls upon all stakeholders in the health sector to commit to strengthen community health units by capacity building of CHPs and community health workers. This aims to promote health at household level hence emphasize is on preventive measures and vaccine uptake awareness among community members, the dangers of relaxation in adherence to COVID-19 containment and mitigation measures with resurgence of COVID-19 cases. Raise awareness and provide education about mental health through establishment of accessible mental health support services in the Country.

Dr. Anne Ng'ang'a
Project Manager, COVID-19 Health Emergency Response Project

CHAPTER ONE: INTRODUCTION

1.0 Background information

The Corona Virus Disease 2019 (COVID-19) pandemic has occasioned a global health crisis due to unprecedented morbidity and mortality and its social-economic impact on countries. Over 767 million infections and close to 6.9 million deaths have been reported worldwide (WHO, 2023), in which Kenya has not been spared by the pandemic. In Kenya, as of 7th June 2023, there were 343,312 confirmed Coronavirus cases in Kenya and 5,688 deaths (MOH, 2021). The World Health Organization (WHO) declared COVID-19 a global pandemic on March 12, 2020, due to its high infectious rate with tremendous transmission dynamics (Cucinotta & Vanelli, 2020).

Kenya confirmed its first COVID-19 case on 13 March 2020 from a traveler who had arrived from London a week earlier. A multisector task force, the National Emergency Response Committee (NERC) comprising of health, security, education, transport, finance, and trade sectors was constituted with responsibility for the overall coordination of the COVID-19 response. NERC identified health facilities, public and private laboratories and isolation centers and developed guidelines for case management, infection prevention and control and surveillance (Nanyingi, 2020).

Adhering to COVID-19 basic infection prevention guidelines as per WHO protocols are the cornerstones of reducing the transmission. These include practicing social-distance (at least 6 feet away from others), maintaining hand hygiene (frequent hand washing with soap and water or alcohol-based sanitizer), use of facemasks in public settings, sneezing on elbows and quarantining of the COVID-19exposed individuals and vaccination (Kumar, Pinky & Nurudden, 2021).

The Kenyan Government with assistance from international partners has continued with the countrywide COVID-19 vaccination. As of 22nd May 2023, the proportion of adults fully vaccinated were 37.6% and children fully vaccinated (12 to <18 years) were 10.6% (MOH, 2023).

Conducting surveys on knowledge, attitude, and practices (KAP) has been useful in informing prevention, control, and mitigation measures during outbreaks. For instance, during the 2014 Ebola response, KAP surveys yielded critical information on the prevalence of misconceptions about

Ebola transmission and prevention, and the need to prevent stigmatization of Ebola survivors and foster safer case management and burial practices (Jalloh et. al, 2017). This study is a follow up to a similar study carried out in April 2022, with the findings providing room for a comparative analysis to ascertain improvements made in adherence to COVID-19 guidelines, knowledge, attitude, practices, and perception of the general population on COVID-19, COVID-19 vaccine, the sources and preference of information on COVID-19.

1.1 Problem statement

In Kenya, the COVID-19 pandemic has spread to all counties, infecting over 343,196 and causing over 5,688 deaths as of 22nd May 2023 (MOH,2023). Since the onset of the COVID-19 pandemic, the Ministry of Health developed a communication and community engagement strategy which enabled rapid dissemination of COVID-19 information, helped to demystify myths and misconceptions, and supported communities to take up prevention measures.

Individuals and community's adherence to the government's guidelines on social distancing, face mask wearing handwashing and vaccination is related to their knowledge, attitude, and practices towards COVID-19. The MOH in collaboration with various partners has conducted several KAP surveys since March 2020 which have continued to inform the communication and community engagement activities as well as other response efforts.

While previous KAP surveys highlighted gaps in knowledge, attitude and practices, steady improvements on the same were also observed: Perception of COVID-19 risk reduced from 31% to 12% being at high risk. Stigma and discrimination have reduced over time during the pandemic. Additionally, more than half of the participants also stated having low mental health status.

The findings from these KAP surveys informed several intervention and policy decisions by the national COVID-19 taskforce. The Ministry of Health conducted the 7th KAP survey to better understand the current COVID-19 information in communities, level of adherence to the MOH prevention guidelines, changes in behavior and attitudes towards the COVID-19 vaccine and ongoing impact of COVID-19 on communities.

The survey assessed the knowledge, attitude, practice and perception to inform efforts to combat COVID-19 among the Kenyan population. The survey also evaluated the impact of COVID-19 on

the community members' social life, economic, mental health as well as healthcare-seeking behavior and additionally evaluated vaccine knowledge, uptake, and vaccine hesitancy.

1.2 Project background

The Ministry of Health - COVID-19 Health Emergency Response Project among other focus areas seeks to address the barriers and improve response measures for communication and community engagement during pandemics.

Advocacy, communication, and social mobilization is an integral component of strengthening surveillance and response to COVID-19 and health emergencies. The Project has supported community sensitization, communication, and coordination activities at national and county level; community dialogue meetings, radio shows, other forms of media engagement and use of different forms of art to communicate among others. In addition to supporting engagement between health facilities and communities to build confidence in health services and ensure appropriate health care services utilization.

The project has supported activities related to risk and behavior change communication; community engagement for vulnerable and marginalized groups; training of community and opinion leaders; and periodic knowledge, attitude, and practice surveys. Communication, social mobilization outreach and citizen engagement strategies are aimed at generating confidence, trust and demand for COVID-19 vaccine are also supported.

1.3 Broad objective

To establish current knowledge, attitude, perception, and practices of the population in regard to the COVID-19 pandemic and its impact on the social, health and economic life of the community

Specific Objectives

1. To establish the current knowledge, attitudes, and practices related to COVID-19
2. To establish the main barriers to adoption of key behaviors for COVID-19 prevention and vaccination
3. To examine the social, health and economic needs arising due to the COVID-19 mitigation measures

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

The literature review is built around the three thematic areas of knowledge, attitude and regarding COVID-19, modalities of prevention, attitude, risk perception, the practice of social distancing methods and respiratory hygiene. It also covers the predictors of good knowledge of COVID-19, vaccine knowledge and its acceptance as well as issues of vaccine perception and sources and preference of information on COVID-19.

2.1 Knowledge on transmission, symptoms, prevention of COVID-19.

COVID-19 is transmitted from person-to-person through respiratory droplets. These droplets are released when someone with COVID-19 sneezes, coughs, or talks. Infectious droplets can land in the mouths or nostrils of people who are nearby and be inhaled into the lungs (WHO, 2021). Recent data suggest that there can be transmission of COVID-19 through droplets of those with mild symptoms or those who do not feel ill (CDC, 2021).

According to the Ministry of Health, Kenya, symptoms of someone infected with corona virus include respiratory symptoms, fever, cough, shortness of breath, and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death (MOH, 2019). Literature also indicates symptoms like wheeze, fatigue or myalgia, vomiting, and or nausea, diarrhea, headache, and sore throat/pharyngitis (Viner et. al, 2021).

Individuals of all ages are at risk of contracting this infection and severe disease. However, patients aged ≥60 years and patients with underlying medical comorbidities (obesity, cardiovascular disease, chronic kidney disease, diabetes, chronic lung disease, smoking, cancer, solid organ or hematopoietic stem cell transplant patients) have an increased risk of developing severe COVID-19 infection (Napoli, 2021).

According to WHO, there are several ways to prevent the spread of COVID-19 infection. These include: avoiding touching your eyes, nose and mouth, avoiding close contact with people (physical distancing), staying at home when you are sick coughing or sneezing into bended elbow

and covering cough or sneeze with a tissue, then dispose properly. Others are using a face covering when physical distancing is difficult or when going into closed spaces (WHO, 2020).

Literature suggests that water, sanitation, and hygiene (WASH) related actions like engaging in frequent hand hygiene using appropriate techniques, implementing regular environmental cleaning and disinfection practices and managing excreta safely are particularly important for prevention and control of COVID-19 infections (Mwai, et. al, 2021). According to Centre for Disease Control and Prevention (CDC), there is need for cleaning and disinfecting frequently touched objects and surfaces, performing hygiene with soap and water or use alcohol-based hand rub that contain at least 60% alcohol.

The COVID-19 pandemic created an urgent need to communicate health information to the public but how can public health officials best reach people, given the myriad channels available? When combined, traditional media sources TV, radio, or newspapers are the largest sources of COVID-19 information (Shahmir, et. al, 2020).

2.2 Attitude and perception towards COVID-19 and its measures

One factor that needs to be tackled is misconceptions related to the disease besides the disease itself. WHO designed a particular page named “myth buster” to tackle such misconceptions, which are even more harmful than the disease itself. Such outbreaks have always been accompanied by a tsunami of misinformation and misuse of drug therapies. However, in an era of fast communication technologies, such misconceptions get amplified and spread at a pace faster than the real facts through social media. Such fake pieces of information and concepts could be drastically damaging for the general public who blindly follow any information they get to run for safety (Mahmood, et. al, 2020).

In a systematic review on knowledge, attitude, perception, and preventive practices towards COVID-19 in sub-Saharan Africa, nine studies reported that attitude towards COVID-19 preventive measures such as hand hygiene, social distancing, wearing face masks and avoiding crowded areas are essential in controlling the spread of COVID-19. The same paper reported that

in some studies, participants had reported not using masks in crowded areas and when leaving home (Nwagbara et. al, 2021).

Stigma in the context of health according to United Nations International Children's Emergency Fund (UNICEF) is the negative association between a person or group of people who share certain characteristics and a specific disease. According to UNICEF, the level of stigma associated with COVID-19 is based on three main factors: 1) it is a disease that's new and for which there are still many unknowns, 2) we are often afraid of the unknown and 3) it is easy to associate that fear with others. It is understandable that there is confusion, anxiety and fear among the public that continue fueling harmful stereotypes (UNICEF, 2020).

Risk perceptions refer to people's intuitive evaluations of hazards that they are or might be exposed to including a multitude of undesirable effects that people associate with a specific cause. Risk perceptions are interpretations of the world. The evaluation of risks is influenced by numerous individual and societal factors, and different social, cultural, and contextual factors influence risk perception. These go beyond the classic hazard attributes and are based on experiences, beliefs, attitudes, judgments, (mis)conceptions, and feelings, as well as wider social, cultural, and institutional processes. Although risk perceptions act as triggers for precautionary action, the engagement in preventive health behaviors is not merely determined by the awareness of objective health risks, but also influenced by health beliefs and specific health cognitions (Cori, Bianchi, & Cadum, and Anthon, 2020).

Facing uncertain situations can increase anxiety levels, especially if there is potential mortality risk. Anxiety may lead both healthy and vulnerable individuals to engage in behaviors to protect themselves from contracting the virus (Shiina et. al, 2021). In a study by Harper et al (2020), indicated that fear of COVID-19 was the only predictor of positive behavior changes.

In a cross-sectional study in India, most of the participants believed that wearing a surgical mask was effective in COVID-19 prevention while some of the participants did not agree with the statement. In addition, many the participants incorrectly believed that it is not safe to receive a package from areas where a case of COVID-19 has been reported. Approximately half of the students were found to have a correct perception that antibiotics are not effective in COVID-19

treatment as well while the same number rightly agreed that vaccines are not sufficient to prevent COVID-19 transmission at present (Gohel et. al, 2021).

2.3 Practice of COVID-19 measures

Kenya confirmed its first COVID-19 case on 13th March 2020, in a traveler who had arrived from London a week earlier. To control and avoid the rapid spread of the ongoing COVID-19 outbreak in the country, several measures were adopted by the government. These measures include the limitation of the number of passengers of public transportation; quarantine and care for infected people or suspected cases; closure of borders and suspension of flights; suspension of issuance of entry visas to Kenya; gatherings of more than 50 people prohibited; bars, restaurants, and public places closed from different times overloading in public transport vehicles prohibited; implementation of virtual meetings; avoiding close contact such as shaking hands or hugging and covering the mouth when sneezing.

Other measures included: curfews and lock downs in certain counties, supervision of burials, reducing crowding at hospitals and the closing of all schools with school children advised to avoid loitering in the estates and streets (MOH, 2020).

CHAPTER THREE: SURVEY METHODS

3.1 The Research design

The study utilized a descriptive cross-sectional survey design to establish the current knowledge, attitude, perception, and practices of the population in regard to the COVID-19 pandemic and its impact on the social, health and economic life of the community. A descriptive research design was adopted because the survey is concerned with specific narration of facts and characteristics concerning household members and VMGs in the country. According to Mugenda and Mugenda (2012), cross-sectional descriptive research determines the way things are and/or reports answers to research questions with regards to current status of knowledge of the subjects in the study. It employs both use of qualitative and quantitative data and provide the necessary linkage between the two in a way to reconstruct the "what is" of a subject hence find solution to the study (Kothari, 2014). Respondents were mainly household individuals selected randomly from community health units in all 47 counties, with randomly sampled household members from diverse backgrounds including VMGs.

3.1.1 Sampling

The survey employed use of multi-stage sampling, which entailed dividing target respondents/participants into equal cluster sizes before further subdividing them.

i) **Stage one** involved distribution of the respondents equally across the counties and communities the Community health Unit (CHU) then into clusters of villages.
ii) **Stage two** employed proportionate random sampling where the cluster villages were randomly selected, and participants selected from the sampled villages based on a criterion.

A total of 2229 respondents comprising of 2124 community members and 105 VMGs were selected and re-weighted proportionately at the analysis stage. This was done through the Community Health Volunteers (CHVs), who recruited individuals from all their community health units, with each County having a minimum of 35 respondents sampled.

3.2 Data collection

The survey used structured quantitative questionnaires and focus group discussions to collect data from sampled households. Consent was sought from the respondents before commencement of the

tool maximized available information for strategic and programmatic decision-making within a dynamic program and environment. The KAP survey was done through phone interviews and focus group discussions. Data was collected using Kobo Collect Software.

During data collection, the sampled household members in sampled households were contacted, and the households head or their designate provided the responses to the questionnaire.

The qualitative data on the other hand was collected through an FGD where the national team was grouped into 10 clusters. The team conducted Focus Group Discussions in the 20 selected counties. The National Team held briefing/board room meeting with the CHMT (CDH, CCHFP, CHPO) to sensitize the County team on the activity, as well as share updates on the counties' COVID-19 situation. Focus Group Discussions were then conducted in two sessions of 10 persons each within the same Sub-County.

Each FGDs comprised of the youths, women, men, PWDs, religious leaders, local administrators, and other community influencers. The purpose of the FGD was to assess the knowledge and practice of the community members in matters COVID-19 and COVID-19 vaccination. The FGDs gave the opportunity to citizens to interrogate the myths, misconceptions, and rumors around the vaccine, and enhanced disseminate of correct information to take root in the community.

3.2.1 Training of research assistants

The survey team was trained for a week on research practices and conducts and data collection tools. Further they were given information about the survey, including its purpose and consent statement.

3.3 Data processing and analysis

Data processing and analysis was done using various data analytical tools STATA, SPSS, and Excel. The raw data was transferred from Extensible Markup Language (XML) and aggregated to CSV format and cleaned before being analyzed. The data was disaggregated based on gender, category group and exposure to COVID-19 communication and other categories deemed fit to provide valuable insights. Close-ended questions were then analyzed using frequencies, means and percentages and findings presented in the form of tables, charts, and graphs.

Behavioral practices for taking precautions were measured using 4-pointer Likert Scale, which covered the following two categories:

1) Preventive measures (i.e., wearing facial masks and practicing hand hygiene)
2) Social distancing (i.e., avoiding crowded places).

Respondents self-reported the frequency of the practices performed during the previous week at the time of the survey, using a 4-point Likert-type scale (1 = never, 2 = sometimes, 3 = often, and 4 = always).

3.4 Study limitations

The study had four main limitations:

i) **Refusal:** Some of the respondents were skeptical to give information on their experiences on COVID-19, and preferred not to be contacted again since they were not benefiting from the calls we were making directly.

ii) **Participant prejudice and perceived fear**: Some participants declined to participate in the survey as they associated the study with conmanship.

iii) **Network issues**: some respondents were from remote areas with little to no network coverage.

iv) **Language barrier:** some respondents, mostly the VMGs, had a difficult time in giving appropriate responses due to the research assistant's little or no knowledge of their language.

v) Reliance on the respondent to give true and accurate information.

To mitigate the study limitations, the survey team ensured that the research assistants had been trained on interpersonal communication and creating rapport with respondents. The quality assurance team was also on standby to support the data collection and do call backs where the research assistants had a challenge with the phone interview.

CHAPTER FOUR: STUDY FINDINGS

4.0 Introduction

The 7th KAP survey respondents were household heads or their designate from the general populations (non VMGs), Vulnerable and Marginalized Groups (VMGs) and People with Disability (PWDs). A total of 1724 phone interviews were successfully completed with households from 245 Community health units hence a response rate of 77%. There were 25 duplicate respondents which were dropped, and the final sample size was 1699.

A summary of the call outcomes of rounds 5, 6 and 7 is shown in Table 1.

Table 1: Comparison of Call outcomes of round 5, 6, and 7 Phone survey

	Round 5		Round 6		Round 7	
	Community members	**VMG**	**Community members**	**VMG**	**Community members**	**VMG**
Expected calls	2295	250	2130	202	2124	105
Fully completed calls	1846	155	1598	110	1616	83
Refusals	41	3	15	9	92	1
Un-attempted	39	N/A	85	7	3	0
Unanswered calls/wrong numbers	353	92	432	76	388	21
Duplicates	N/A	N/A	N/A	N/A	25	0
Total calls made	**2240**	**155**	**2045**	**195**	**2096**	**105**

Focus Group Discussions were conducted in 20 selected Counties grouped in 10 clusters as shown in annex 1.

4.1 Characteristics of respondents

Of the interviewed respondents, 95% (1616) were from general populations (non-VMGs) and 4.9% (83) were VMGs. Of the total respondents 4.1% (69) were PWDs. Persons with disability interviewed decreased from 11% in round 5 to 4.1% in round 7.

Males were the predominant participants at 51.3% (871). Most of the study participants 78% were household heads.

Table 2: Characteristics of respondents

	Household heads		Other	
	Male	**Female**	**Male**	**Female**
VMG(n=83)	(55%) 46	(27%) 22	(6%) 5	(12%) 10
Non-VMG (n=1616)	(48%) 783	(30%) 478	(2%) 37	(20%) 318

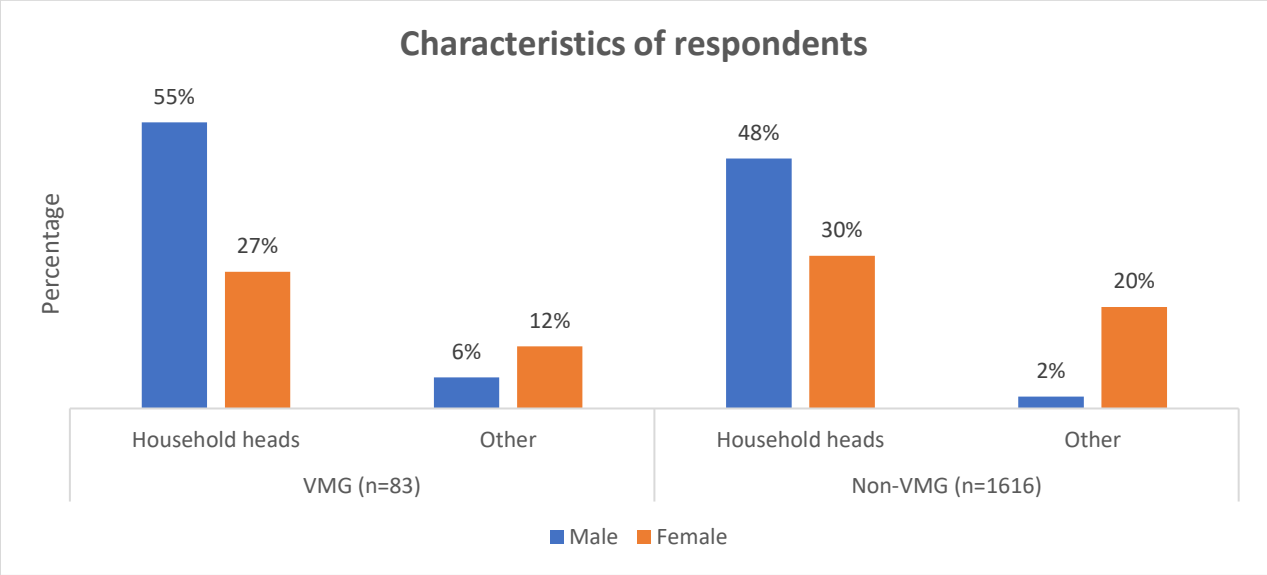

Figure 1: Characteristics of respondents

Majority of the households had dependents (either children or the elderly) 93% (1574). About 22% (382) of the respondents had elderly household members while 19% (317) had both children and elderly as members of their households.

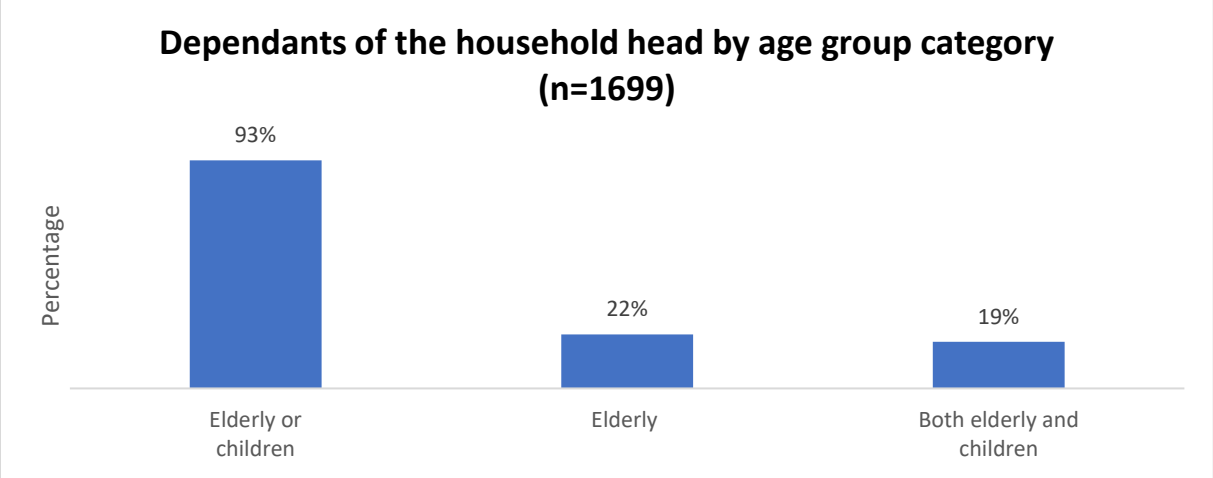

Figure 2: Dependents of household heads by age category

4.2 Relocation of respondents from their homes

The respondents who had moved from their pre-COVID-19 residential location was 12%. Most of the respondents who had moved were still within the same county 40% (81) while those who moved to urban area within same county were 30% (60). Respondents who moved to other counties and resided in the urban location were 15% (30) and 14% (29) resided in the rural locations.

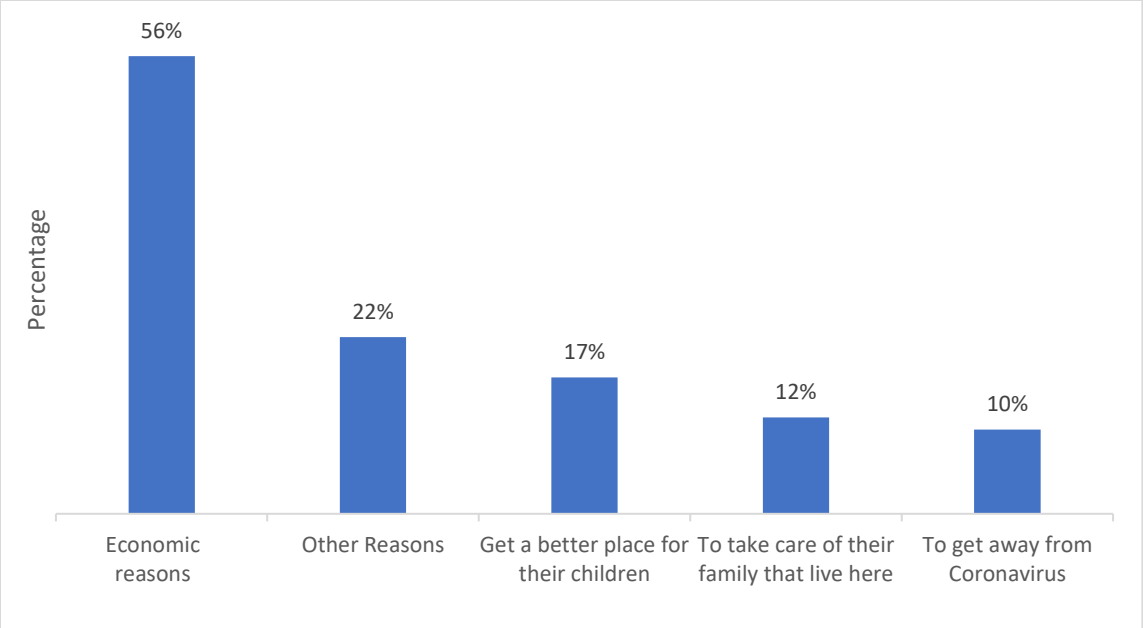

*Figure 3: Reasons for respondent relocation**

More than half of the respondents 56% (114) moved due to the pandemic related economic reasons, 22% (44) gave other reasons. Some of the other reasons given were health morbidities (12%) and job transfer (7%). In addition,17% (34) of them moved to get a better place for their children, 12% moved to take care of their family and only one-in-ten (10%) moved to get away from Corona Virus.

4.3 Source of information on COVID-19

The main source of information on COVID–19 remained radio 84%, which is a slight decline from 94% and 90% in rounds 5 and 6 respectively. Close to two-thirds (65%) reported that the TV was their source of information, an increase from 55% in round 6. Other sources included CHW (47%), health facilities (35%), religious meetings (28%), social media (26%), posters (9%), and website

(6%). There was a decline in access to COVID-19 information from all sources of information except TVs.

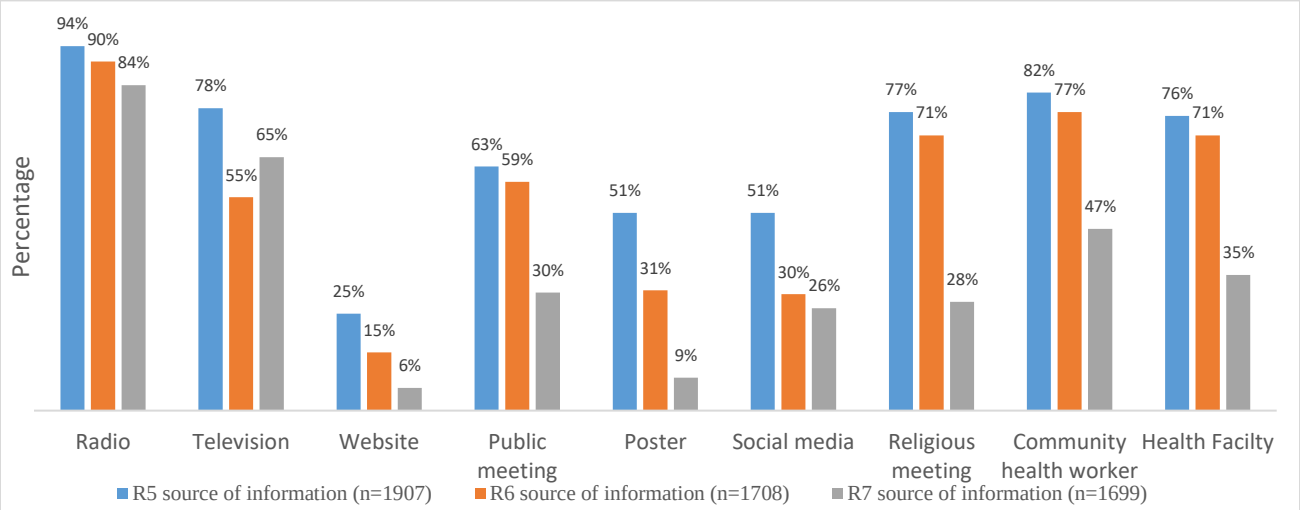

Figure 4: Comparison of main Sources of information on COVID-19 in the community for the last 6 months with the previous rounds of KAP survey

4.3.1 Sources of information utilizing indigenous language/vernacular

The respondents were asked whether they had accessed any COVID-19 information for at least 3 measures that prevent COVID-19 through indigenous language in the past 6 months, more than three quarter (84%) had COVID-19 information delivered in vernacular from radio programs or shows followed by television (37%), community health worker (35%), public meeting (23%), health facility (20%) and (19%) from religious meeting.

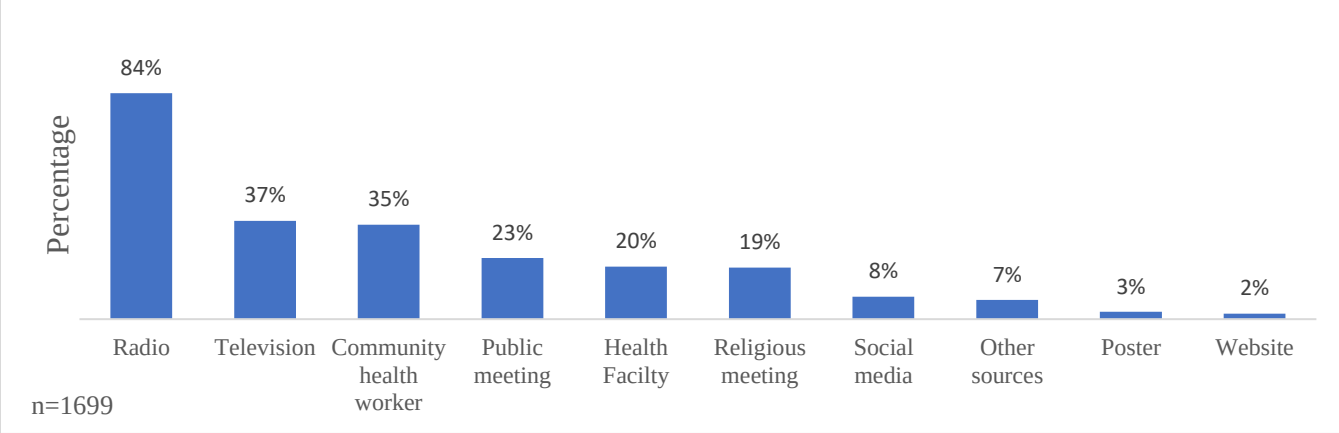

Figure 5: Sources of information received on at least 3 measures to prevent COVID-19 in indigenous language/vernacular in the last 6 months

The least popular sources of information using vernacular languages were social media, posters and websites having 9%, 3%, and 2% respectively.

4.3.2 Key message on COVID-19 delivered through indigenous language.

The study also sought to find out the key message recalled by the respondents on COVID-19 in indigenous languages. The Key messages the respondents could recall included mask-wearing (83%), social/physical distancing (71%), and COVID-19 vaccine (52%). The least reported key messages included cough etiquette (25%), health seeking (25%), COVID-19 symptoms (19%), deaths (11%), patients (10%), and COVID-19 recoveries (8%).

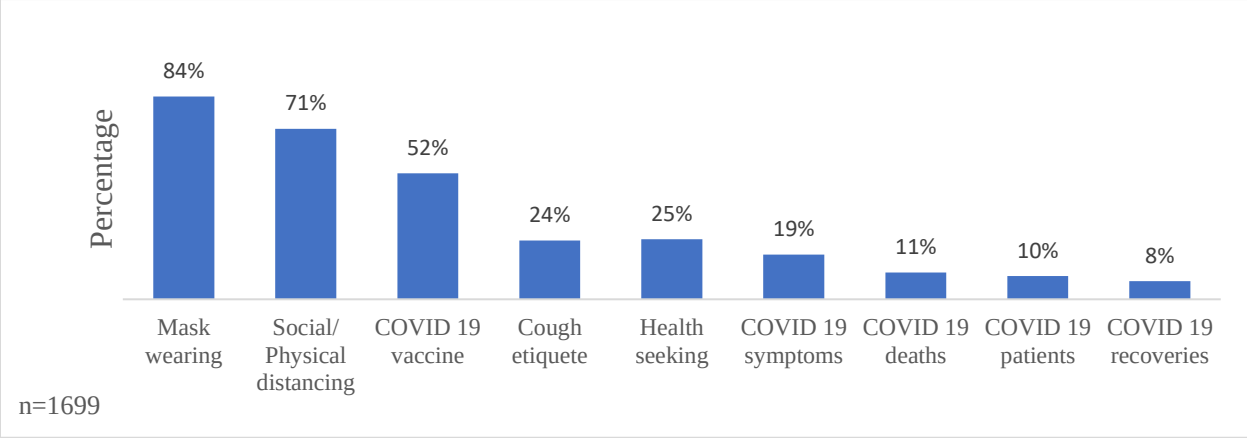

Figure 6: Key message on COVID-19 delivered through indigenous language.

4.4 The preferred sources of information

The preferred source of information on COVID-19 among the respondents was radio at 74% (1263), TV shows at 50% (846), and CHW at 39% (664).

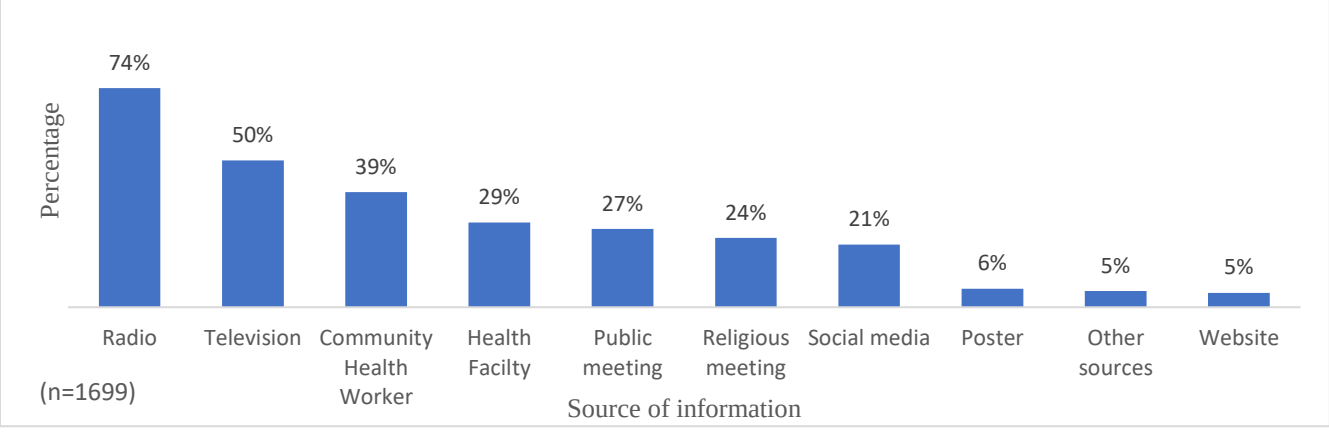

Figure 7: Respondents' preferred source of information on any future updates on COVID – 19

Those who preferred health facilities were (29%) while public meetings were (27%), religious meetings (24%), social media (21%), posters (6%), websites (5%) and other sources (5%).

4.5 Satisfaction and suggestions on information received in indigenous language.

4.5.1 Satisfaction on information received.

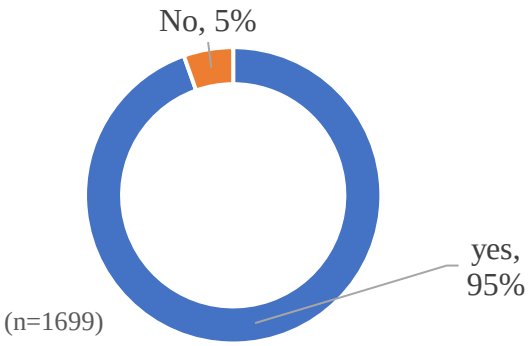

Figure 8: Respondents' Satisfaction on the information they received in their indigenous language.

Majority of the respondents (95%) were satisfied with the information they received in the indigenous language as shown in figure 8.

4.5.2 Suggestions on improvement of information received

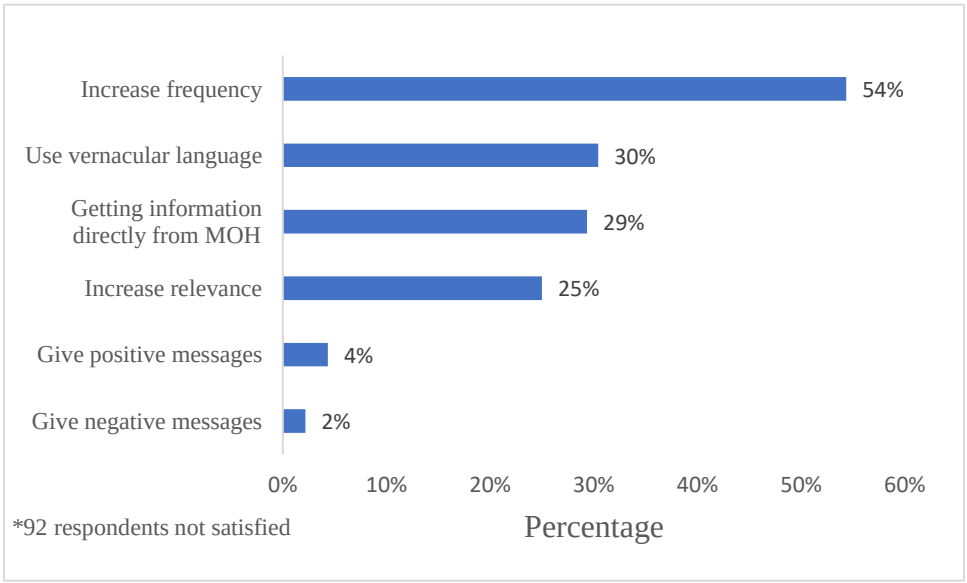

*Figure 9: Suggestions on how to make the information better meet the needs of the respondents**

The respondents who were dissatisfied with the COVID-19 information gave suggestions for improvement. The suggestions were, to increase the frequency of COVID-19 information 54% (50), use of vernacular language on COVID-19 information 30% (28) and increase in the relevance of the information 25% (23) which would make the information meet their needs. Almost a third of the respondents, 29% (27) suggested getting the information directly from MOH. Lastly 4% suggested giving positive messages and 2% giving negative messages.

4.6 Risk perception of the COVID-19 vaccine

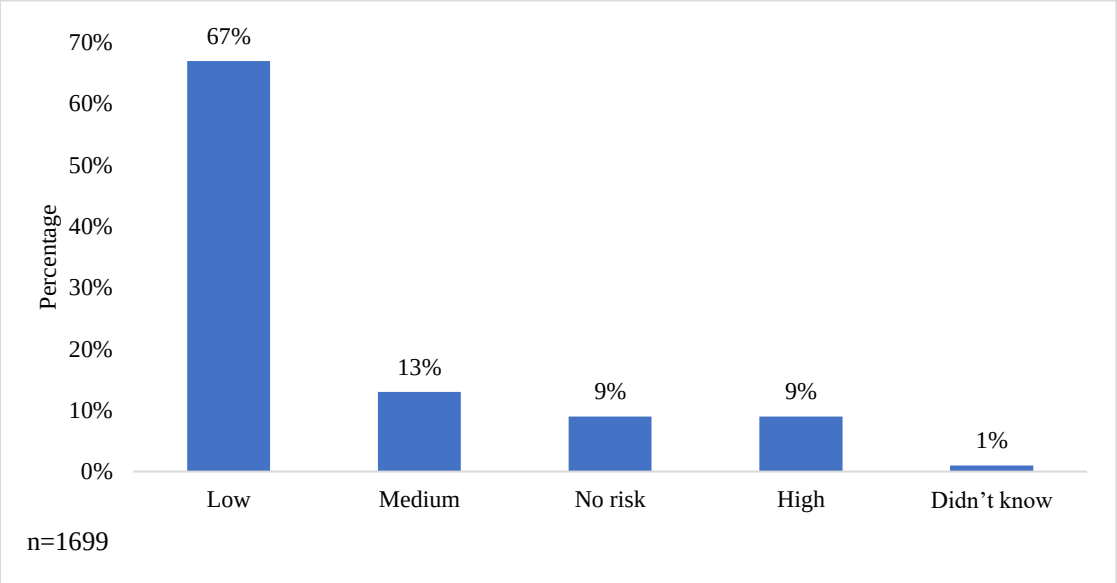

Figure 10: Covid-19 risk perception in the community

The 7th KAP survey showed that there was low risk perception on COVID-19 acquisition among respondents. Figure 10 shows that the majority of the respondents 67% (1,144) perceived themselves as low risk of getting infected with COVID-19, medium risk was 13% (221), no risk at 9% (149), high risk at 9% (157) and those who didn't know was 1% (22). The respondents who reported that they already had COVID-19, therefore did not find themselves at any risk, was the lowest at 0.35% (6).

"... in my opinion the people who are at the most risk are the youths. This is because for many youths even when I am doing vaccination mobilization many say they are strong, they have many theories and think that vaccination is mainly for elderly people due to their low immunity". FGD participant— Kiratina CHU, Mwea West, Kirinyaga

"Other people who are at high risk are small children as they cannot understand what it means to properly observe the preventive measures and have low immunity". FGD participant—Mwea East-Kiarukungu CHU-Kirinyaga

Figure 11 shows the trends in risk perception over time, there was an increase in proportion of respondents with low-risk perception from 41% in round 5, 56% in round 6 and 67% in round 7.

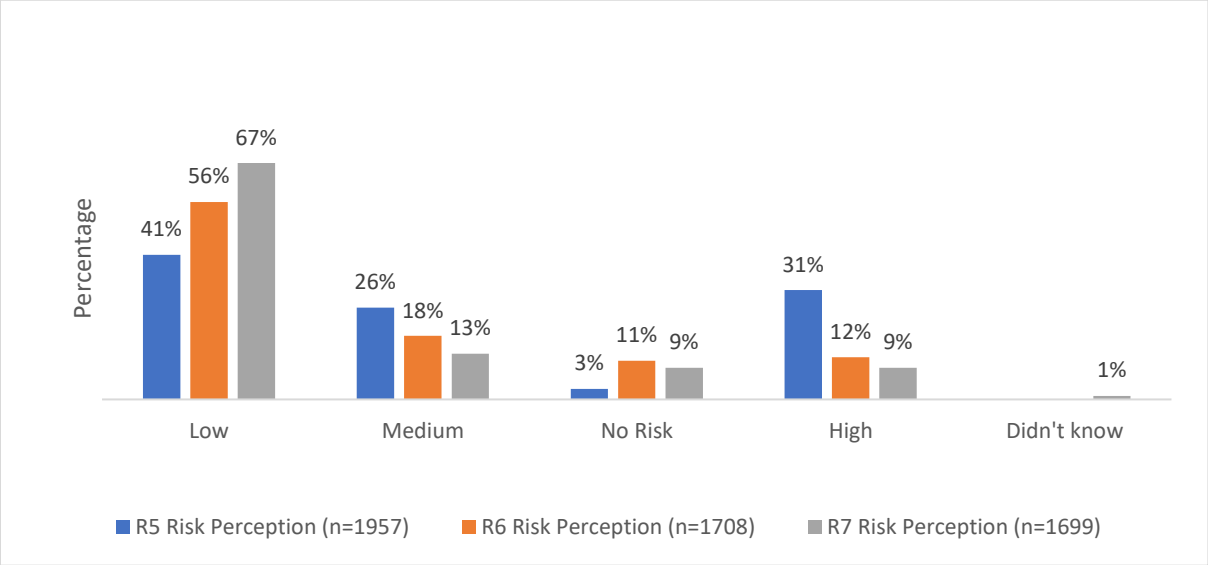

Figure 11: Comparison of COVID-19 risk perception in the community across previous rounds of KAP survey.

The respondents who perceived themselves as high risk reduced from 31% in round 5, 12% in round 6 and 9% in round 7.

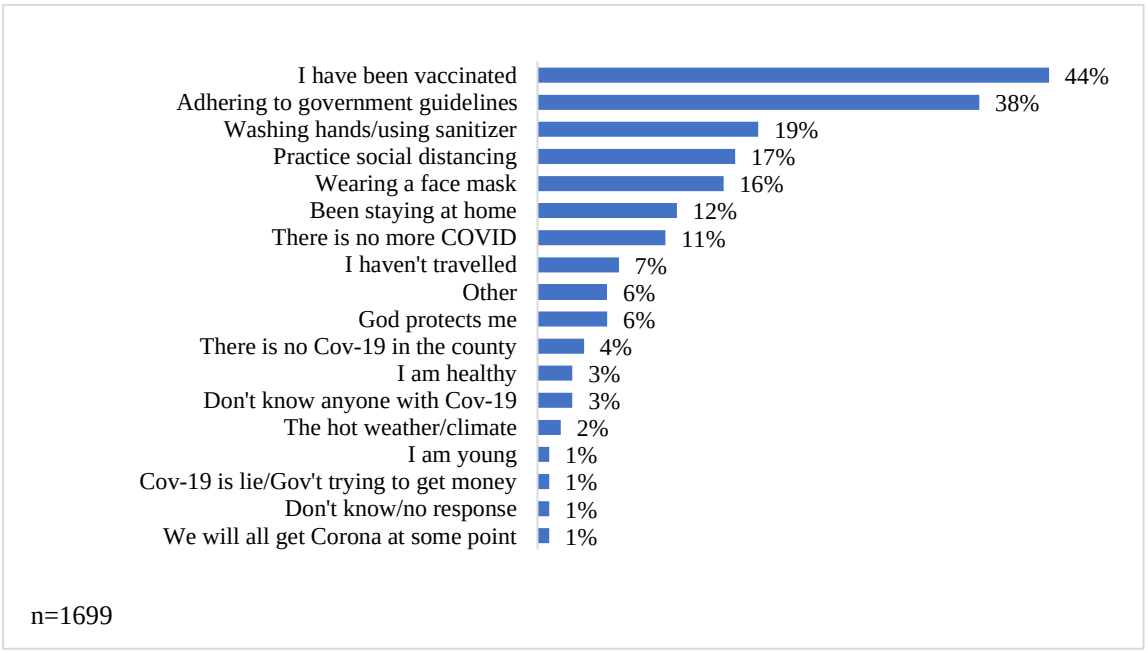

Figure 12: Reasons for low risk perceptions by the respondents

The main reasons for low-risk perception among the respondents were being vaccinated (44%; 743) and adhering to Government guidelines (38%; 646). Other reasons included washing hands (19%), social distancing (17%) and wearing face mask (16%) amongst others.

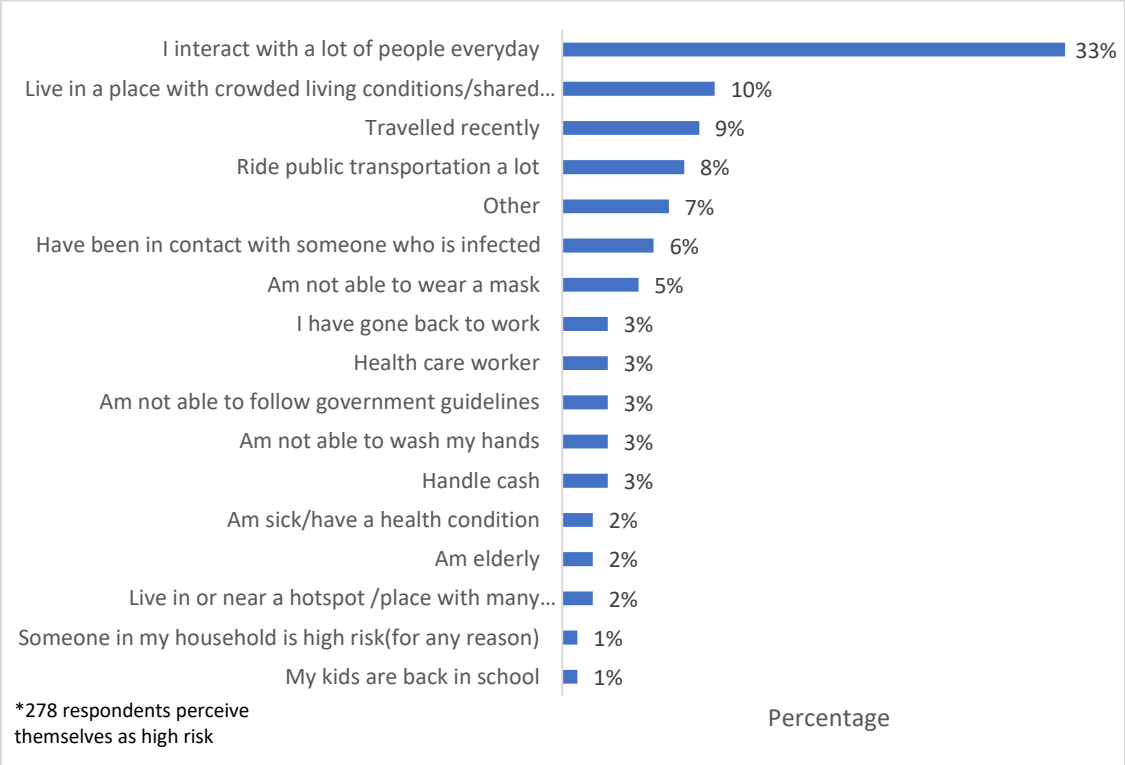

Figure 13: Respondents' reasons for high-risk perceptions

The main reasons for high-risk perception included, interacting with many people (33%), living in crowded areas (10%) and recent travel (9%) amongst other as shown in figure 13.

"All are at risk due to a reluctance in observing guidelines. Even if we say that the elderly has lower immunity, businesspeople interact with many people, in churches there are many people. Let us all just get vaccinated". FGD participant— Oljororok CU -Nyandarua

4.7 COVID-19 infection awareness

The respondents were asked whether they knew of a community member who had COVID-19 infection.

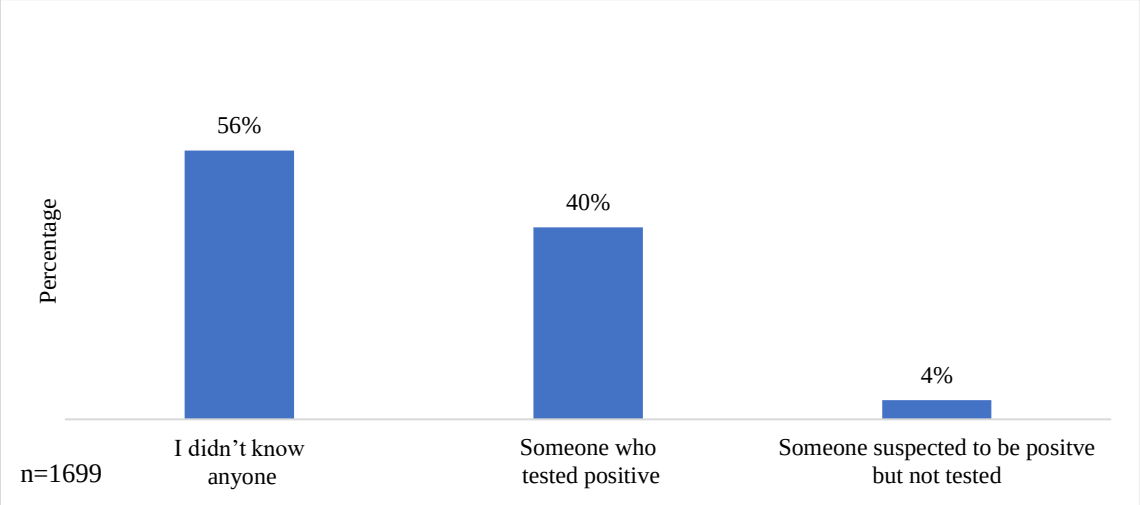

Figure 14: Awareness of people in the community infected with Covid-19

Figure 14 shows that 56% did not know anyone who had COVID-19 infection, 40% knew someone who had tested positive and 4% knew someone who were suspected to be positive but were not tested.

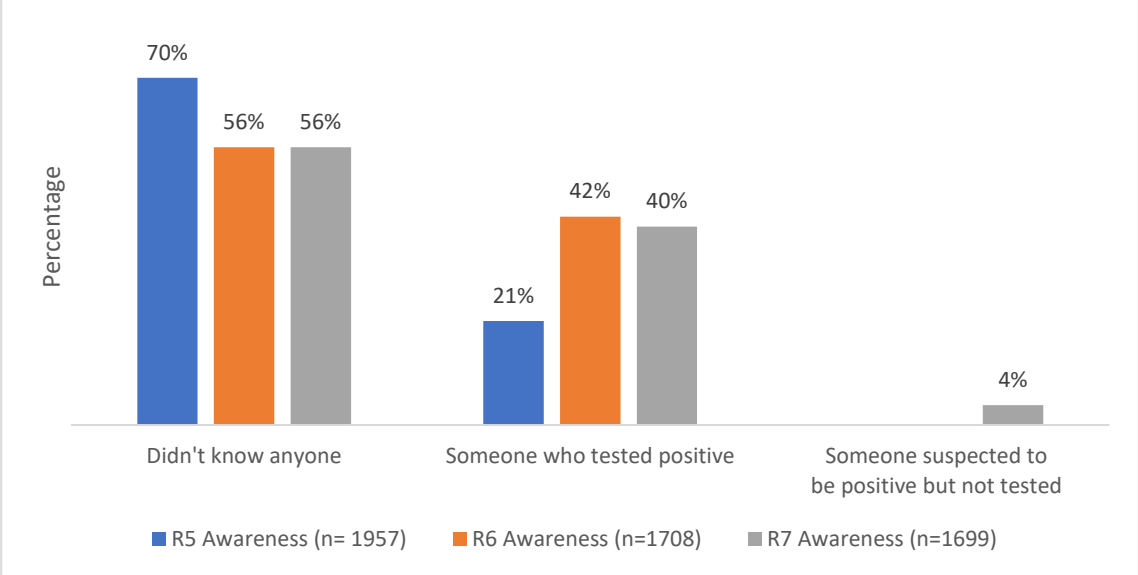

Figure 15: Comparison of awareness of people in the community infected with COVID-19 with previous KAP survey rounds 5th, 6th and 7th

Figure 15 shows a trend analysis based on previous KAP surveys, it indicates a reduction in the proportion of respondents who said they did not know anyone with COVID-19 infection from 70% in rounds 5, 56% in round 6 and 50% in round 7 as well as an increase in awareness of a community member who had tested COVID-19 positive.

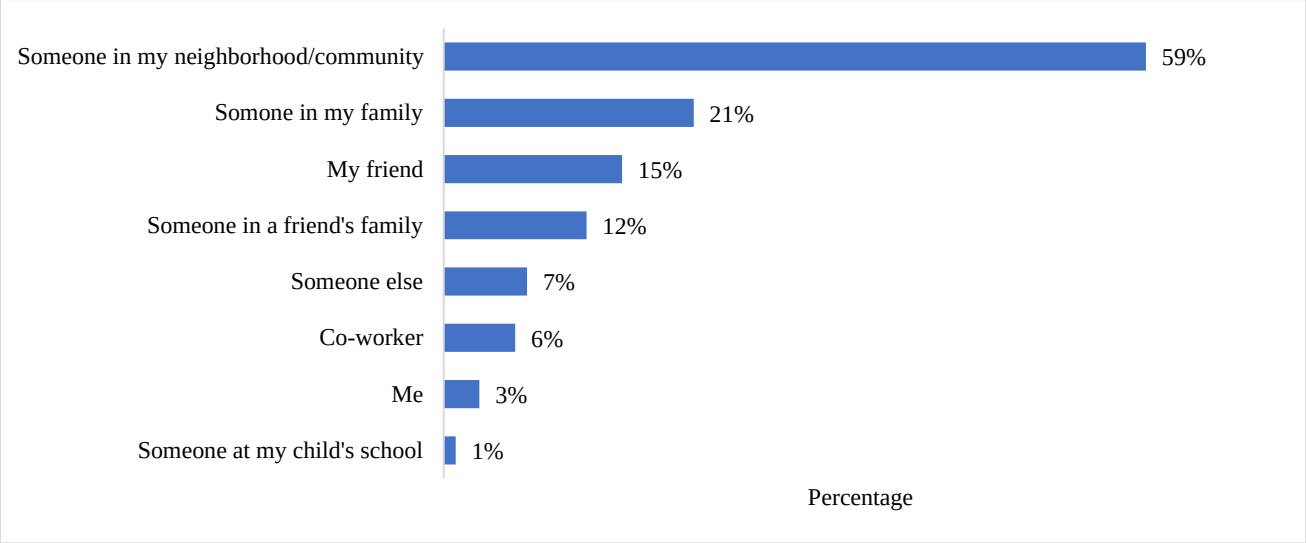

Figure 16: COVID-19 cases in the community who the respondent was aware of

The respondents reported that they knew someone with COVID-19 in their neighborhood (59%; 436) someone in their family 21% (155), friend 15% (114).

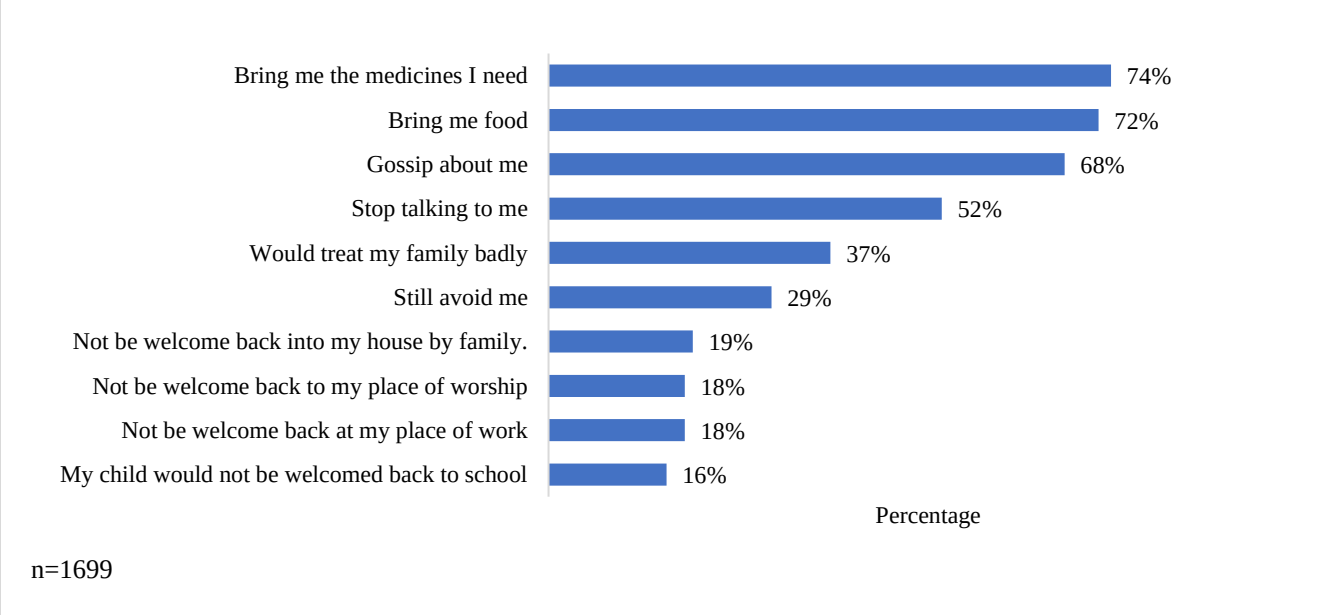

Figure 17: COVID-19 related stigma in the community

4.7.1 COVID-19 related stigma

The respondents were asked whether there was COVID-19 stigmatization in the community. There was a reduction in stigma in the community. In comparison to previous rounds, there was an increase in proportion of respondents who reported that their neighbours would bring them food from 61% in round 5 to 73% in round 7, and a reduction in neighbours who would bring medicine 31% to 9%, stop talking to me 54% to 52%, gossip about me from 85% to 68%, treat my family badly in round 5 and 7 respectively.

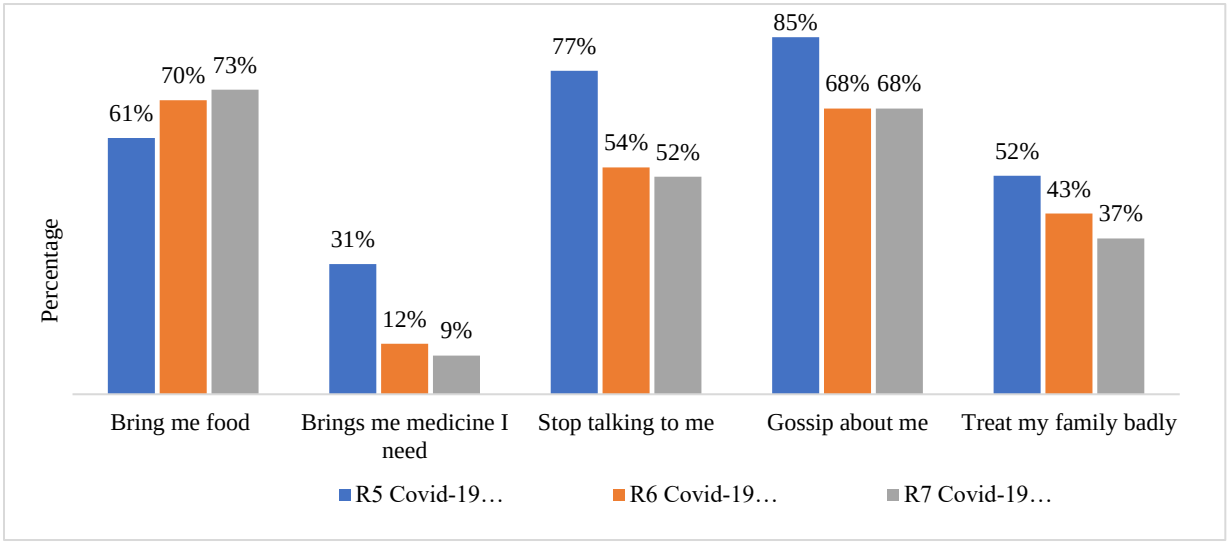

Figure 18: stigmatization of COVID-19 in the community

4.8 Attitudes and practices to COVID-19 guidelines

The attitudes towards the Government's public health measures is a key factor towards adoption and practicing the correct behaviors.

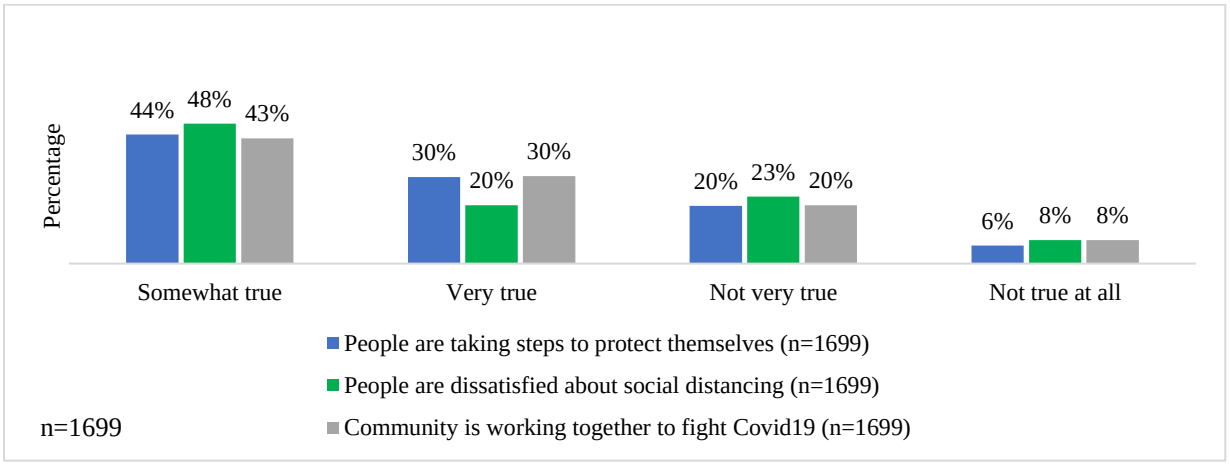

Figure 19: Community members attitudes and practices to COVID-19 preventive guidelines

Figure 19 shows that, 44% (752) of the respondents reported that people in their community were taking steps to protect themselves against the COVID-19 pandemic as somewhat true while only 6% (105) of the respondents reported this to be not true at all. In addition, 48% of the respondents indicated that it was somewhat true that people in the community were dissatisfied with social distancing measures.

4.8.1 Community perception on the Governments COVID-19 guidelines

The respondents were asked about their perception on the Governments COVID-19 guidelines. Figure 20 explores the ease of following the set government guidelines towards the control of COVID-19 virus at the community level.

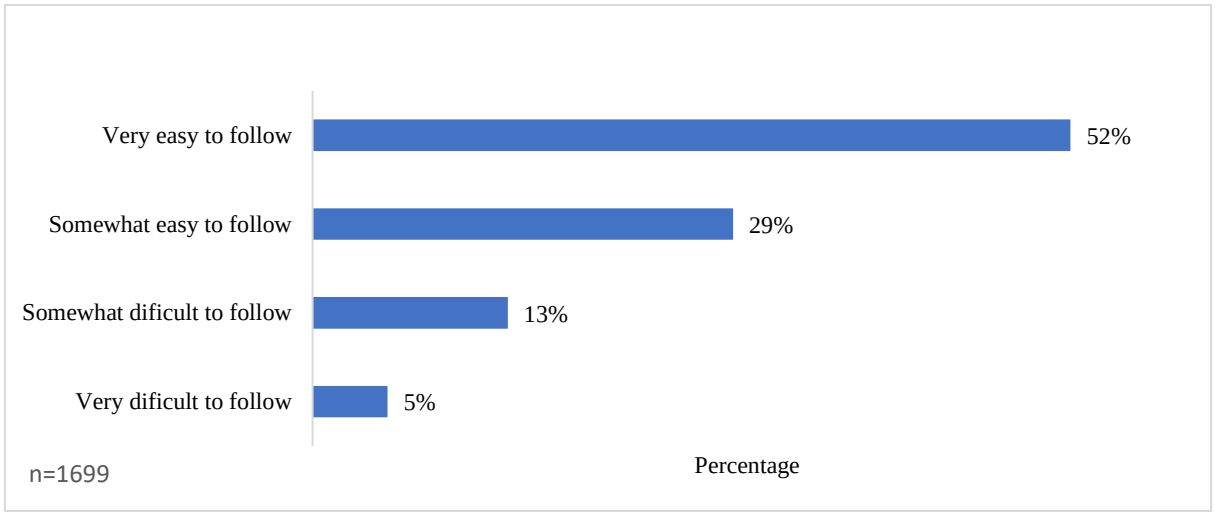

Figure 20: Community's perceptions on government COVID-19 guidelines

More than half (52%; 889) of the respondents reported that the guidelines on COVID-19 set by the government were very easy to follow while 5% (88) of the respondents reported that they were difficult to follow.

"... the government allowed businesses, schools, churches, to operate as before with a few restrictions. It is somewhat difficult for the community to follow". FGD participant— Kesses CHU, sub county, Uasin Gishu

4.8.2 Vaccine uptake

The COVID-19 uptake among the respondents was assessed. Majority of the respondents (87%) had received the COVID-19 vaccination. Among the general population and VMG community, 87% and 82% had been vaccinated respectively as shown in figure 21.

"…. most people in the community have been vaccinated". FGD participant— Nyandarua, Kinangop, Gitabush CHU

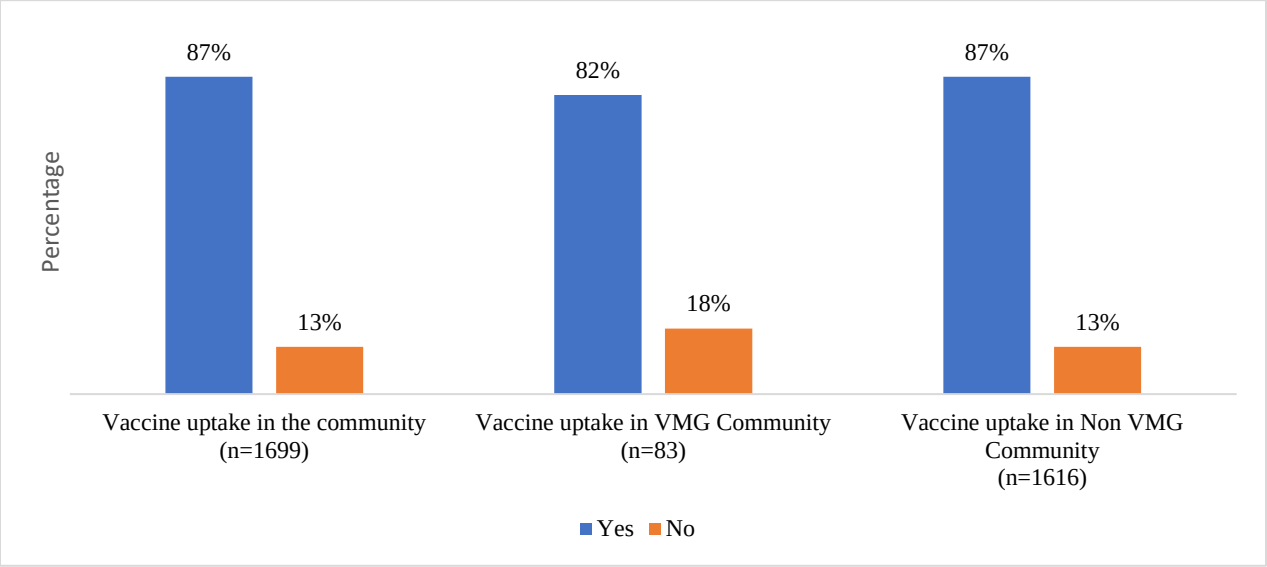

Figure 21: Vaccine uptake among respondents

There has been an increasing trend in the proportion of respondents who reported they have been vaccinated in the three rounds of KAP surveys. Figure 22 shows that vaccine uptake increased from 8% and 9% to 82% and 87% in round 5 and 7 in VMG and non VMG respondents respectively. The vaccination rate of 82% among the VMGs is due to sustained community engagement and outreach programs by health care workers and CHVs.

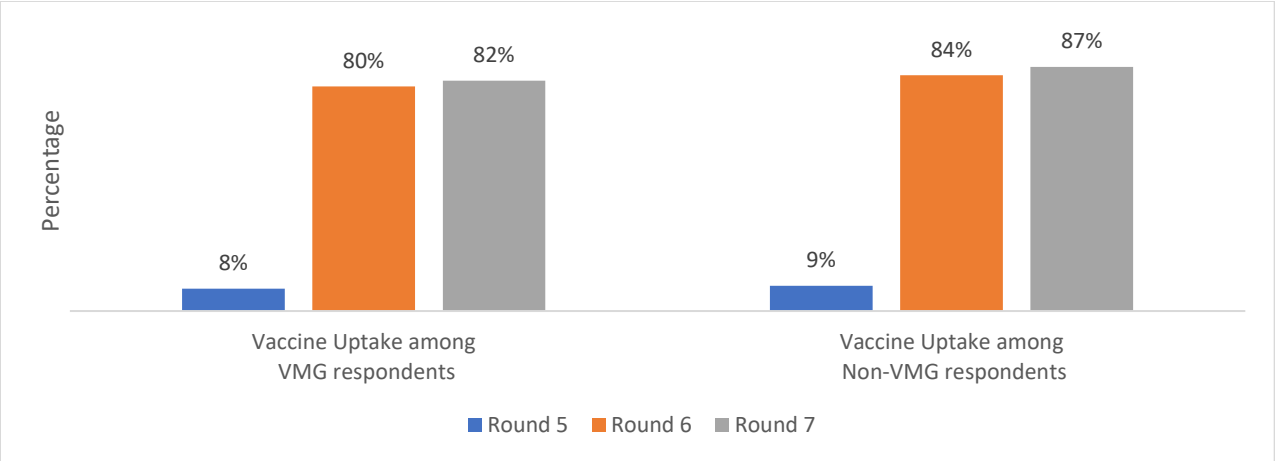

Figure 22: Comparison of vaccine uptake among VMG and Non-VMG respondents for KAP 5, 6 &7 survey.

"…. Majority of elderly people in our community have embraced the COVID-19 vaccines due to regular visits from community health workers and community engagements that the health workers did from Kesho Aliance and Aspen Institute". FGD participant— Garissa County, Fafi CHU

4.8.3 Respondents' recommendation to other community members for vaccination

The respondents were asked whether they would recommend the COVID-19 vaccine to other community members. About 89% (1519) of respondents indicated they would recommend the COVID-19 vaccine to other community members.

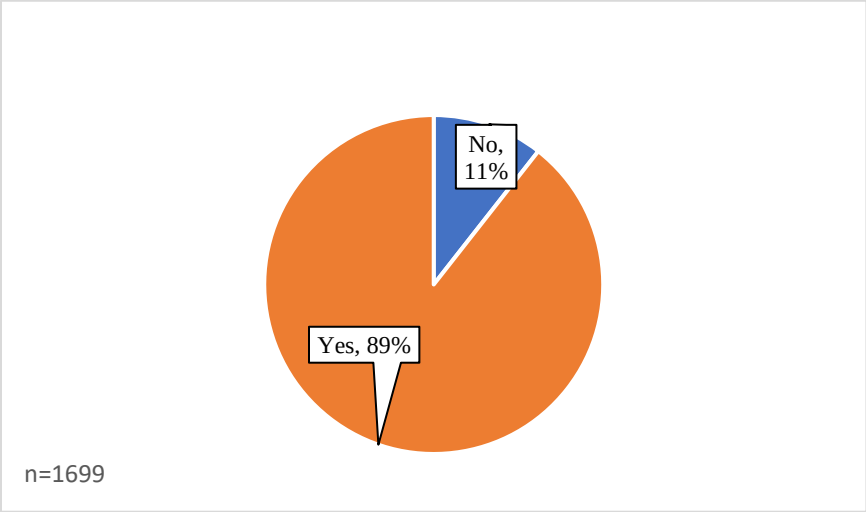

Figure 23: Recommendation for a vaccination to other community members

4.8.4 Preferred information on COVID-19 vaccine

The majority of the respondents 81% (1368) preferred information on COVID-19 vaccine safety, the quality of the vaccine at 35% (587) and 27% (453) number of doses.

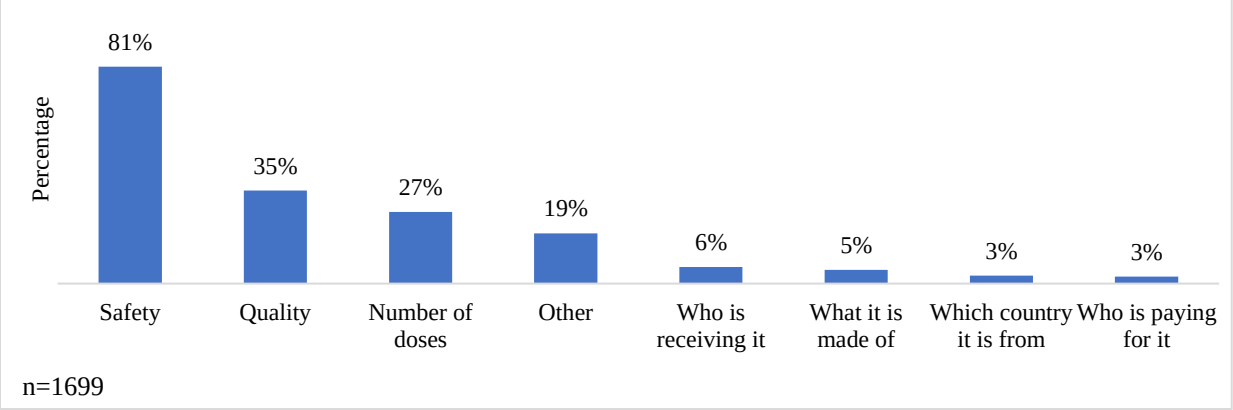

Figure 24: Preferred information on COVID-19 vaccine in the community

The respondents were asked about their preferred source of information on COVID-19 vaccine. 42% of the respondents preferred Community health worker and the health facility.

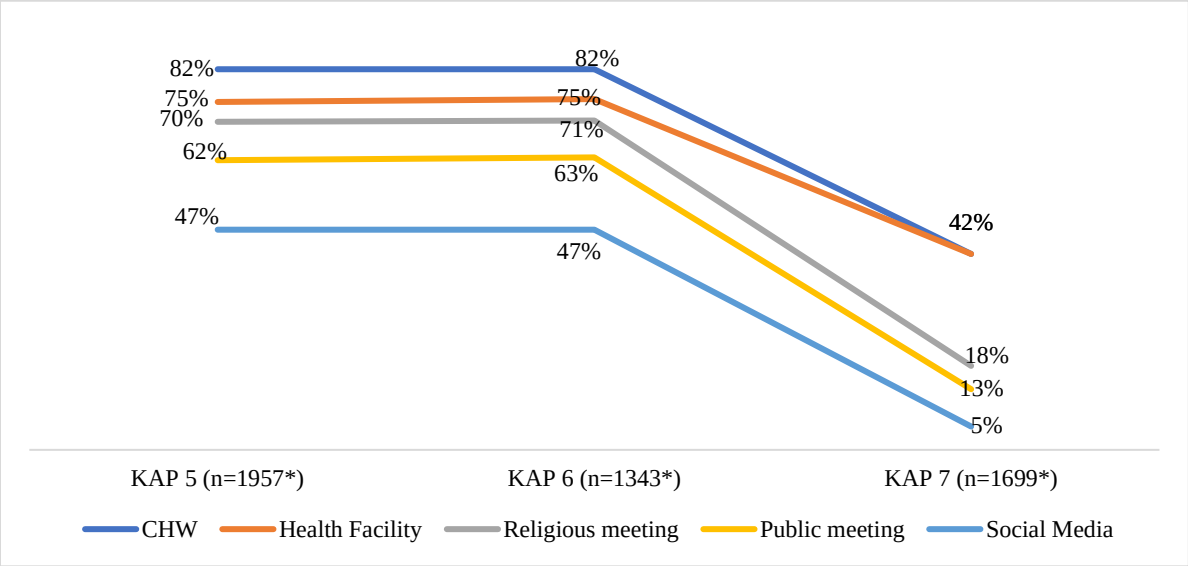

Figure 25: Comparison of preferred source of information on COVID-19 vaccine

The comparison across the 3 KAP surveys 5th, 6th and 7th showed that there was a significant decline in the preferred sources of COVID-19 vaccine information sources over time.

4.9 Reasons for vaccine hesitancy

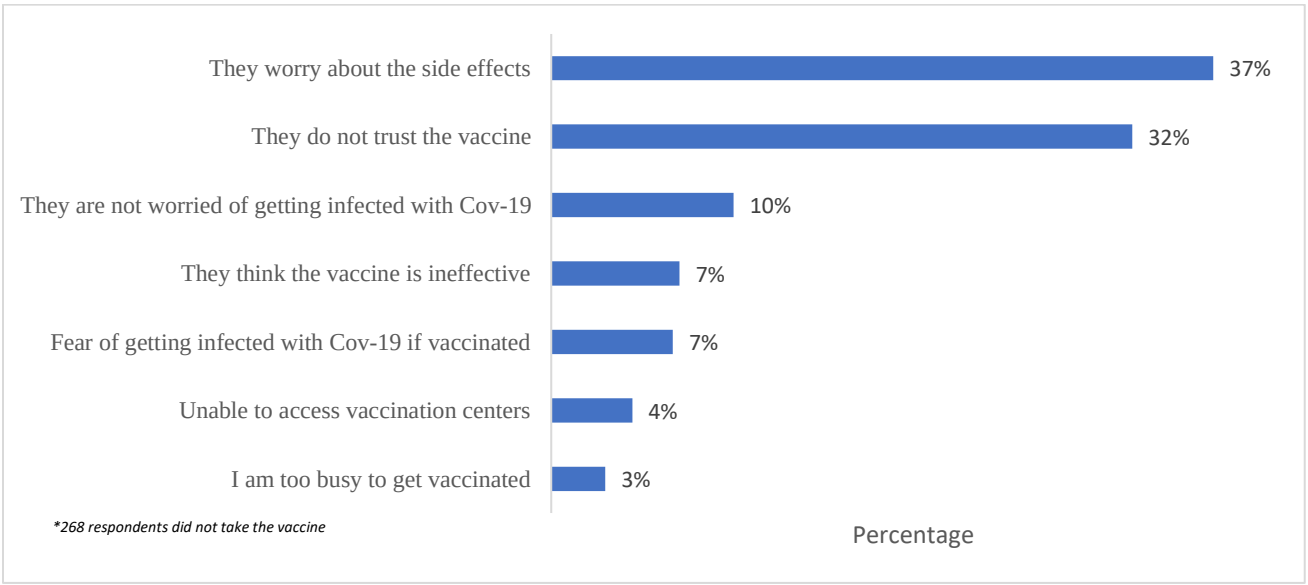

Figure 26: Reasons for vaccine hesitancy

The respondents were asked about reasons for vaccine hesitancy. Figure 26 shows that 37% (98) reported that they worry about the side effects of the vaccine, 32% do not trust the vaccine and 10% were worried of getting infected with COVID-19.

"…. most people in the community have been vaccinated". FGD participant— Nyandarua, Kinangop, Gitabush CHU

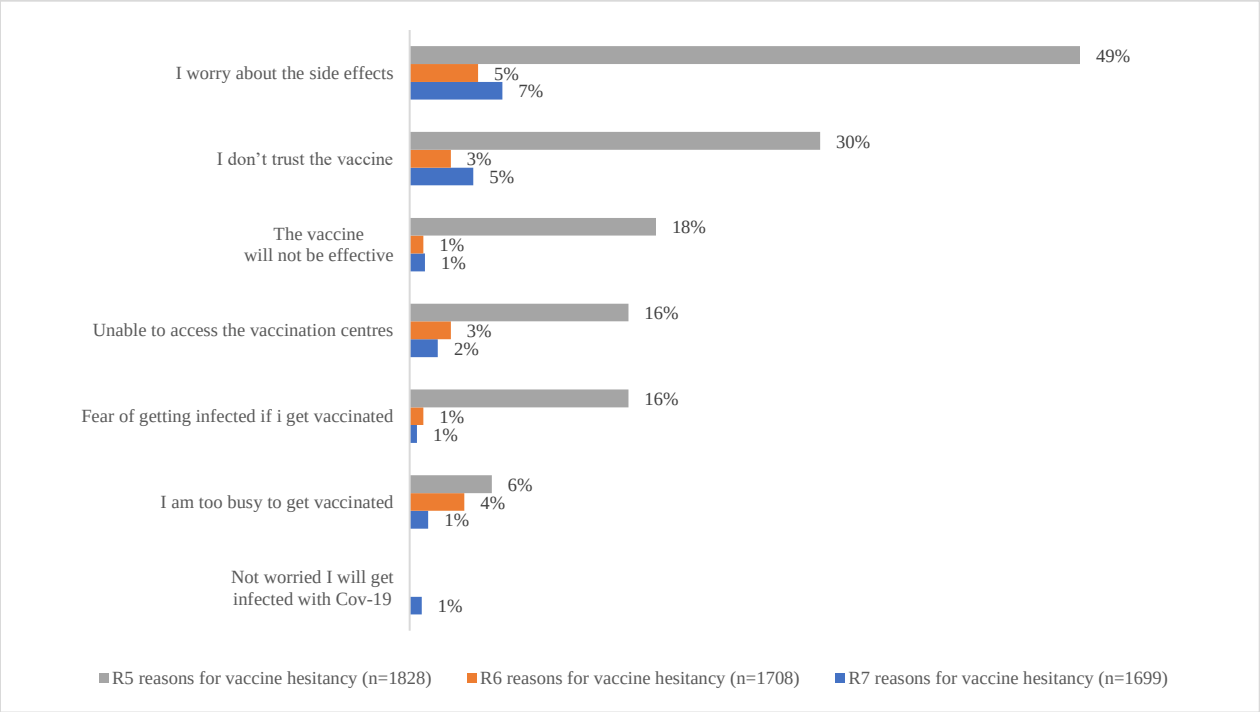

Figure 27: Comparison of reasons for vaccine hesitancy with previous rounds of KAP survey

A comparison on the reasons for COVID-19 vaccine hesitancy from the 5th to the 7th KAP survey showed that, generally, there was increasing acceptance of the COVID-19 vaccine. Figure 27 shows that respondents who worried about side effects declined from 49% to 5% and 7%, those who did not trust the vaccine 30% to 3% to 5%, those who thought vaccine is not effective from 18% to 1% to 1% in rounds 5, 6 and 7 respectively.

4.10 Perception on schooling.

4.10.1 Children's return to school since the government's directive.

The proportion of respondents whose children returned to school when the government gave the directive for them to reopen was 96% (76) among VMG and 93% (1324) among non-VMGs.

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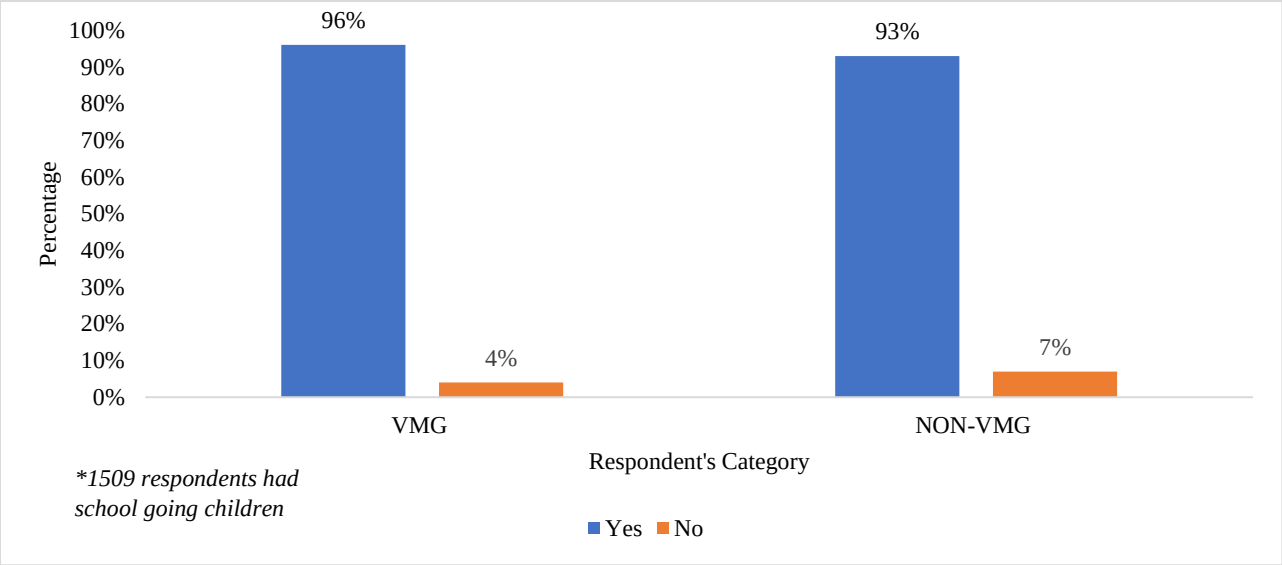

*Figure 28: Respondents' children who returned to school since government directive **

4.10.2 Children missing school since the directive to return

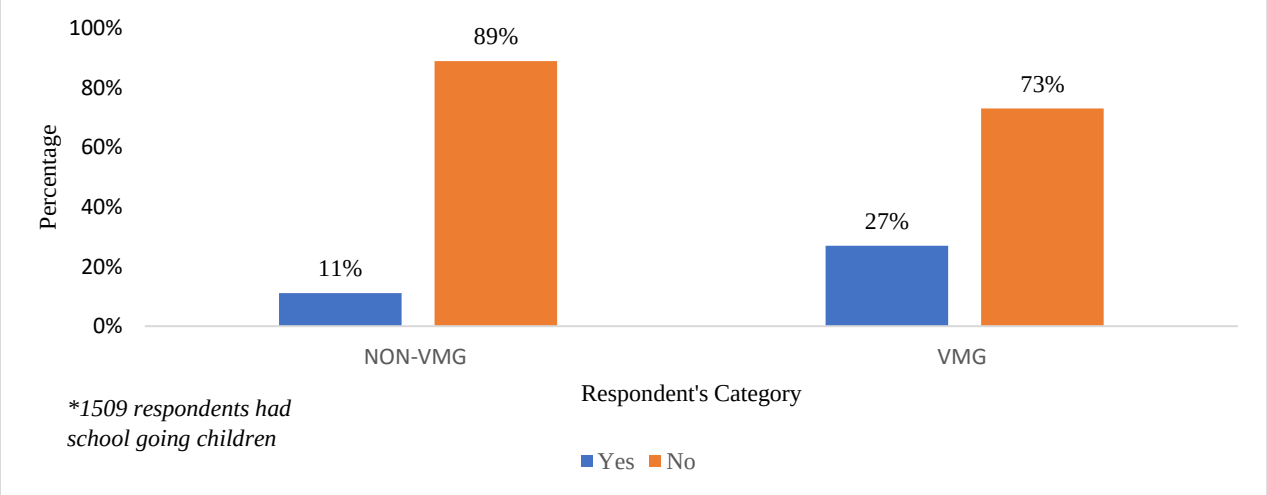

*Figure 29: Respondents' children who have missed school since the directive to return per category **

The survey showed the proportion of school going children who missed school was 11% (159) for non-VMG communities and 27% (21) for the VMG communities.

Key reasons for children missing school included lack of school fees at 69% (122) with boarding fees alone accounting for 1%. Absence due to illness was reported at 23% (41), transport and suspension accounted for at 4% each. The respondents also reported other reasons (15%) for missing school which included pregnancy (5%) and the fear of their children getting infected (8%).

"There are some children who dropped out of school and some children were not able to do exams however those who did their results were low". FGD participant— Muramati CHU, Tharaka nithi county

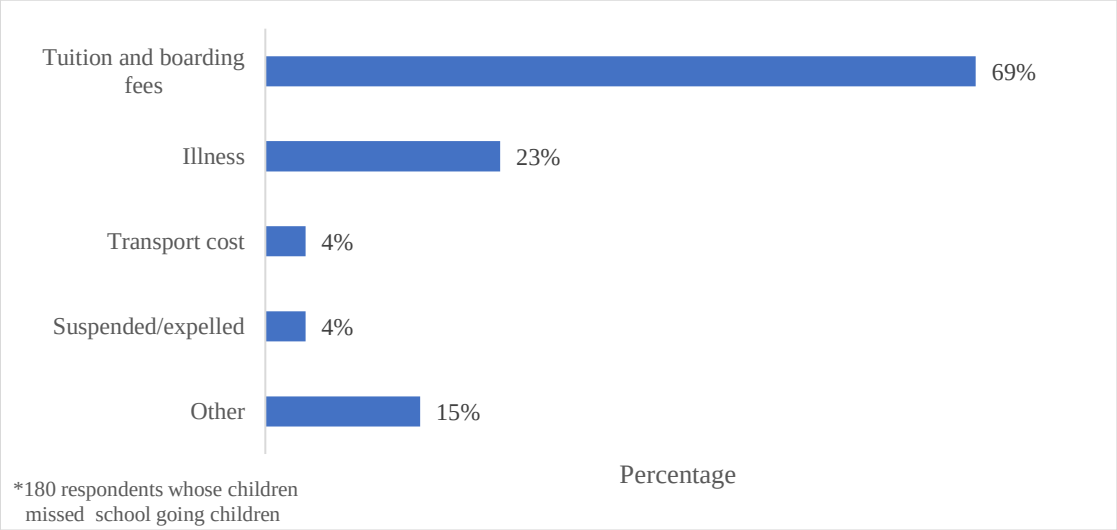

*Figure 30: Reasons for respondents' children missing school **

4.10.3 Concerns over children being in school

In the figure 31, shows 24% (365) respondents had concerns about their children being in school.

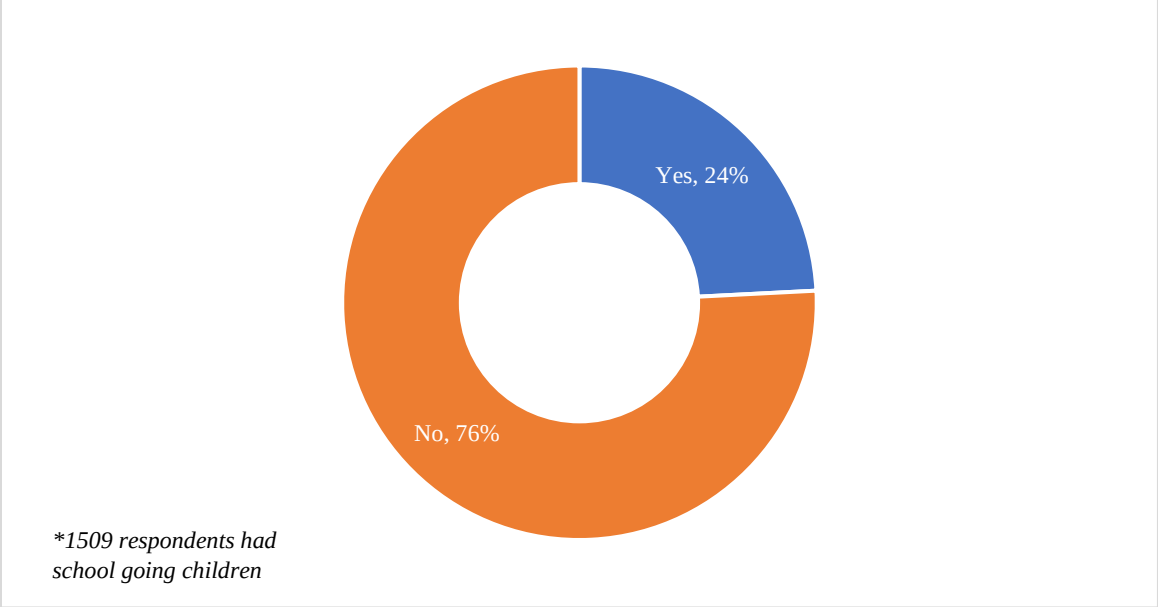

*Figure 31: Respondents who had concerns over their children being in school **

The Key concerns to the parents were crowded spaces for 39% (141) while 32% (117) respondents highlighted low possibility of maintaining social distance while 10% (38) cited lack of WASH facilities.

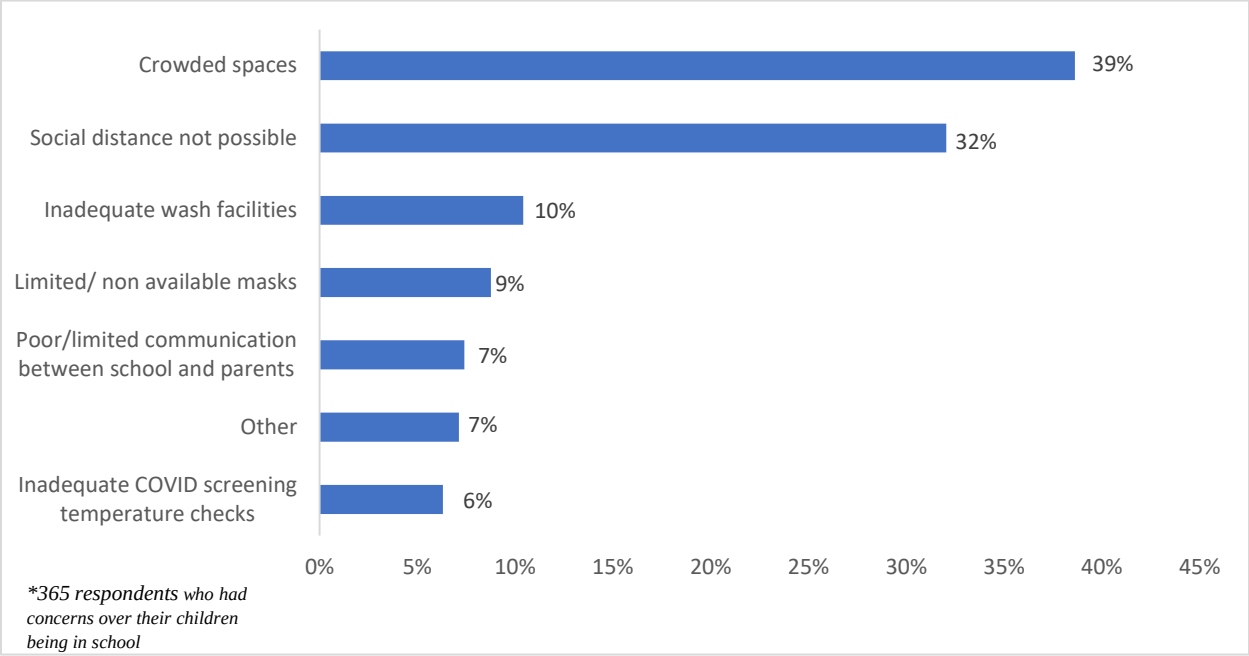

*Figure 32: Respondents' reasons for concern of their children being in school **

4.11 Adherence to preventive measures

4.11.1 Handwashing behaviors

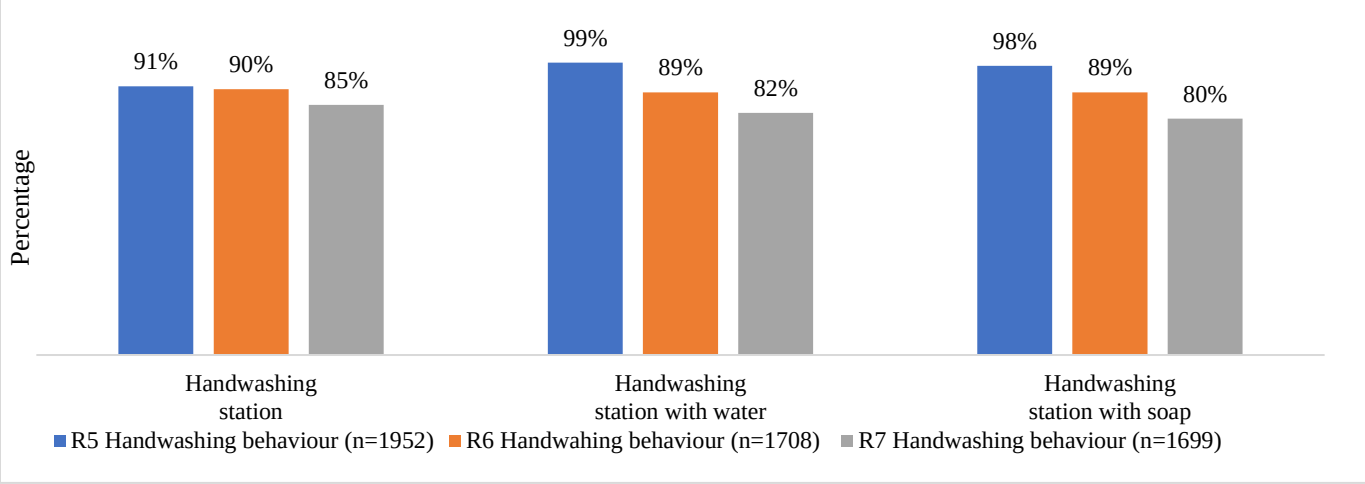

Figure 33: Comparison of handwashing stations having water and soap between previous KAP rounds

Availability of handwashing facilities with water and soap in households had slightly decreased, with at least 80% of respondents reporting that they had handwashing facilities with water and soap as shown in Figure 33.

In comparison to the previous KAP surveys availability of water and soap at the handwashing stations has also decreased to 82% and 80% respectively. These findings can be attributed to reduced risk perception of acquiring COVID-19 in the community.

4.11.2 Wearing of face mask

The use of face masks decreased over the three rounds of the KAP surveys. Face mask usage decreased to 15% in round 7 compared to 36% in round 6 and 80% in round 5. The main reason cited by most respondents add percentages for not wearing masks was the government's relaxation of regulations. Consistent messaging and strict regulations are crucial in maintaining mask compliance during public health emergencies. Further research is needed to understand factors contributing to declining mask usage and to improve communication strategies.

"…. Wearing of masks has reduced". FGD participant— Sigowet CHU, West Pokot

"Abiding by the preventive measures that we have been taught such as observing coughing etiquette". FGD participant— Mambani CHU, Kwale County

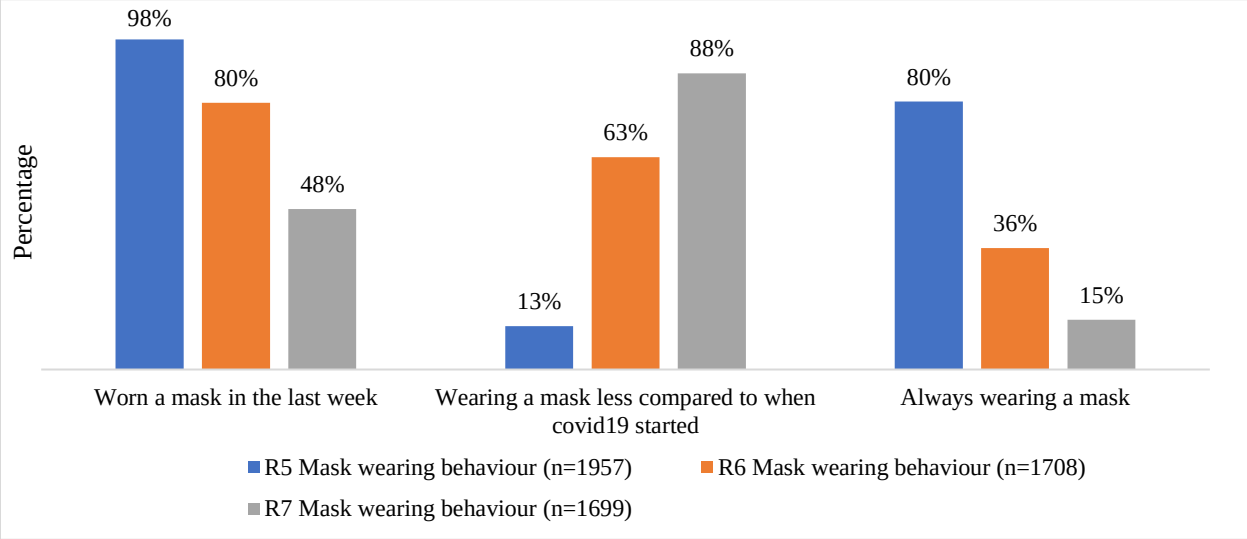

Figure 34: Comparison of mask wearing behavior between the KAP rounds.

4.11.2.1 Reasons for not wearing a face mask always

Among the reasons provided by the participants, it was found that the most prominent factor influencing non-adherence was the perceived reduction in COVID-19 infections, with majority, 68% (986 individuals) acknowledging this as their primary rationale. Additionally, a noteworthy minority of 17% (252 individuals) reported discomfort associated with mask usage as a contributing factor. Furthermore, the study identified other factors of lesser significance. This included mask unaffordability, which was cited by 5% of the respondents, as well as interference with religious practices (1%) and inaccessibility to face masks (1%), which emerged as the least frequently reported reasons.

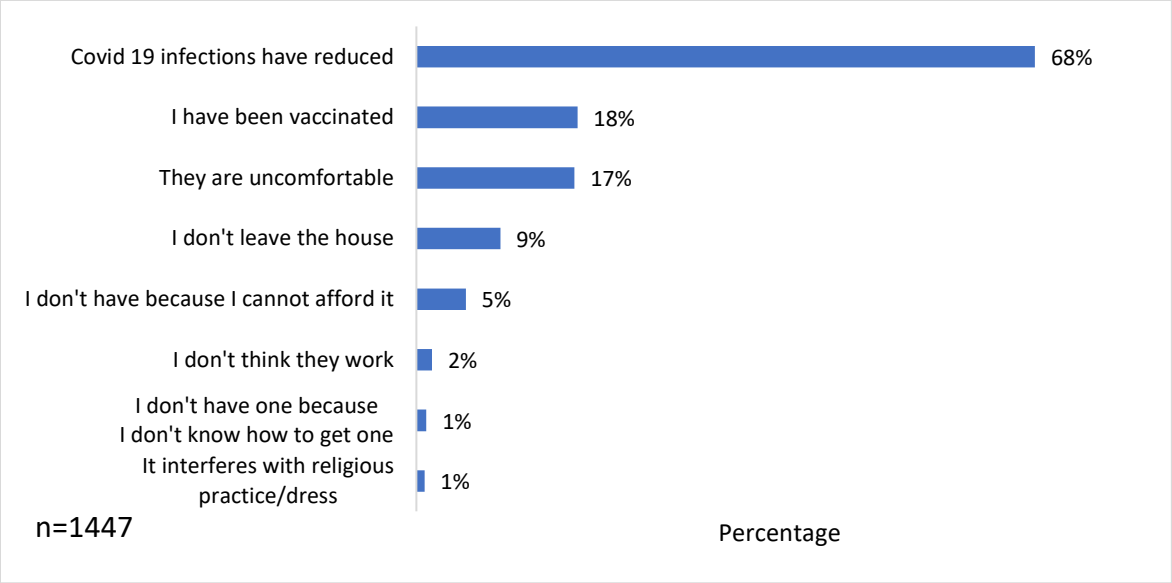

Figure 35: Reasons for not always wearing a mask

4.11.3 Social distancing

4.11.3.1 Social distancing outside home

Community members who practiced social distancing outside their homes were 52% (876) while 48% (823) did not.

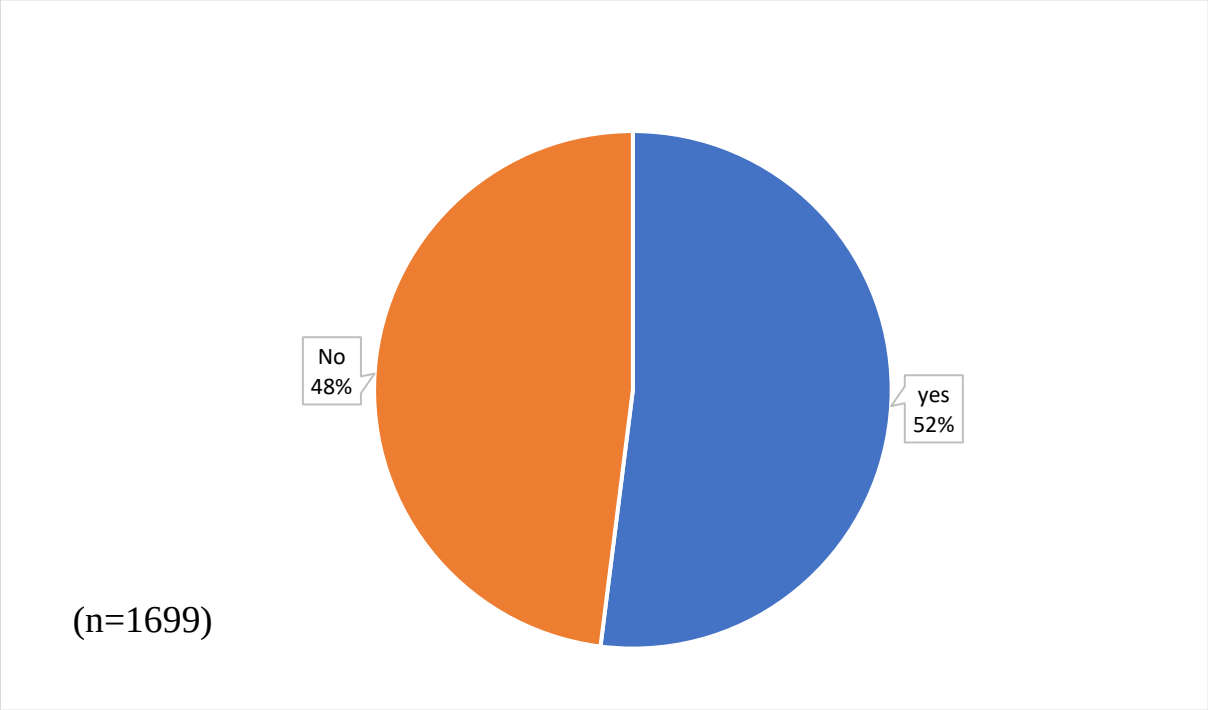

Figure 36: Respondents who maintained social distance outside their home.

"Since COVID-19 it affected the way, the community related before. There are some who keep distance and no longer shake hands, they salute each other without touching. Some have been vaccinated and others not. Wearing of masks has reduced". FGD participant— Sigowet CHU, West Pokot

"..., It is hard to observe social distancing for in our Swahili culture we eat and share a meal together in one big plate as we socialize but cases have reduced thus the social gatherings were allowed". FGD participant— Ganze, Jaribuni CHU, Kilifi County

4.11.3.2 Social distancing in social and religious gatherings

A proportion of 78% (1327) respondents attended social gatherings. However only 36% (477) confirmed that social distancing was maintained in these gatherings. 86% (1463) of the

respondents reported to have attended religious gatherings and only 44% (644) confirmed that social distancing was maintained in these gatherings.

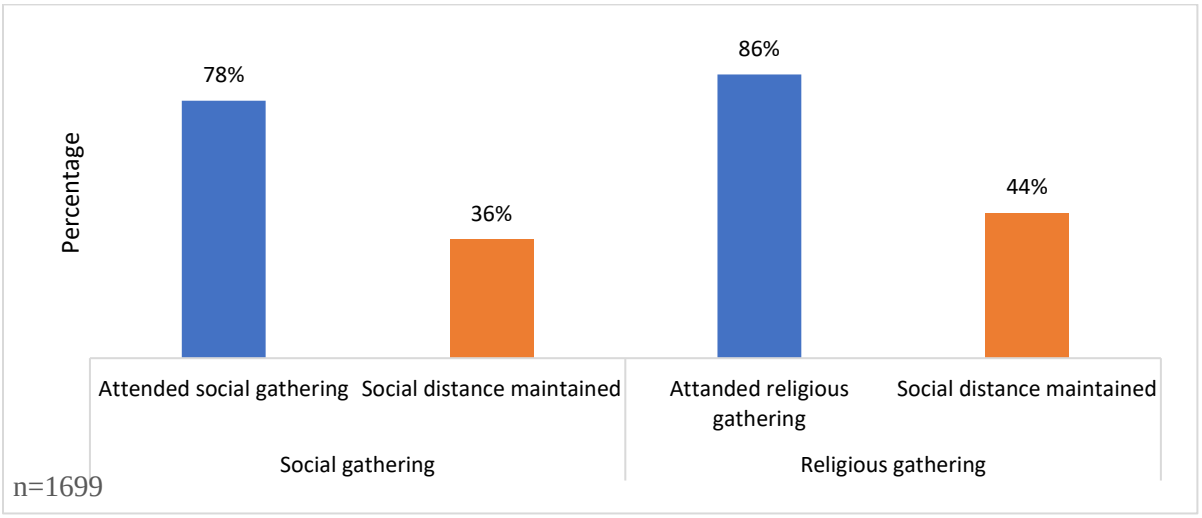

Figure 37: Maintaining social distancing in Social and religious gatherings.

4.12 COVID-19 testing

The number of respondents who reported to have been tested for COVID-19 increased from 10% in round 5 to 33% in round 7.

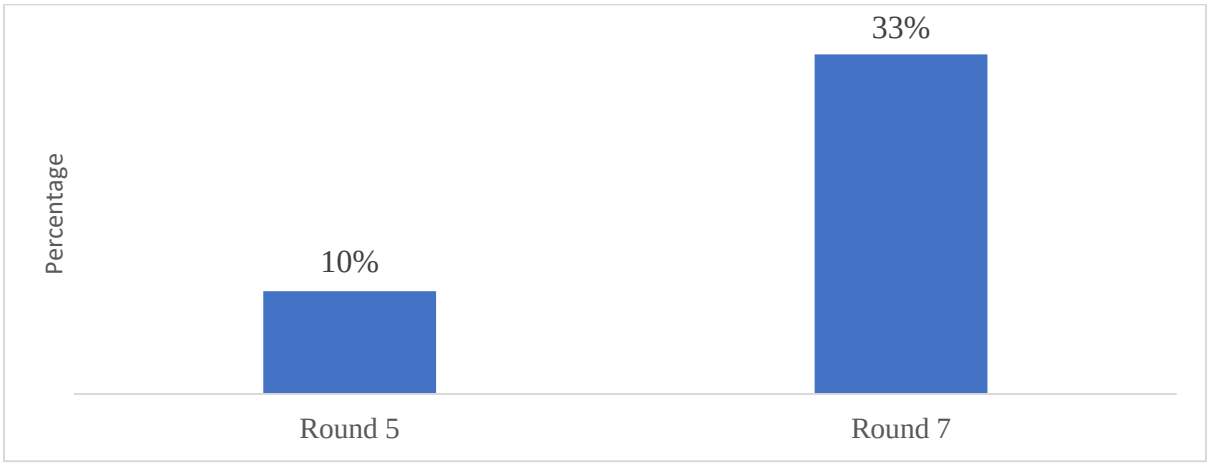

Figure 38: Comparison of respondents who have been tested for COVID-19 in rounds 5 and 7

4.12.1 Social interactions.

There was a drop on the effect of COVID-19 on social interactions compared to the previous rounds. Respondents who reported seeing their family less dropped from 58% in round 5 to 35%

in round 6 and finally to 23% in round 7. Avoidance of public transport also decreased in round 7 (21%) compared to round 6 (34%).

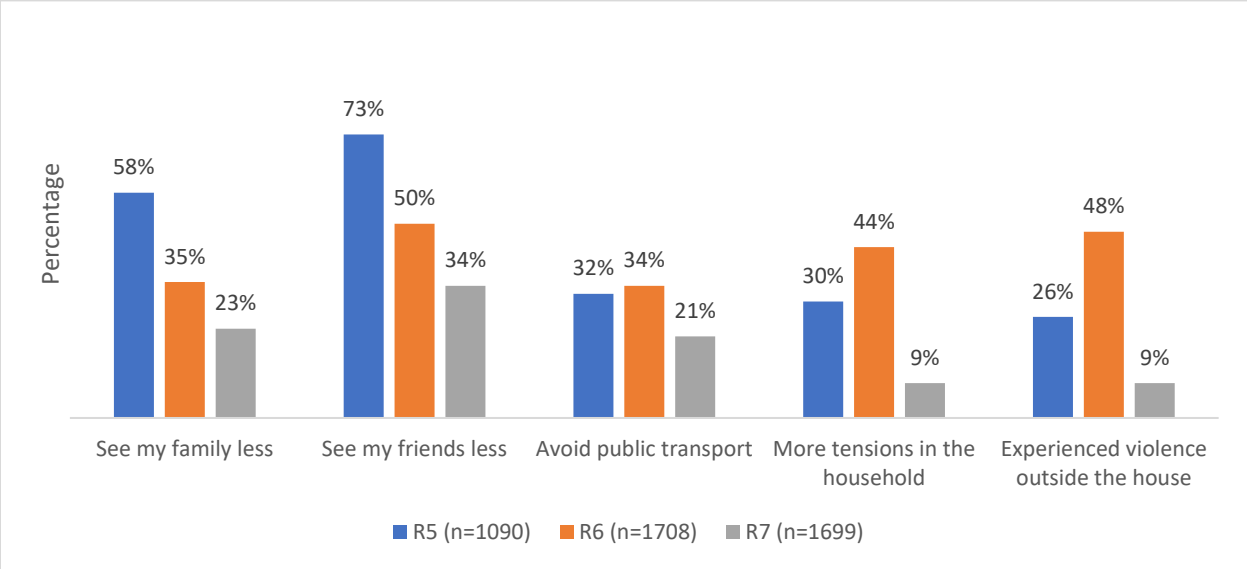

Figure 39: Comparison of effects of COVID-19 on social interactions

There was a decline in reports of tension and violence within and outside the households from 44% to 9% and 48% to 9% in round 6 and round 7 respectively.

4.12.2 Health seeking behavior.

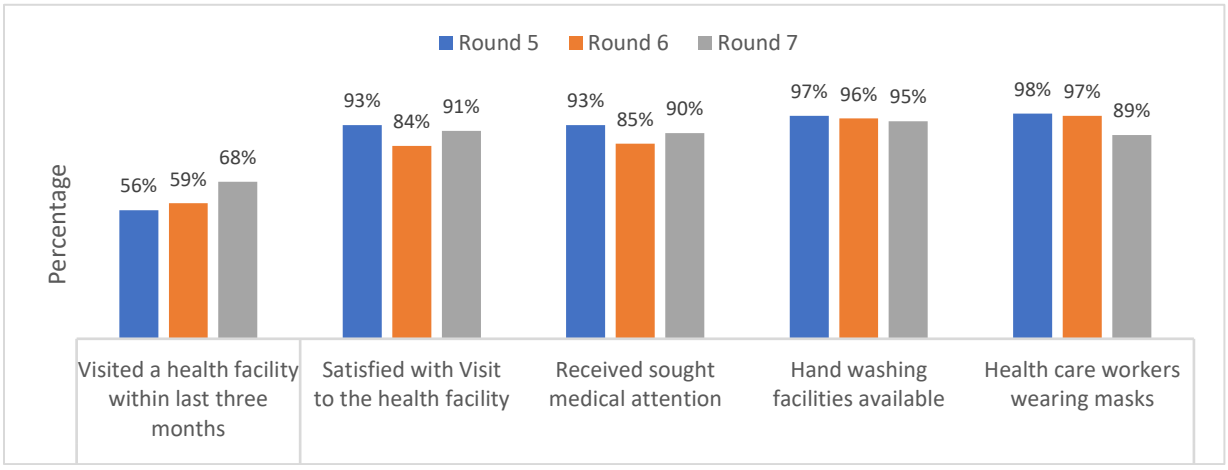

Figure 40: Health seeking behavior and experience

Health care seeking behavior has improved over time of the pandemic. Over 60% of respondents had visited a health facility in the last 3 months in comparison to 47% in round 5. There was an increase in the proportion of people visiting health facilities over time indicating a reduction in the fear of health facilities that was documented earlier in the pandemic. Most (91%) of the

respondents reported to have received the services they needed which was an improvement from 84% in round 6.

4.13 Impacts of COVID-19 & decision-making

4.13.1 Economic impact

The figure 41 provided below shows the results of the impact of the COVID-19 pandemic on the economy. The survey explored the extent of their job or income loss, as well as changes in prices of food and cooking fuel. The findings have been compared to the previous KAP 5 and 6 surveys.

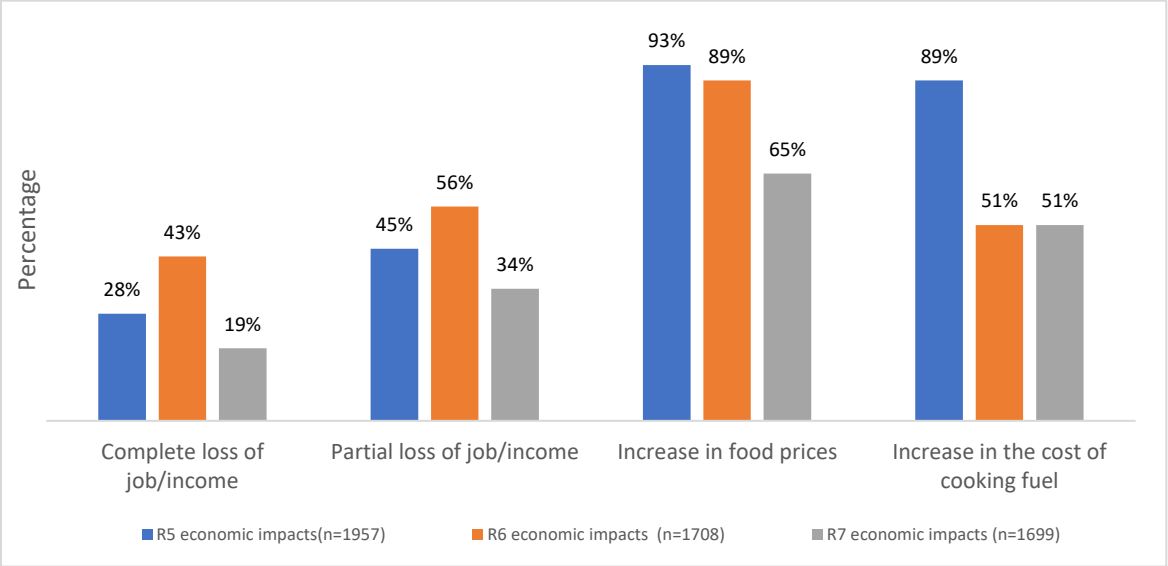

Figure 41: Impact of COVID-19 on the economy status

The findings from figure 41 shows that the pandemic has had a great impact on the economy whereby the lowest complete loss of job or income was recorded in the Round 7 at 19% (322), while Round 6 had the highest at 43%.

In terms of partial loss of job or income, the 6th Round had the highest percentage at 56% (958), while Round 7 had the lowest at 34% (586), however the 5th Round had a slightly lower percentage compared to the 6th Round at 45% (881).

Regarding the increase in food prices, the 5th Round had the highest percentage at 93% (1,820), while 6th Round and 7th Round had lower percentages at 89% (1,522) and 65% (1,098), respectively. It is worth noting that the percentage in 6th Round is significantly lower than in 5th Round, suggesting that the situation may have improved between these two rounds. Finally, the

5th Round had 89% (1,744) of households reporting an increase in the cost of cooking fuel compared to the 6th and 7th Rounds with each having 51% (871) and 51% (869) respectively.

"… beyond losing jobs, COVID-19 increased levels of poverty as people were not able to buy food and their lives became so difficult". FGD participant— Murinduko CHUs, Kureisoi North Nakuru County

Overall, the data shows that there have been some fluctuations in the economic impacts of COVID-19 on households surveyed from 5th,6th and 7th Rounds, with some improvements in certain areas but continued challenges in others.

4.13.2 Effect of COVID-19 on respondent's income

The figure 42 shows the results of the financial impact of the COVID-19 pandemic on the respondents. The survey explored on the respondents' financial income in the past month compared to before the pandemic started and compared to the first six months of the outbreak.

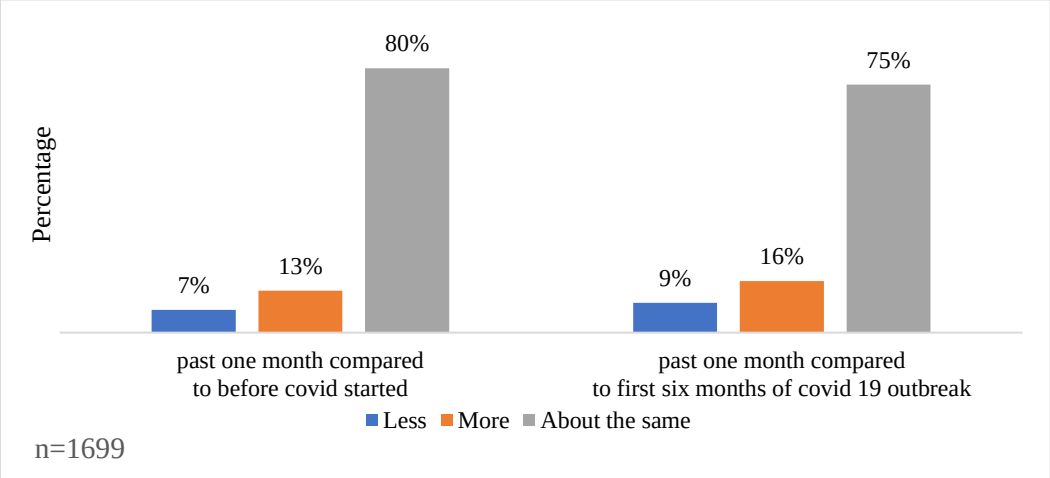

Figure 42: Effects of COVID-19 on incomes

The figure 42 above shows that the financial income is "about the same" in the past month as reported by majority of the respondents, at 80% (1,364) whereas before the pandemic started in comparison to the first six months of the outbreak was reported by 75% (1,279). However, experience on a positive financial impact in the past month was reported by only 13% (217) of respondents to contrasting to, before the pandemic started and in the past month compared to the first six months of the outbreak which was reported by 16% (266) of the respondents.

On the other hand, 7% (118) of respondents reported experiencing a negative financial impact in the past month compared to 9% (154) before the pandemic started and in the past month compared to the first six months of the outbreak.

"As a result of coronavirus, some doctors died and cases of defaulters for TB and HIV drugs increased.". FGD participant— Gita bush CHU, Kinangop sub county, Nyandarua

4.14 Food security

Skipping meals was reported to have decreased in round 7 compared to round 6. Respondents who related skipping of meals to COVID-19 decreased from 81% in round 6 to 31% in round 7. Most of the respondents reported skipping meals several times a week.

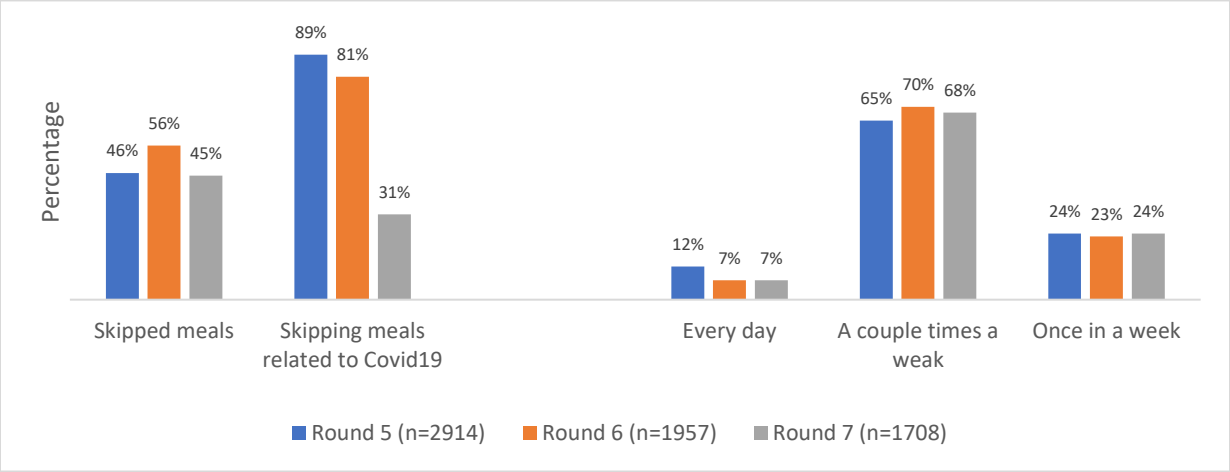

Figure 43: Effects of COVID-19 on food security in the community

4.14.1 Assistance received

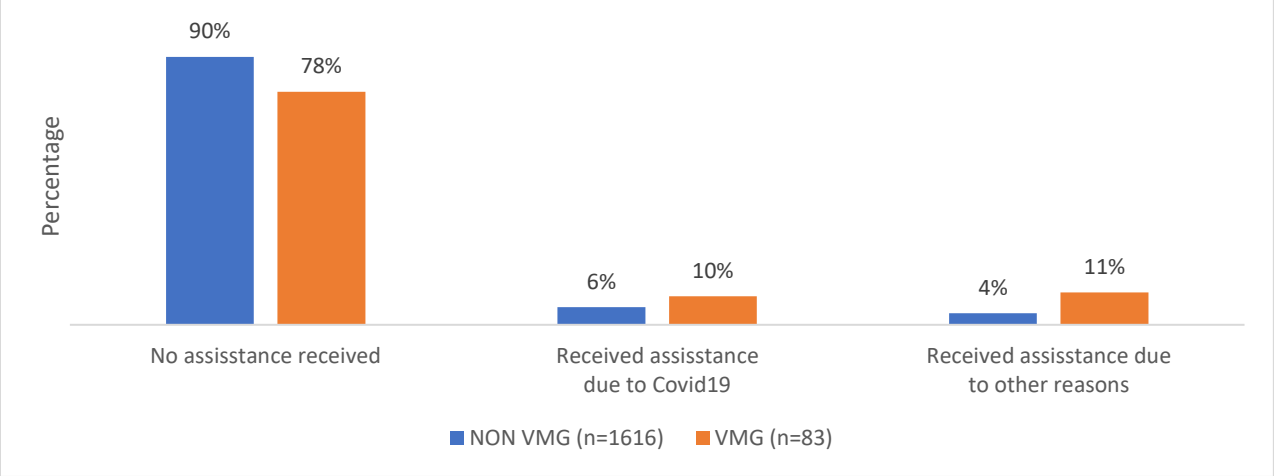

Figure 44: Assistance offered to the respondents.

Majority of the respondents did not receive any form of assistance. Of those who received assistance, VMGs where slightly more than Non VMGs.

4.14.2 Preferred form assistance

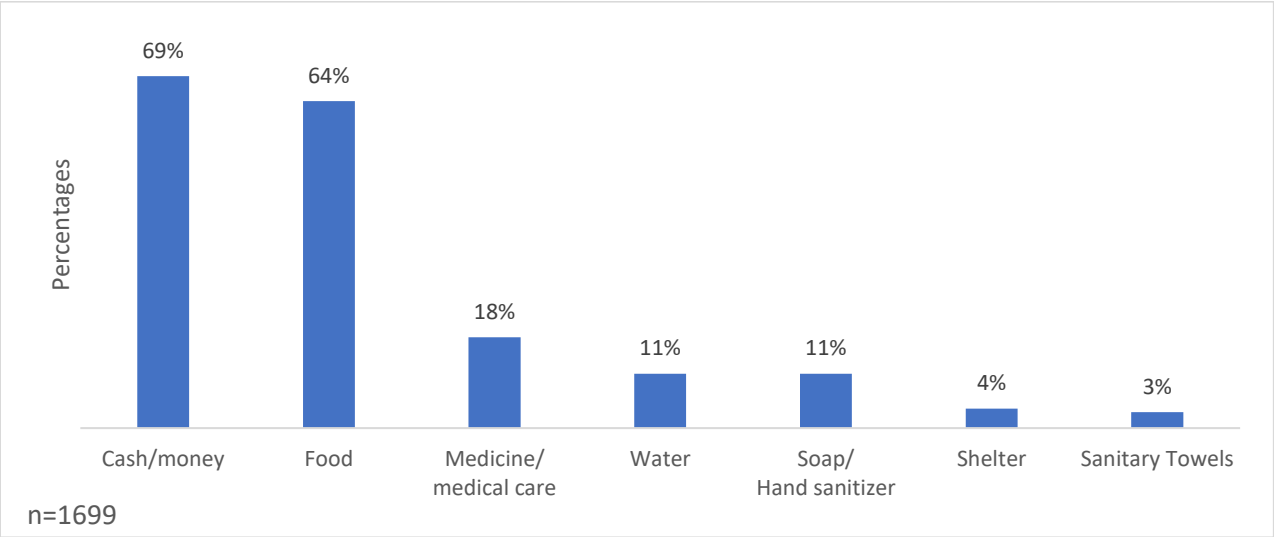

Figure 45: Respondents' preferred form of assistance.

Money and food where the most preferred forms of assistance at 69% and 64% respectively. Other preferred forms of assistance were medicine 18%, Water 11%, Soap 11%, shelter 4%, and sanitary towels at 3%.

4.15 Mental health effects

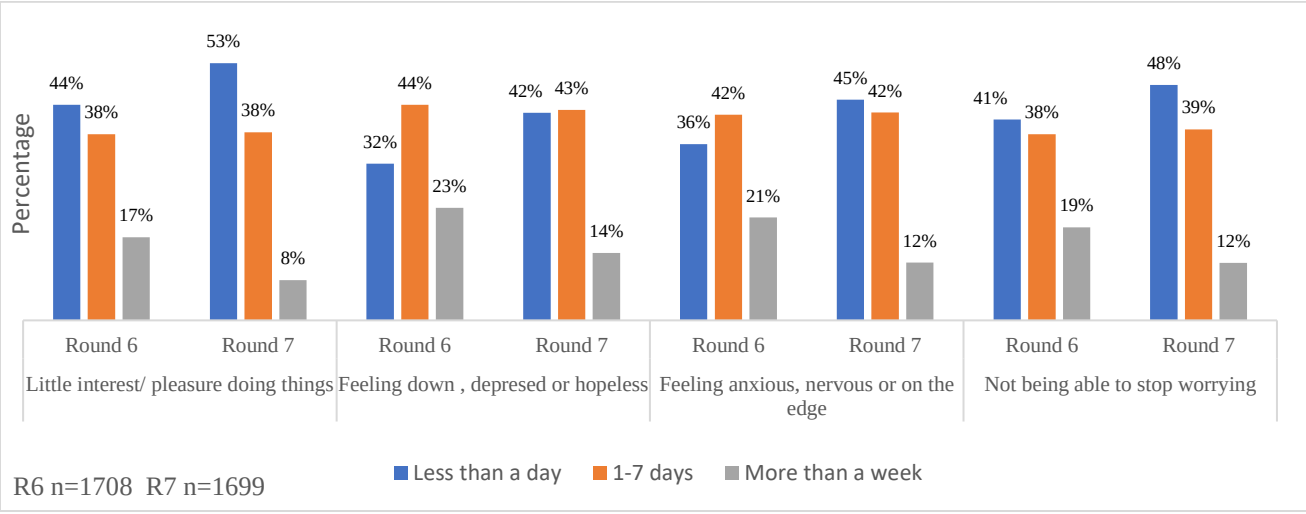

Figure 46: Effects of COVID-19 on mental health status in the community

Majority of the respondents experienced mental effects for less than a day while a few of the respondents experienced mental distress that is little interest (8%), feeling down, depressed, or hopeless (14%), feeling anxious (12%) and not being able to stop worrying (12%) as depicted above. Those who reported to have experienced a mental health effects for more than a week reduced in round 7 as compared to round 6 survey.

"COVID-19 led to increase in rates of depression and mental illnesses due to loss of jobs, especially for breadwinners of families". FGD participant— Kambi CHU, Garbatula SC, Isiolo county

4.16 Violence against women and children

Respondents who reported to have experienced violence against intimate partners in the community were 19%, violence against children and harassment to women by non-household members was 12%.

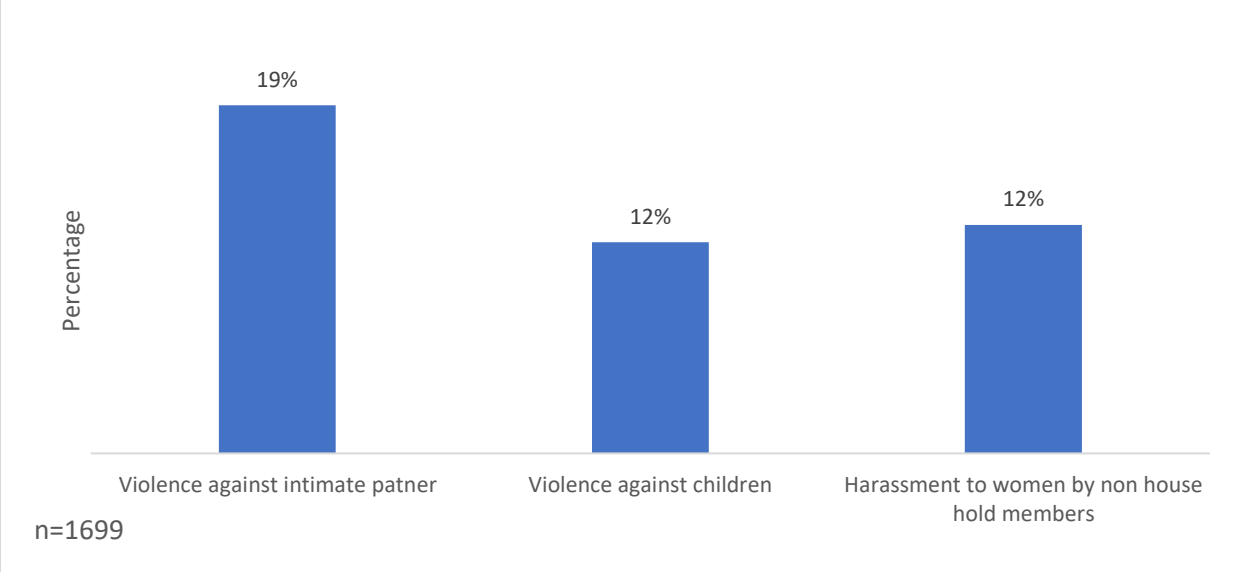

Figure 47: Violence against women and children in the community

"COVID-19 had caused a lot of problems in this area. People have lost jobs, when the man of the house is not going to work, they get into conflict with the wife. People have lost even money because those that had hotels do not have people to eat food. Children have also gotten into different habits because they don't like staying at home with their parents. There has been cases of early marriages and early pregnancies". FGD participant— Baatuk CHU, Maralal sub county, Samburu county

CHAPTER 5: DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Discussion

This study sought to establish current knowledge, attitude, perception and practices of the population in regard to the COVID-19 pandemic and its impact on the social, health and economic life of households in Kenya. This was the seventh round of the COVID-19 knowledge, attitude, perception, and practices survey in the country, with the study findings highlighting the progress made since the first COVID-19 case was reported on 13 March 2020. Following the analysis carried out in the previous section, the 7th COVID-19 KAP survey provided adequate response to the objectives outlined in section one of the study.

5.1.1 Current knowledge, attitudes, perceptions, and practices related to COVID-19

The first objective of the survey was to establish current knowledge, attitude, perceptions, and practices related to COVID-19 in Kenya. According to the results, the participants, regardless of their age and gender, had a good understanding of COVID-19, in contrast to previous editions of the survey, which revealed relatively less knowledge about COVID-19 disease. These findings are similar to Sigh and Ahuja (2020), which noted that the knowledge, attitude, and practice of general public towards COVID-19 in India improved as time went on. It was also found that radio was the most popular source (84%) of information on at least 3 measures to prevent COVID-19. The most preferred source of information was radio (74%) for updates on COVID-19, as compared to television (65%), CHW (47%), health facilities (35%), religious meetings (28%), social media (26%), posters (9%), and the MOH website (6%).

The study findings revealed that majority of the respondents (67%) perceived themselves to be at a low risk of contracting COVID-19 virus. The main reason for this is that 44% of the respondents considered being vaccinated as the main reason for their low-risk to contracting COVID-19, while 38% stated that their risk is lowered by ensuring strict adherence to the laid-down government procedures on COVID-19. Only 9% of the respondents on the other hand had a high-risk perception to contracting COVID-19, as opposed to 31% and 12% in the 5th and 6th round of the

KAP survey in the country. As Balkhi et. al, (2020) noted in their study psychological and behavioral response to the COVID-19 pandemic among adolescents in Pakistan, the impact of information increases positive affective behaviors among people, on the premise that the public can make 'informed decisions' about health behaviors by the sufficiency and accuracy of information availed to them. This therefore means that the increase in the number of people perceiving low risk of contracting COVID-19 is precipitated by increased knowledge on COVID-19 practices and embracing preventive measures and guidelines put in place, as opposed to limited awareness and the negative perception of COVID-19 practices in the 5th round of the KAP survey in Kenya.

5.1.2 Barriers to adoption of key behaviors for COVID-19 prevention and vaccination

The second objective of the study was to establish main barriers to the adoption of key behaviours necessary for COVID-19 prevention and vaccination. Study findings reveal that stigma and discrimination was one of the main barriers to adoption of COVID-19 prevention measures in Kenya. Even though the 7th round of KAP survey indicate a significant improvement in the way COVID-19 patients are treated by family members and the rest of the community, 68% of respondents still reported being gossiped by people close to them. 52% on the other hand indicated that their close friends stopped talking to them once they learnt of their COVID-19 status, while 38% reported being treated badly by their friends and family members. As Wong (2020) posits, during the COVID-19 pandemic, most Chinese citizens especially adolescents not only had to face the typical stress of adolescence growth, but also the stress of COVID-19 concerns, providing obstacles and dilemmas in socialization needs and building relationships with others, which further increases the likelihood of maladjustment and a reduction in personal wellbeing. This meant that most participants had relatively negative feelings and attitudes toward their personal external life during the pandemic.

Another barrier to efficient adoption of COVID-19 prevention measures and vaccination was misinformation and disinformation. At the peak of COVID-19 during the 5th round of KAP survey, most people relied on community health workers (82%), religious meetings (77%), and health facilities (76%) as the most reliable sources of accurate information, despite radio and television being the most popular sources of information on COVID-19 during the period. However, the 7th

round of KAP survey reveals that most respondents now prefer MOH as the reliable source of accurate information on COVID-19 prevention measures and vaccination. This phenomenon, according to Brennen et. al, (2020), is due to massive COVID-19 misinformation and disinformation on social media propagated by anti-vaxxer groups across the world. This forced most governments to consider centralizing communication channels through main health departments, as opposed to earlier efforts to let social groups take charge of peer education on COVID-19 prevention measures. This is well demonstrated by 49% of respondents in R5 of the survey being worried about side-effects of the vaccine due to information received from other sources (CHWs=82%, health facilities=75%, religious meetings=70%, public meetings=62%, and social media=47%), as compared to 7% of respondents in R7 when the other sources of information fell to 42%, 18%, 13%, and 5% respectively.

5.1.3 Social, health and economic needs arising due to COVID-19 mitigation measures

The third and final objective of the study was to establish the socio-economic needs arising due to COVID-19 mitigation measures. One of indicators measured by the survey was individuals' residence, with some of the participants having moved from their pre-COVID-19 residential areas/location due to various reasons. According to the study findings, 56% of the respondents who moved during the pandemic cited economic wellbeing as the most notable reason for their relocation, with 22% being health morbidities and job transfers, while 17% moved to get a better place for their children, 12% moved to take care of their families, and only 10% moved to get away from COVID-19.

At the peak of COVID-19 in 2020 and 2021, Kenya, like any other country in the world, implemented measures to contain the spread of COVID-19, including school closures, home isolation/quarantine, and community lockdown, all of which have had primary and secondary effects on school-going children and their households (UNESCO, 2020). With cases of COVID-19 receding and most economies opening up again, schools were also opened, and children allowed to resume learning with strict adherence to COVID-19 containment and prevention measures. The R7 KAP survey findings show that only 24% of parents had concerns about their children in school due to overcrowding (39%), low possibility of maintaining social distance (32%), and lack of sufficient WASH facilities (10%) in the school compound.

Another aspect socio-economic effect of COVID-19 on households was the loss of income and financial wellbeing of household heads. Financial income, commodity prices, and food security are some of the key indicators of household welfare, with massive job losses due to lockdowns and other containment measures rendering many households without a source of livelihood. The study findings show that 19% of the respondents reported complete loss of job/income due to COVID-19 while 34% had partial job loss, compared to 43% and 56% respectively in R6 of the KAP survey. Despite a slight improvement in job losses between R6 and R7, commodity prices were on an upward trajectory, meaning that households used more to buy the same unit of a good/service as compared to six months before. This therefore meant that responds were left worse-off even with the same level of income due to inflation. As one respondent noted during focus-group discussions, COVID-19 increased levels of poverty to the level that individuals were not able to buy food with the same amount they had before COVID-19. This pushed many households to start skipping meals during the day, since most people were struggling to put meals on the table because of macroeconomic repercussions of COVID-19. The R7 study findings show that 31% of participants skipped meals due to COVID-19, as compared to 89% in R5 of the survey. Though this signifies an improvement in the household welfare, 68% still reported having to skip meals a couple number of times during R7 of the KAP survey, higher than 65% recorded in R5.

With the COVID-19 pandemic presenting a phenomenon never experienced before by most households across the world, many people resorted to different ways of coping with the depression caused by the pandemic. As a result, mental cases were on a sharp increase, with many cases going unreported because of lack of civic education on mental illness. As one of the FGD respondents in Garbatula-Isiolo County noted, COVID-19 led to increase in rates of depression and mental illnesses due to loss of jobs, especially for breadwinners of families. The study findings show that majority of respondents reported experiencing mental distress at some point during the COVID-19 period, occasioned by little interest/pleasure in doing things (8%), feeling down/depressed/hopeless (14%), feeling anxious (12%) and not being able to stop worrying (12%). This led to increased rates of domestic violence against women and children. According to an FGD respondent in Maaralal-Samburu County, COVID-19 caused a lot of problems in families because many family-heads lost their jobs, resulting to incessant fights/conflict with their spouses. Due to lockdown measures by the government, school-going children also got into different bad habits to pass time, leading to addictions and other vices such as stealing and robbery.

5.2 Conclusion

The nationwide 7th KAP survey sought to understand the current COVID-19 information in communities; the level of community adherence to the MOH prevention guidelines; vaccine uptake and hesitancy; impacts of COVID-19. The survey also sought to track health and social challenges associated with COVID-19 and enable the availability of data that will help the Ministry of Health continue to plan recovery strategies. The recommendation from this round of the survey will also bolster communication and community engagement for COVID-19.

The conclusions from the 7th round of the national COVID-19 KAP survey are as follows:

1) Radio remains the most common and preferred source of information on COVID-19, despite Television registering an increase in preference as compared to R6, with a significant reduction in reliance on religious meetings, social media and posters as preferred sources of information on COVID-19. This makes it critical for radio programs and TV shows to continue displaying messages on COVID-19 prevention measures.
2) There is an increased in the number of respondents who consider themselves 'low-risk' in contracting COVID-19, with a greater percentage (44%) citing vaccination as the key reason to their low risk of contracting the virus. This misjudgment of risk would cause a lower perception of disease risk among the young generation, thus lowering adherence to the preventive behaviors propagated by MOH.
3) Stigma and discrimination of COVID-19 patients has reduced over the period of the pandemic, with fewer respondents indicating they are likely to be discriminated if they contracted the virus, as compared to responses on the same question in R6. This signifies an improvement brought by the Government's concerted efforts by MOH and other key stakeholders in the sector.
4) Following continuous sensitization on the importance of COVID-19 vaccines, there has been a slight increase in vaccine uptake among both VMGs and non-VMG community members. This is attributed to persistent and vaccine sensitization programs by MOH, which have seen steady decline in barriers to vaccination and increase in the trust of vaccines.

5) There has been a significant reduction in adherence to COVID-19 preventive measures such as face mask wearing, handwashing, and social distancing behaviors, which have gradually gravitated towards the pre-COVID-19 scenes where people interacted freely with each other. This is attributed to the general relaxation of MOH guidelines and decreasing numbers of COVID-19 cases reported in health facilities, resulting to significantly lower effect of COVID-19 on social interactions.

6) The increase in COVID-19 testing could be attributed to the COVID-19 government guidelines which required most institutions to have their workforce tested and the travel policy which required a compulsory test for persons traveling outside the country.

7) Health care seeking behavior had improved and this is attributed to the reduction of COVID-19 related stigma while seeking health services in health facilities as seen in section 4.7 on "COVID-19 infection awareness and Stigma".

8) Despite the increasing cost of leaving for households across the country, many respondents believed COVID-19 had the least effect on the household economic welfare as compared to the general increase in food prices as well high costs of cooking fuel. As a result, the survey reveals that more than 40% of the respondents relied on their partner's financial support to weather these unfavorable economic tides.

9) Even though social interaction improved as the COVID-19 situation in the country becomes more stable, tough economic challenges cause tension and violence within and outside homes, leading to an increase in violence against women and children.

10) Most of the respondents who moved from their pre-COVID-19 residences cited economic reasons as the major cause. This shows the impact COVID-19 pandemic has on the social-economic welfare of people in the community.

11) Most of the respondents experienced mental health effects for a short duration of less than a day. This suggests that the impact of these effects may be temporary or situational in nature.

12) Food security is still unstable. However, many respondents reported this not being as a result of the COVID-19.

5.3 Recommendations.

1. Develop policies to guide media houses to dedicate slots that discuss on health issues and information on COVID-19. There is need for frequent reviewing of radio clips and messages and giving more airtime through the national and local radio channels to target the general population on health messages including information on COVID-19.
2. There is need to carry out further studies to explore the 'optimism bias's and perceived susceptibility to disease among the young generation in Kenya. This is because in practice, it is recommended to increase the risk awareness of susceptibility to COVID-19 among the younger groups to prevent infection.
3. The government and other stakeholders in the health sector should encourage speaking up against negative stereotypes, learning more about mental health and sharing individual experiences to provide the support needed.
4. There is need for capacity building of community health volunteers with new and relevant information on COVID-19 and other health related matters to enhance/promote sensitization on preventive measures and vaccine uptake awareness among community members.
5. The government should continue reminding the general public on the dangers of relaxation in adherence to COVID-19 containment and mitigation measures, with resurgence of COVID-19 cases reported in countries such as China and India in early 2023.
6. Use innovative ways to get more people tested for COVID-19 like integrating COVID-19 testing into routine health services.
7. Raise awareness and knowledge among communities about how COVID-19 is and is not transmitted, and how people can safely care for loved ones diagnosed with COVID-19 to reduce stigmatizing behaviours and promote non- stigmatizing ways to support community members diagnosed with or recovered from COVID-19, build health literacy, sensitize leaders, and identify supportive strategies in the community.
8. Implement measures to support and stimulate economic recovery, with a focus on creating employment opportunities and providing financial assistance to those who have

experienced job or income loss. This can include initiatives such as job creation programs, skills development training, and access to microfinance or small business support.

9. Raise awareness and provide education about mental health through establishment of accessible mental health support services: Considering the number of respondents who reported experiencing mental distress, it is crucial to ensure the availability of accessible mental health support services. This can include resources such as helplines, counseling centers, and mental health professionals. By providing easy access to support, individuals can receive timely assistance and interventions to address their mental health concerns.
10. Strengthen financial support measures: Despite the majority reporting no significant change in income, it is important to provide targeted financial support to individuals and households who have experienced a negative impact. This can involve implementing social protection programs, providing access to credit or loans, and offering financial counseling services to help individuals manage their finances effectively during these challenging times.
11. Continuous community engagement to enhance decision making on health care seeking behavior during pandemics.
12. Continuously monitor and assess the economic impact of the COVID-19 pandemic on households to identify emerging trends and devise targeted interventions such as food relief programs to cushion those who could have lost their sources of income/livelihoods.

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ANNEXURE

Annex 1: Focus Group Discussion Clusters

	Cluster	Counties
1	Western Cluster	• Kakamega • Vihiga
2	Lower Eastern Cluster	• Kajiado • Kitui
3	Upper Eastern Cluster	• Tharaka Nithi • Isiolo
4	Central Cluster	• Kirinyaga • Nyandarua
5	Northeastern Cluster	• Garissa • Tana River
6	Coast Cluster	• Kwale • Kilifi
7	South Rift Cluster	• West Pokot • Uasin Gishu
8	North Rift Cluster	• Samburu • Nakuru
9	Nyanza Cluster	• Siaya • Nyamira
10	Central Rift Cluster	• Narok • Kericho

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